

Turf Grass TRENDS



Issue 12

December 1993

Environmental regulations

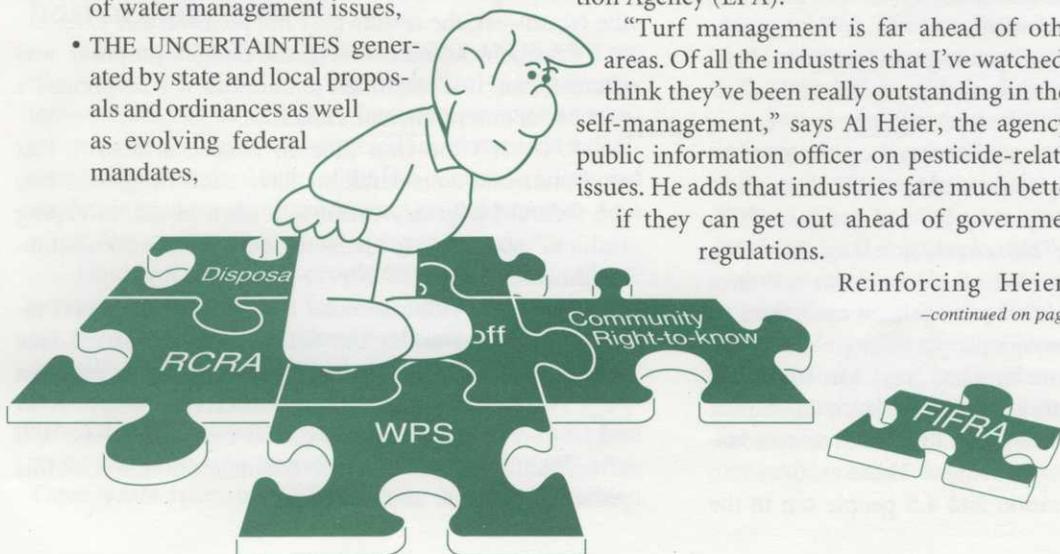
Lean and mean 80s give way to clean and mean 90s

by Russ McKinney

TURFGRASS MANAGERS were more focused on new products, equipment, and production standards in the 80s. Now they see environmental issues as their greatest concern. The big questions are: How clean? And how mean?

The growth of regulations over the last 25 years has been controversial, and shows no signs of abating. The regulations have produced some desirable results—such as increased sensitivity to the obvious shift in public attitudes and the risk reduction achieved through compliance—but a combination of factors has made the environment a number one worry. They include:

- THE SHEER NUMBER AND SCOPE of areas impacted, from the handling of pesticides and the availability of some products to right to know rules, the disposal of yard wastes, and a variety of water management issues,
- THE UNCERTAINTIES generated by state and local proposals and ordinances as well as evolving federal mandates,



- AND CONTINUING DISAGREEMENTS over the scientific issues involved.

The regulatory development process has been helter skelter, because of the impact of headline-making incidents and other shifting currents in the marketplace and in government priorities. However chaotic the process has been to date, the bottom line is that America is becoming a more planned, more data-driven, and more regulated society. Turf grass management and a long list of other products are tested, measured, analyzed, and tested again and again. In fact, the same exact science that has given turf management an unparalleled host of effective products and equipment has given society, in general, new ways of detecting minute residues and assessing the associated risks and costs. Unfortunately or not, the scientific and regulatory controversies involved are complicated by alarmists on all sides.

Turf looks good

Enforcement evidence, detailed on pages 6 and 7, suggests that most turf grass managers are bringing their operations into compliance. In fact, the environmental record of the turf grass industry, in general, and golf course superintendents, in particular, have won some hearts and minds—even at the U.S. Environmental Protection Agency (EPA).

“Turf management is far ahead of other areas. Of all the industries that I’ve watched, I think they’ve been really outstanding in their self-management,” says Al Heier, the agency’s public information officer on pesticide-related issues. He adds that industries fare much better, if they can get out ahead of government regulations.

Reinforcing Heier’s
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Environmental Regulations

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point is the fact that the EPA generally targets areas for monitoring and enforcement where violations are the highest, the most likely, or the most obvious—and where the potential for risk reduction is greatest. That, in large part, is why the manufacturing sector of the green industry and turf's big brother, agriculture, have been, and still are, more of a focal point for regulatory action than turf management. Both manufacturing and agriculture are concentrated, high volume chemical operations. Even the most highly managed turf grass sites offer far less potential for risk reduction. In fact, a variety of studies have examined the environmental safety of managed turf. They found it safe to walk on, safe for pets, and not a major source of pesticide or fertilizer runoff or ground water contamination.

To cite just one example, a two-year study conducted by Dr. Martin Petroic and Nine Roth Borromeo at Cornell University concluded that there is little potential hazard to water supplies from pesticide and fertilizer applications to turf. They found that hazardous material leaching from managed turf sites is not likely, because of the high plant density and the presence of thatch. (They recommended that turf managers and landscapers be more aware of the environment around the sites they manage, especially drainage areas, and consider the season, short-term weather, the characteristics of the soils and the materials applied, and the real needs of the turf.)

What turf management has in greater abundance than both manufacturing and agriculture is public exposure. Lawn care and landscaping companies provide services directly to homeowners in full view of their neighbors, and people walk around golf courses and campuses. The public rarely sets foot in a chemical plant or on a farm. In fact, people in the chemical industry wish they did. Many manufacturing plants hold open houses and make other community outreach efforts. Showing critical members of the public the precautions and safety systems in place can help dispel fear of the unknown.

Despite the fears of many turf grass managers about the potential harm of environmental issues, the golf industry is not being singled out, and regulation is not as extensive, nor as intensive, as that faced by other industries, according to a study sponsored by the National Golf Foundation and funded in part by PGA of America, PGA Tour, USGA, and LPGA. This conclusion is reinforced by the relatively limited amount of enforcement activities directed at lawn care and turf management operations.

"There just aren't enough people there (in the states) to do a lot of enforcement actions," says Mr. Heier. He points out that in fiscal 1991 the EPA awarded the state of Florida, which has enormous agricultural and resort industries, only \$300,000 for enforcement. That translates into 1.5 people for administration and 4.5 people out in the

What turf management has in greater abundance than both manufacturing and agriculture is public exposure.



field making inspections. Last year the EPA's Lawn Care Monitoring Initiative called for each state to conduct at least 10 inspections of lawn care companies—a relatively small number even by the standards of small states. Both state and federal regulators have bigger fish to fry. For example, major environmental regulatory actions were expected this year in Pennsylvania and New Jersey, but not ones in which turf management operations or practices are central. According to *Focus* (a Philadelphia business magazine), most of the anticipated actions concern new air and water pollution standards and a variety of hazardous waste issues, including clean-up liability and underground oil storage tanks. Moreover, three counties of southern New Jersey across the Delaware River from Philadelphia are examples of northeastern areas where water shortage is a major, longstanding problem—and a source of uncertainty over water use restrictions. Development of a long-term solution to the underlying problem—overuse of aquifer water—has been slow, because several municipalities in the area successfully sued the New Jersey Department of Environmental Protection over their designation as critical water supply shortage areas.

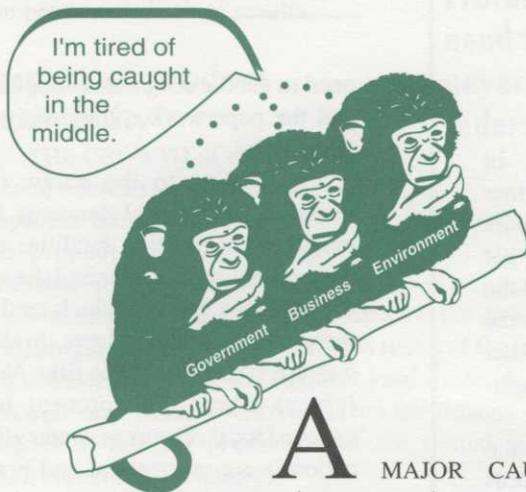
Impact of new Clinton-Gore Administration

IN HIS AUGUST, 1992, STATEMENT on the new worker protection standard, now former EPA administrator William K. Reilly said, "I am proud of this product." A big question this year was how ambitiously the new Clinton-Gore administration would be about toughening EPA's "products." The consensus approach involved in the President's Council on Sustainable Development may indicate how the new administration will try to work together with environmental and industrial groups, but, as with his proposed solution to timber industry problems in the Northwest, the results may not please either side.

President Clinton's original budget proposal was changed, but it is important to note that it incorporated a number of environmental initiatives.

"... It's the first time in American history that environmental considerations have been integrated into the federal budgetary process in such broad, sweeping fashion," according to Gannett News Service commentator Edward Flattau.

Obviously environmental actions in general have already increased under the Clinton administration (*see Regulatory Watch for the most recent developments, on page 14*). A host of factors, from budget restraints to other major domestic policy debates and overseas crises, will affect the impact of the new administration, but at this point it is difficult to predict how.



A MAJOR CAUSE of uncertainty over environmental regulations is the sheer number of laws, regulations, agencies, and issues involved. These summaries by no means exhaust the subject:

LAWS

■ **Revised Clean Water Act**

Federal legislation governing water pollution control, including both storm water discharge and non-point run-off. Related new regulations were implemented in 1992. This law increased regulations governing the manufacturing, mixing, and formulating of fertilizers and pesticides.

■ **Safe Drinking Water Act**

This 1977 law regulates the quality of water in public drinking water systems and the disposal of wastes in injection wells.

■ **Emergency Planning & Community Right to Know Act**

This 1976 law, resulting from the chemical accident in Bhopal, India, mandates state development of plans for chemical emergencies, accident and release reporting, and related trade secret issues.

A related bill expected to be re-introduced at some point is the Notification Control & Application Act, which would establish a registry of chemical "sensitives" and increase posting requirements on home applications.

■ **Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)**

This 1976 law regulates the manufacture, distribution, and use of pesticides and research into their health and environmental effects. It is administered by the EPA.

In general, FIFRA increased training requirements for certified pesticide applicators, increased fines for violations, and increased training for state enforcement personnel. It is also the law under which the new Worker Protection Standard (WPS) and related labelling requirements were developed.

A FIFRA re-authorization bill was introduced, but not passed, in 1991. A new bill may be introduced this year, but controversies over its provisions and likely amendments, regarding minor use chemicals and pre-emption of local use restrictions, make smooth sailing unlikely.

Another focal point of debate between indus-

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Regulations reflect a host of cofactors

ENVIRONMENTAL REGULATIONS AND LAWS are like celestial bodies. They are pocked with impact craters—depending on whether a business group or an environmental lobby or a well-covered incident made a decisive mark on the final letter of the law. Court decisions and academic studies also have impact on the process. As a result, the quality of regulations tends to vary.

Hard as it may be for people on the firing line to have perspective on this issue, for front-line turf grass managers, the development of federal environmental regulations actually has been, and will likely continue to be, a fairly gradual process. Fifteen years after the EPA was established in 1970, small volume generators of hazardous waste began having to meet environmental regulations. Three years later, in 1988, the new Worker Protection

Standard (WPS) was first proposed. Five years later the 70 pages of the new WPS regulations were finally released in August, 1992. The new WPS labels went on pesticides in April, and implementation of portions of the new standard will be phased in over the following year.

Part of what has made this relatively gradual increase in environmental regulations such a source of worry to turf managers is that environmental concerns are not narrowly defined. They encompass a whole range of complex related issues. For example, the National Golf Foundation report cited above also noted that developers of new golf courses face heightened public concerns about wetlands and people or groups who favor limits on development. These factors tend to lengthen the process involved in major construction or expansion plans, because a period for public comment is required. They can also stop a project from happening. Managers involved in such projects

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What's it like to be inspected?

WHEN KEENER-SENSENIK LANDSCAPING, INC. in Newark, Delaware, was inspected, managing partner Dana Ressler says the inspector spent about three hours and did find a variety of violations, but he says, "he wasn't there to get me. He was there to help me." However, he adds that the tone of the encounter could have been different, if the inspector had come because of a complaint or if he had found a pattern of violations that suggested something less than a "good faith" effort to be in compliance.

The inspector checked such things as the company's license and whether its license number was on each of its vehicles and its records of pesticide applications. He pointed out what the company needs to do to correct the deficiencies.

"We didn't have records of the weather conditions on the particular lawns," says Ressler. Local weather reports aren't specific enough, so he says he is now searching for a portable unit that can read the wind speed and take the air temperature at each site. The inspector also found that all of Ressler's employees did not have the required photo-identification cards.

While saying that he thought almost all of the requirements that he had to meet were reasonable, Ressler is also searching for the required back flow protector—to prevent liquid from a tank from being taken up into a hose used to fill the tank. Ressler points out that such a possibility is "freakish," but he is checking farm supply companies in his area to see if he can find the right equipment.

"I don't think it'll take us longer than five minutes per customer to fill out the paperwork," says Ressler. He uses ready-made, commercially available forms, which have spaces for most of the necessary information. Keener-Sensenig works on shrubs as well as lawns, and Ressler says documenting the specifics of applications to shrubs is more involved than documenting applications to lawns because of the variety of ornamental plants.

Ressler supports enforcement actions against people operating without a license or without the proper training, pointing out that substandard operators hurt legitimate companies by unfairly competing against them. Remembering the liability insurance crisis of the mid-1980s, he sees compliance as a form of self-defense.

"It's actually protecting me," he says. ■



need to get the community outreach and the paperwork rolling early in the process.

According to the study, the major environmental concerns for managers of existing facilities are the availability of water and the use of pesticides, both of which tend to increase operating budgets. In dry, western states and states (like New Jersey) where development has exceeded local resources, water allocation is a controversial and hotly contested issue. Even in states where water use is normally not a problem, drought emergencies and the opposite problem of extensive flood damage can make an issue of water use. All states have emergency plans in place, and many facility managers already have implemented alternatives such as the storage and use of effluent water.

In addition, in their efforts to comply with RCRA, nearly half the states have sought to ease pressures on landfills by banning their use for yard waste, which represents about one-fifth of all solid waste (*see table on page 7*). Mowing, dethatching, pruning, and leaf removal all generate a substantial amount of organic matter—35 millions tons annually, according to the EPA. Increasing amounts of this material are being composted, but only 4.2% of the total volume of yard waste generated. The number of facilities that compost their own yard waste is growing, and so is the number of composting facilities. While there are benefits to this trend, it still represents yet another area of adjustment.

The EPA and organizations such as PLCAA now encourage leaving grass clippings on lawns. There are good reasons for doing so: unlike thatch, which contains high levels of lignin that makes thatch slow to decompose, clippings break down quickly. However, spreading clippings from an area of turf infected

with a disease such as Pythium during the hot summer months, can produce disastrous results.

Impact on product availability

THE GROWTH of environmental consciousness also has impacted the marketplace and the products and equipment available to professional turf grass managers. For example, much of the interest in mulching mowers in recent years is a result of the increasing number of landfill bans against yard waste. A glance through any trade magazine provides dozens of examples of ads for products that are touted as more environmentally friendly.

The environmental rules that have been applied to the manufacturing sector of the green industry are much more involved, more expensive, and more dramatic in their impact on the marketplace. Manufacturers are also subject to intense scrutiny by environmental groups, such as Greenpeace.

New laws and regulations are already affecting both the availability of existing products and the development of new products—and additional dramatic impacts are expected. The complicated and still changing rules governing the manufacturing and use of pesticides mean that manufacturers have to spend more time and money to keep existing products on the market, and they have to think twice before bringing a new product to the market.

"They're going to see more defense of old products than efforts to bring out new products," says James Petta, business manager of the Turf and Ornamental Department at ICI Americas Inc. A number of companies in the field announced fewer new products in 1993 than in previous years.

Petta points out that manufacturers are tied to two-three year automatic studies, and must decide beforehand if a product has enough potential to warrant the expenses involved. In fact, it takes a manufacturer seven to eight years of research and development to bring a new product to market. The impacts of increasing environmental regulations have been slowing the flow of new products, lengthening the time it takes to get a new product to market, and increasing the costs of production.

"The cheap thing is to find out if it works," says Petta, noting that approximately 85% of manufacturer's research dollars are tied up in looking at a product's environmental "profile" and its toxicity. In fact, studying and debating the safety of some products—like 2,4-D—have practically become whole industries by themselves.

Another concern here is a combination of local environmental ordinances and permitting requirements, which could mean the industry would have to conform to—or spend time and money opposing—hundreds or even thou-

" Professional turf managers need to be involved in local government right up to the federal government."

— JAMES PETTA
ICI Americas Inc.

sands of variable and, in some cases, extremely unreasonable standards.

"You've got to watch the back door. This is one of the most serious threats to turf managers," says Petta. He adds that "professional turf managers need to be involved in local government right up to the federal government." The

EPA reversed its policy in March, 1992, and since then has supported state pre-emption of local pesticide regulations. The issue could be resolved through an amendment to FIFRA—a lot of wheels are in motion.

Outreach efforts are expanding

PETTA'S CALL FOR GREATER PROFESSIONAL involvement in the legislative and regulatory process and associated public debate on the issues may be one of the most frequently sounded themes for the 1990s. To cite just one example, the National Golf Foundation study recommended establishment of a clearing house for information about the golf industry and increased networking with other industry groups.

Another increasing form of action is publicizing the environmental friendliness of the industry. Ciba-Geigy is involved in a Environmental Steward Awards program that recognizes innovative superintendents. More than 500 golf courses nationwide have signed up for the Audubon Sanctuary Program run by the Audubon Society of New York and funded by the U.S. Golf Association.

State turf associations and a variety of national organizations, such as PLCAA and Responsible Industry for a Safe Environmental (RISE), are increasingly involved in "public comment" activities regarding specific laws and regulations. Many general business organizations, such as state Chambers of Commerce, have organized environmental committees that monitor, and comment on, state environmental actions. In short, there are ample opportunities for turf managers to become more informed and more involved in making their views and their industry's track record better known.

One noteworthy factor dampening this wave of openness, outreach, and enhanced dialogue is liability. Labeling regulations, the Superfund experience, law suits, occasional crises over the cost and the availability of liability insurance (such as the "Liability Crunch" of the mid-1980s), and a host of related controversies have been, and continue to be, costly to both business and government.

The media's spotty record on accuracy adds to the problem. All of these factors tend to make people cautious about what they say and what they recommend. For example, the Alliance for a Clean Rural Environment (ACRE) published a booklet in *Farm Chemical* magazine designed

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Trends in violations

Who did what and where?

DURING FISCAL YEAR 1992 the EPA's Lawn Care Compliance Monitoring Initiative requested state environmental agencies to review lawn care company advertising and to conduct at least 10 extra use inspections of lawn care companies. The goals of the initiative were both to enforce existing regulations—to identify wrongdoers and to take appropriate actions against them—and to gather information on what types of violations are taking place—to provide a basis for adjusting the focus of the ongoing joint federal-state effort.

By the end of the year, the states had conducted 760 use inspections and found 257 violations. Another 37 cases were still under investigation. Nationwide, the number of actual inspections represents a tiny percentage of the industry. The adjoining charts and tables show what violations were found and what kinds of enforcement actions were taken. In bottom line terms, the good news is that two-thirds of the companies inspected were in compliance, and the bad news is that one-third of the companies inspected were breaking a variety of state and federal regulations.

How serious were the violations? That is obviously a matter of perspective. For example, every industry has its rotten apples and turf management is no exception. Witness the fact that the violations found included one person who sprayed another applicator, one who sprayed the wrong lawn, and one who illegally dumped pesticides. While these clearly were exceptional cases, they are exactly the kind of cases that make news as well as attracting regulatory attention. The Lawn Care Initiative report recommended giving higher enforcement priority to areas where the highest rates of violations are found.

How do the various regions of the country compare in terms of actual violations of environmental regulations? The following table shows the relative relationship between inspections and violations in each region (see the list of EPA regional offices on pg. 15) The first data column for each region shows the percent of the total number of inspections conducted there. The second data column shows the percent of the total number of violations which

REGION	% TOTAL INSPECTIONS	% TOTAL VIOLATIONS
1	11.4	0
→ 2	10.5	11.6
3	13.8	5.8
→ 4	12.5	18.0
5	18.0	16.0
6	6.6	1.4
→ 7	15.9	25.9
8	3.2	1.8
9	3.2	1.8
→ 10	4.6	5.4

If the percentage of inspections is higher than the percent of violations, then your region is doing an above average job of complying with environmental regulations. If the percentage of violations is higher than the percent of inspections, then your region accounted for more than its share of violations. By this reckoning, regions 2, 4, 7, and 10 are more likely targets than other regions for increased use inspections (see EPA regional offices list on pg. 15).

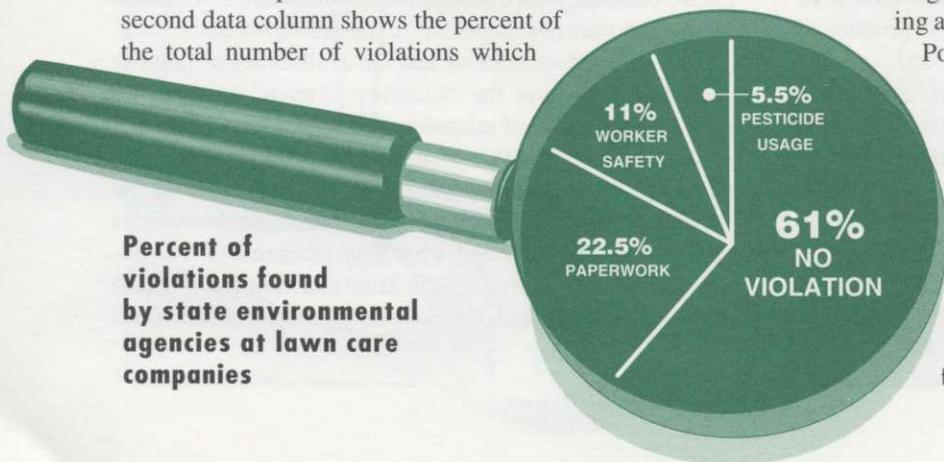
were found in each particular region.

On the whole, the industry seems to be moving toward compliance. Whether it is doing so at a reasonable rate is another judgement call. The facts are as follows: less than 6% of the lawn care companies had violations of worker safety regulations and approximately 11% had violations of pesticide usage regulations. The specific violations included drift problems resulting from spraying in adverse conditions (7% of total violations), lack of protective clothing (9%), unlicensed operators (15%), and storage (5%). Bear in mind that a 10% rate would mean that these kinds of violations were found at one in ten companies.

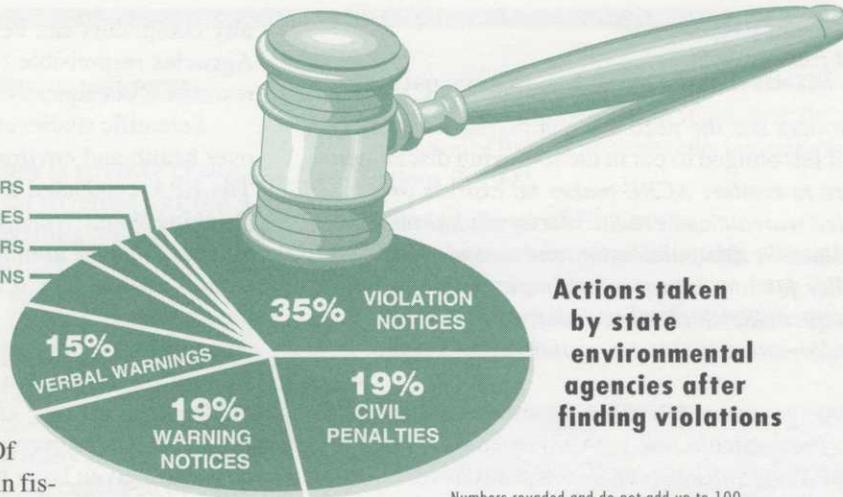
A far greater number of the companies (22.5% or slightly over two out of ten companies) were found to be violating what might be called internal and external paperwork regulations, such as those regarding record keeping and posting and notification of sprayed areas.

Posting and notification violations accounted for 17% of the total violations found. With the implementation of the new Worker Protection Standard and the related emphasis on community right-to-know issues, paperwork regulations will continue to receive a lot of attention.

In 1992, the states conducted a total of 760 inspections and found 257 violations.



1% ADVISORY LETTERS
2% FIELD NOTICES
2% ADVERTISING LETTERS
6% OTHER STATE ACTIONS



Actions taken by state environmental agencies after finding violations

Numbers rounded and do not add up to 100

The EPA's Lawn Care Initiative also looked at advertising. Of 934 literature reviews conducted in fiscal year 1992, only 41 violations were found.

Another 39 cases were referred by the states to the Federal Trade Commission (FTC). Some states also referred cases to their own Attorney General offices. In other words, 96% of the advertising was found to be in compliance, and 4.4% was found to be in violation—with another 4% or so still listed as possible violations. Again, these figures mean that violators represented less than one in every ten companies inspected.

The next obvious question is how serious were the resulting enforcement actions? And were they in proportion to the violations? Once again, the obvious question involves a value judgement. The facts are simply that, in most cases, the actions taken amounted to a verbal or written warning. Less than one in every four violation enforcements stemming from inspections resulted in civil penalties.

Near-term adjustments

GIVEN LAST YEAR'S ENFORCEMENT RESULTS, the EPA expects to continue its Lawn Care Monitoring Initiative, but the low rate of advertising violations will result in backing off the emphasis given to lawn care advertising in 1992. It still will be a part of routine inspections, and tips and complaints will continue to be pursued. Increased inspections and enforcement actions will be targeted to areas with the highest violation rates in 1992.

The EPA is also aiming to help increase the level of compliance by developing and making available a variety of informative materials:

- A LAWN CARE COMPLIANCE ASSISTANCE packet for distribution by state inspectors
- REVIEWING WHETHER THE LAWN CARE application violations related to restricted use products, which may then require a revision of training and certification materials
- AND A PROPOSED SET OF LAWN CARE advertising guidelines.

For turf managers, the most immediate use of these violation and enforcement facts is as a guide to your own compliance efforts. In short, use them to identify and

prioritize the kinds of violations that you need to look for: unlicensed operator/business equipment, lack of protective clothing and other applicator safety problems, spraying in adverse conditions that result in pesticide drift, and pesticide storage, misuse, and label violation. Because these violations involve risks to workers or to the public, eliminating them should be a top priority.

Even more likely are paperwork violations. On one level, complying with paperwork rules should be easier than complying with rules covering the handling of hazardous materials. There is no special clothing or equipment involved. What is involved, however, is keeping careful records and making sure that workers understand the rules.

Beyond immediate compliance concerns, these facts should help turf managers to communicate more effectively with the public and with legislators. ■

The regulatory burden has varied, in part, because individual states and localities have moved at differing speeds in adopting new regulations. For example, this July Georgia became the twenty-third state to pass a pesticide posting law. The adjoining table shows the spread of state bans on using landfills for yard wastes. ▼

STARTING DATES FOR STATE BANS ON LANDFILLING YARD WASTES

- 1988 New Jersey
- 1989 no states
- 1990 Minnesota*, Illinois, Pennsylvania
- 1991 Connecticut, Iowa, Maine, Massachusetts*
- 1992 Florida, Minnesota*, Missouri, South Carolina, Massachusetts*
- 1993 Arkansas, North Carolina, Wisconsin, Michigan, West Virginia, Ohio
- 1994 Indiana, Nebraska, Maryland
- 1995 South Dakota, Michigan

*Phase-in plan

Environmental Regulations

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to help farmers see the need for complying with safety rules, but it felt obliged to put in the following disclaimer:

Notice to reader: ACRE makes no express or implied warranties as to the recommendations contained in this publication and assumes no liability for any injury or damage, direct or consequential, which may result from the use of the information in this newsletter.

Even the government itself is careful about this issue. For example, the EPA's *Layman's Guide to the Toxic Substances Control Act* states that "the following sections briefly describe the major provisions of T.S.C.A. The discussion is intended to familiarize the public with the provisions of the law, not to constitute an authoritative legal statement of it."

In a related vein, a turf manager may feel reluctant to call a regulatory agency—even to clarify what a particular regulation requires. Such an attitude is clearly erring on the side of caution. State and federal agencies are genuinely interested in providing information and encouraging compliance.

How clean is clean enough?

ONE OF THE BIGGEST regulatory problems is the unresolved conflicts concerning standards for what is clean enough—in a world where parts per billion are detectable. The questions and debates have both political and scientific dimensions. Most of them boil down to disagreement over the right standards for, and the right ways of handling, risk management.

In this context, it is important to understand the incident-driven character of public opinion, media coverage, and the subsequent development and enforcement of new laws and regulations. The local newspaper here in Wilmington ran a headline that illustrates this point: "Boy's death prompts look at site safety." Among the thousands of such local stories are incidents that are like the proverbial shot heard round the world. The most obvious example is the 1985 accident in Bhopal, India, where over 2,500 people died as a result of a leak of methyl isocyanate at a Union Carbide plant. This incident led directly to the Emergency Planning and Community Right to Know Act of 1987.

The incident involved also can be a court decision, such as the recent Supreme Court decision to let stand a lower court's decision involving the Delaney Clause, which prohibits introducing carcinogens, including pesticide residues, into food products. Another important case involved an effort by OSHA to speed-up restrictions on workplace chemicals by grouping them. A federal court ruled against the practice, forcing OSHA to return to the slower on at a time approach.

On a more immediate level, individual and commu-

nity complaints can be potent process-driving incidents. Agencies responsible for enforcement may have limited resources, but squeaky wheels get oiled.

Scientific studies are one way that these controversies over health and environmental risks are properly settled. The EPA conducted a National Survey of Pesticides in Drinking Water Wells, and is now studying potential risks to birds from 14 granular pesticides. A host of academic studies, such as the Cornell study cited above (*see page 2*), have produced a steady stream of evidence, and individual companies and industry groups are also involved in sponsoring studies. Unfortunately, data-based facts and conclusions are not universally available nor accepted even when known. Partisans on all sides of a given issue tend to attack one another's credibility, but trends toward acceptance of data-driven conclusions continue growing.

The bottom line

WHILE TURF MANAGEMENT professionals and companies continue to put the turf industry in the forefront of the movement toward a "clean and mean" society, they clearly need to be more involved in community outreach and in lobbying government. These activities involve different challenges than those involved in managing turf, but ones that are just as essential to the future of the industry.

Obviously, the issue of the environment is not going to go away. In fact, two-thirds of 130 media representatives polled by Pinnacle Worldwide of Minneapolis, Minn., expect coverage of environmental issues to increase. Long-term Greenpeace and other environmental groups will continue to push for "full public disclosure" concerning every step in the process: development, manufacturing, distribution, and use and fate of pesticides.

The challenge is to find common ground. For example, professional turf managers and environmental groups both want to see more research into "alternative, non-chemical methods of pest management." The problem is that further developments in this area are research dependent, and turf managers have to deal with the problems they face today. Manufacturers have increased research spending on pest control alternatives, but ICI's Petta cautions that there are no "magic bullets." ■

ASK THE EXPERT

HAVE A QUESTION on any aspect of turf management? Send it to:

Ask the Expert—Turf Grass Trends

1775 T St. NW, Washington, DC 20009

or send your message via

Fax: (202) 483-5797

Compuserve: 76517, 2451

Internet: 76517.2451@COMUSERVE.COM



Environmental laws, agencies, and terms

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try and environmental groups is possible changes in the re-registration program governed by FIFRA. This program involves updating safety data on existing pesticides. It was initiated in 1988, and originally expected to be completed by 1997. A General Accounting Office (GAO) report issued in April pointed out problems with the program. Of 20,000 products subject to re-registration only 33 have been re-registered. Moreover, 600 of the products—more than 18 times as many products as have been re-registered—have been cancelled or otherwise moved toward suspension.

The fees manufacturers must pay to register their products have increased substantially. Speeding up the re-registration process may require more funding, according to the EPA, but the costs involved already have led manufacturers to pull some minor use pesticides off the market. Another bill (HR 967) would reduce the re-registration requirements for minor use pesticides. It is supported by industry, such as Responsible Industry for a Sound Environment (RISE), and opposed by environmental groups, such as the National Audubon Society.

Six states have passed pre-emption laws limiting local ordinances, and industry groups favor an amendment to FIFRA that would provide a national mandate on pre-emption.

Pesticide Safety Improvement Act (HR 3742)

If passed, will increase training requirements for applicators, customer right to know and customer service agreement requirements, and notice of applications. Would also mandate federal rather than state regulation of the lawn care industry.

Resource Conservation & Recovery Act (RCRA)

This 1976 law established programs and regulations designed to insure safe waste treatment and disposal. Under it over \$20 million in fines have been levied, and increased enforcement and criminal and civil prosecutions are expected.

A related trend among states is the increasing number of bans on the use of landfills for yard wastes.

AGENCIES

Occupational Health and Safety Administration

(OSHA) Federal agency involved in restrictions on workplace chemicals and other workplace health and safety issues. The policy of grouping such chemicals was blocked by suit in federal court. The decision required return to slower chemical by chemical approach.

U.S. Department of Transportation (DOT)

Federal agency involved in regulating the transportation of hazardous materials. Issued new regulations in 1992.

U.S. Army Corps of Engineers

Federal agency involved in issuing wetlands protection permits. Many states also have agencies involved in regulation of activities that involve or impact wetlands.

TERMS

non-point run-off . . . Water that is discharged from a site in general rather than from a specific source on the site.

P.P.E. . . . Personal protective equipment required by the new WPS.

pre-emption . . . A rule that limits local government agencies from passing regulations that may conflict with state and federal environmental regulations.

registrant . . . Registered pesticide manufacturers.

R.E.I. (Restricted Entry Interval) . . . A period of time after a pesticide application is made to a site during which workers are excluded from treated sites. R.E.I.s are set for all pesticides, ranging from 12-72 hours depending on toxicity of material applied.

ROPS (Roll over protection standard) . . .

A requirement, dating to 1984, that tractors and certain other equipment include protection for the driver in case the vehicle rolls over.

sensitives . . . People with extraordinary sensitivity to chemicals such as pesticides. The Notification, Control and Application Act would establish a registry of sensitives whom businesses would have to notify if they plan to apply a pesticide near the home of a person on the list.

WPS (Worker Protection Standard) . . . Designed to eliminate worker exposure to pesticides, to mitigate exposures that do occur, and to insure that employees are informed about pesticide hazards. Sets rules for worker safety in 70 pages of regulations that were released in 1992 and became effective in April, 1993, including new worker safety labelling requirements for approximately 8,000 products. Full compliance is mandated by April, 1994. ■



Want to get involved?

Getting organized is an essential first step, whether you are seeking information, aiming to have your views heard, or searching for allies.

THE FOLLOWING is a list of national, regional, and state professional organizations. It may be worth noting that people in neighboring states and "neighboring" professions frequently act as if they are worlds away; however, many environmental concerns are regional and multi-disciplinary in nature, and regulatory trends also cross state lines.

In future issues of *Turf Grass Trends*, we will profile organizations that are involved in legislative and regulatory developments in newsworthy ways or that are particularly good sources of information on environmental issues.

The processes by which environmental laws and regulations are developed and implemented are generally the same throughout the country, but particular states and localities differ in how they are organized and which trends they have embraced.

To complete this directory, make a list of your state and local government representatives and agency contacts.

National Organizations

American Assoc. Botanical Gardens & Arboreta, Inc.
786 Church Rd.
Wayne, PA 19087
(215) 688-1120

American Assoc. Landscape Contractors
155 Throop St.
N. Babylon, NY 11704
(516) 661-1966

American Assoc. of Nurserymen
1250 I St. N.W., Suite 500
Washington, DC 20005
(202) 789-2900

American Council Turfgrass, Soil & Crop Sci. Ctr.
Texas A&M University
College Station, TX 77843
(409) 845-3041

APPA
Assoc. Higher Education Facilities Officers
1446 Duke St.
Alexandria, VA 22341-3492
(703) 648-1446

American Landscape Horticulture Assoc.
2509 E. Thousand Oaks Blvd., Suite 109
Westlake Village, CA 91362
(800) 359-6647

American Sod Producers Assoc.
1855-A Hicks Rd.
Rolling Meadows, IL 60008
(708) 705-9898

Assoc. Zoo. Hort.
c/o Toledo Zoological Gardens
P.O. Box 4010
Toledo, OH 43609
(419) 385-5721

Golf Course Builders Assoc. of America
920 Airport Rd., Suite 210
Chapel Hill, NC 27514
(919) 942-8922

Golf Course Superintendents Association of America
1421 Research Park Drive
Lawrence, KS 66049-3859
(913) 841-2240

Independent Turf & Ornamental Distributors Assoc.
5050 Beech Place
Temple Hills, MD 20748
(301) 899-3535

Landscape Maintenance Assoc., Inc.
P.O. Box 728
Largo, FL 34649
(813) 584-2312

The Lawn Institute
County Line Rd., P.O. Box 108
Pleasant Hill, TN 38578-0108
(615) 277-3722

National Assoc. Industrial & Office Parks
1215 Jefferson Davis Hwy., Suite 100
Arlington, VA 22202
(703) 979-3400

National Catholic Cemetery Conference
710 N. River Rd.
Des Plaines, IL 60016
(708) 824-8131

National Institute Park & Grounds Management
P.O. Box 1936
Appleton, WI 54913
(414) 733-2301

National Roadside Vegetation Management Assoc.
309 Center Hill Rd.
Centerville, DE 19807
(302) 655-9993

PLCAA
Professional Lawncare Assoc. of America
1000 Johnson Ferry Rd.
Marietta, GA 30068-2112
(404) 977-5222

PGMS
Professional Grounds Management Society
10402 Ridgland, Suite 4
Cockeysville, MD 21030
(301) 667-1833

Public Golf Management Assoc.
8030 Cedar Ave. S., Suite 228
Bloomington, MN 55425
(612) 854-7272

RISE
Responsible Industry for a Safe Environment
1155 15th St. NW Suite 900
Washington, DC 20005
(202) 872-3860

Sports Turf Managers Assoc.
1455 E. Tropicana, Suite 390,
P.O. Box 98056
Las Vegas, NV 89193-8056

USGA
United States Golf Assoc. Green Section
Golf House
Far Hills, NJ 07931
(908) 234-2300

State and Regional Turf, Nursery, Landscaping, and Facilities Management Organizations

NORTHEAST REGION

Associated Landscape Contractors of Massachusetts

288 Walnut St., Suite 300
Newton, MA 02160
(617) 964-0452

Connecticut Groundskeepers Assoc.

P.O. Box 876
Bethel, CT 06801
(203) 791-8615

Eastern Regional Nurserymen's Assoc.

24 West Rd., Suite 53
Vernon, CT 06086
(203) 872-2095

Massachusetts Nurserymen's Assoc.

100 Boylston St., Suite 1050
Boston, MA 02116
(617) 426-6400

Massachusetts Turf & Lawnglass Assoc.

P.O. Box 489
Hadley, MA 01035
(413) 549-5295

Nassau Suffolk Landscape Gardeners Assoc.

P.O. Box 489
Brightwaters, NY 11718
(516) 665-2250

New England Cemetery Assoc.

15 Riverton St.
Keene, NH 03431
(603) 357-3967 or (603) 352-7655

New England Nurserymen's Assoc.

288 Walnut St., Suite 300
Newton, MA 02160
(617) 964-8209

New England Park Assoc.

c/o Wickham Park
1329 W. Middle Turnpike
Manchester CT 06040
(203) 528-0856

New York State Turfgrass Assoc.

P.O. Box 612
Latham, NY 12110
(518) 783-1229

New York Turf & Landscape Assoc., Inc.

P.O. Box 307
Scarsdale, NY 10583
(914) 636-2875

Pennsylvania Nurserymen's Assoc.

1924 N. Second St.
Harrisburg, PA 17102
(717) 238-1673

Pennsylvania Turfgrass Council

P.O. Box 417
Belleville, PA 16823
(814) 355-8010

MID-ATLANTIC REGION

Atlantic Seedsmen's Assoc.

298 E. McCormick Ave.
State College, PA 16801
(814) 237-0330

Bergen County Landscape Contractors Assoc. Inc.

P.O. Box 117
Closter, NJ 07624

Cultivated Sod Assoc. of NJ

Crop Sci. Dept., Cook College
Rutgers University
P.O. Box 231
New Brunswick, NJ 08908
(201) 247-8028

Golf Course Superintendents Assoc. of N. J.

66 Morris Ave., P.O. Box 359
Springfield, NJ 07081
(201) 579-1100

Landscape Contractors Assoc.

MD-DC-VA
9053 Shady Grove Ct.
Gaithersburg, MD 20877
(301) 948-0810

Maryland Nurserymen's Assoc.

P.O. Box 432
Perry Hall, MD 21128
(301) 256-1799

Maryland Seeding Assoc.

120 N. Carolina Ave.
Pasadena, MD 21122
(301) 255-8131

Maryland Turfgrass Council Inc.

P.O. Box 223
White Marsh, MD 21162
(301) 335-3700

N.J. Turfgrass Assoc.

Crop Sci. Dept., Cook College
Rutgers University
P.O. Box 231
New Brunswick, NJ 08903
(201) 932-9453

Tidewater Turfgrass Assoc.

P.O. Box 2171
Norfolk, VA 23501

Turfgrass Council of North Carolina

P.O. Box 289
Southern Pines, NC 28388
(919) 695-1333

Virginia Nurserymen's Assoc., Inc.

383 Coal Hollow Rd.
Christiansburg, VA 24073
(703) 382-0943

Virginia Turfgrass Assoc.

3848 Greenland Ave. N.W.
Roanoke, VA 24012
(703) 562-4781

Virginia Turfgrass Council

P.O. Box 9528
Virginia Beach, VA 23450
(804) 340-3473

MID-WEST REGION

Grounds Management Assoc.

Wisconsin, Inc.
6515 Seybold Rd.
Madison, WI 53719
(608) 274-6311

Illinois Landscape Contractors Assoc.

2200 S. Main St., Suite 304
Lombard, IL 60148
(708) 932-8443

Illinois Turfgrass Foundation, Inc.

One Illinois Center, No. 200,
111 E. Wacker Dr.
Chicago, IL 60601-4298
(312) 616-0800

Indiana State Lawn Care Assoc.

375 Ridge Point Dr.
Carmel, IN 46032
(317) 575-9010

Iowa Turf Producers & Contractors

108 Candlestick Dr.
Mt. Vernon, IA 52314
(319) 895-6917

Kansas State Horticultural Society
4237 Silver Lake Rd.
Topeka, KS 66618
(913) 233-9657

Kansas. Turfgrass Foundation
Dept. of Hort., Waters Hall,
Kansas State University
Manhattan, KS 66506
(913) 532-6170

Kentucky Turfgrass Council
Carter Bldg., E. Kentucky University
Richmond, KY 40475
(606) 622-2228

Lawn Service Assoc. of Michigan
4463 Bursdens Dr.
Warren, MI 48092
(313) 751-1190

Michigan Nursery & Landscape Assoc.
819 N. Washington Ave.
Lansing, MI 48906
(517) 487-1282

Michigan Recreation & Park Assoc.
2722 E. Michigan Ave., Suite 201
Lansing, MI 48912
(517) 485-9888

Michigan Turfgrass Foundation
P.O. Box 80071
Lansing, MI 48909

Midwest Regional Turf Foundation
Dept. of Agronomy, Purdue University
W. Lafayette, IN 47907
(317) 494-8039

Minnesota Turf Assoc.
13655 Lake Dr.
Forest Lake, MN 65025
(612) 464-2130

**Missouri Assoc. of Nurserymen
and Western Assoc. of Nurserymen**
Rte. 1, P.O. Box 175
Clarksdale, MO 64430
(816) 369-2005

Missouri Valley Turfgrass Assoc.
344 Hearnest Ctr. Univ. Missouri
Columbia, MO 65211
(314) 882-4087

Missouri Park & Recreation Assoc.
1203 Missouri Blvd.
Jefferson City, MO 65109
(314) 636-3828

Nebraska Assoc. of Nurserymen
P.O. Box 80705
Lincoln, NE 68501
(402) 476-3852

Ohio Nurserymen's Assoc.
2021 E. Dublin-Granville Rd.
Columbus, OH 43229
(800) 825-5062

Ohio Turfgrass Foundation
234 Kettman Hall, OSU, 2021 Coffey Rd.
Columbus, OH 43210
(614) 292-2601

**Professional Lawn Care Assoc.
of Mid-America**
P.O. Box 35184
Kansas City, MO 64134
(816) 766-7616

Tennessee Nurserymen's Assoc.
P.O. Box 57
McMinnville, TN 37110
(615) 473-3951

Tennessee Turfgrass Assoc.
c/o Mid-East Power Equip. Co.
533 Hagan St.
Nashville, TN 37203
(615) 242-4600

Wisconsin Turfgrass Assoc.
Bishops Woods, Suite 104,
333 Bishops Way
Brookfield, WI 53005
(608) 274-6311

WESTERN REGION

**Assoc. Landscape Contractors
of Colorado**
5290 E. Yale Circle, Ste 100
Denver, CO 80222
(303) 757-5611

California Assoc. of Nurserymen
4620 Northgate Blvd., Suite 155
Sacramento, CA 95834
(916) 567-0200

**California Council/American Society
of Landscape Architects**
925 L Street, Ste. 250
Sacramento, CA 95814
(916) 447-763

**California Landscape Contractors
Assoc.**
2021 N St., Suite 300
Sacramento, CA 95814
(916) 448-CLCA

Colorado Nurserymen's Assoc.
10200 E. Girard Ave., Suite 340C
Denver, CO 80231
(303) 745-2848

**Golf Course Superintendents Assoc.
of Northern California**
1745 Saratoga Ave., Suite A1
San Jose, CA 95129
(408) 565-0360

Intermountain Grass Growers Assoc.
1423 S. Laura
Spokane, WA 99203
(509) 624-9263

Interstate Pro. Applicators Assoc.
P.O. Box 1377
Milton, WA 98354
(206) 922-9437

North Central Turf Grass Assoc.
P.O. Box 10444
Fargo, ND 58106-0444
(701) 232-0215

N. Calif. Turfgrass Council
425 Oak St.
Brentwood, CA 94513
(510) 516-0146

North Dakota Nurserymen's Assoc.
P.O. Box 426
Dickinson, ND 58601

Turf & Landscape Council
P.O. Box 7506
Ventura, CA 93006
(805) 495-2770

**Washington St. Nursery
& Landscape Assoc.**
1006-D Fryar Ave., Ste. 3/P.O. Box 670
Sumner, WA 98590
(206) 863-4482 ■

New pesticide educators group

NEW GROUPS are forming all of the time. After two years of organizational work, the American Association of Pesticide Safety Educators (AAPSE) was formed earlier this year. This new group will focus on providing pesticide safety educators with a single voice for speaking to EPA, expanding the role of pesticide coordinators in EPA's certification and training process, and addressing pesticide applicator issues. The group is organizing committees focused on the Worker Protection Standard and pesticide applicator training.

Amer. Assos. of Pesticide Safety Educators (AAPSE)

Dr. P. Mac Horton, Pres.
Clemson Univ., Dept. of Entomology
Rm. 113 Long Hall
Clemson, SC 29634-0365
(803) 656-3113

Environmental regulations and related trends: Who's affected and how?

EVERYONE HAS BEEN AFFECTED by environmental trends, but the impact has varied from sector to sector. Here is a summary of likely trends for 1993 and beyond:

Turf grass management operations

- Increased compliance efforts and costs related to changes in field procedures and office practices.
- Increased composting and other alternatives designed to reduce or eliminate the landfilling of yard wastes.
- Increased recognition of the positive business opportunities presented by ongoing changes in environmental regulations.
- Increased emphasis on worker training and certification.
- Continuing efforts to minimize the number of pesticide applications, to adjust expectations to reflect a "reasonable" performance standard, and increased market demand for safe, cost effective alternatives.
- Shake out of marginal operators and organizations due to escalating requirements.
- Lobbying all levels of government.
- And increased community outreach and attention to posting and notification requirements.

Manufacturers

- Continuing efforts to adjust to new legislative and regulatory changes, to have a voice in the direction of those changes, and to avoid involvement in costly related court actions, such as the Benlate fungicide contamination case in which the DuPont Co. is currently embroiled.
- Increase in number of more "environmental" products to meet market demand by requiring or allowing:
 - lower or less frequent application rates,
 - less rigorous worker safety precautions,
 - and easier clean-up.
- Flattening of pesticide market and gradually lowering of the number of companies involved, resulting in growth in market share for remaining big players. (The top six companies now have nearly a 70% share of the market.)
- Probable elimination of some products (primarily for agriculture) or increased restrictions on use.
- Continuing public outreach and research efforts by chemical companies, product manufacturers, and trade groups.

Government

- Increased enforcement, most likely in areas reporting higher levels of violations and in particular states with stiffer standards and higher commitment to enforcement.
- Promulgation of new rules as the legislative, judicial, and regulatory processes continue.
- Increased effort to get word out about new regulations and how to comply with them.
- Increased dialogue between state and federal regulators and decreasing numbers of local alarmist initiatives and ordinances as issues are sorted out.
- Less emphasis on monitoring lawn care advertising, since violation data indicate a low level of problems.
- Continuing water use controversies in areas with chronic water shortages and stiffer competition for the remaining scarce resources.
- Continuing debates and actions related to waste disposal and management.
- Increased training for regulators/enforcers.

Media and public opinion

- Continuing high level of media and public interest in regulatory confrontations, controversies over the impacts of new rules, and related court cases, studies, and research findings.
- Continuing debate on issues of risk management.
- Continuing efforts by environmental groups to influence public debate and government actions regarding use restrictions, record keeping requirements, enforcement actions, and notification rules.
- Increased awareness of turf as separate from agriculture.

Research

- Increased amount of data available on key environment and regulation-related subjects from:
 - funding of studies by government, industry, and trade associations,
 - state inspection and enforcement activities,
 - and ongoing academic research.

Bottom line

- Improved risk management of all potentially hazardous materials and practices.
- Improved effectiveness as individual company's recordkeeping generates data useful for assessing the effectiveness of applications and other turf management products and techniques.
- Reduced potential for liability crisis as hazardous practices and inadequate record keeping are reduced. ■

FEDERAL DEVELOPMENTS

Report will impact the turf industry

The US Environmental Protection Agency (EPA) will hold hearings on the Clinton administration's "reduced pesticide use initiative," according to Steve Johnson, EPA director of field operations for the Office of Pesticide Programs. The multi-agency initiative, formulated in response to the National Academy of Science (NAS) report on pesticide residues in the diets of infants and children, is designed to reduce the overall use of pesticides. The EPA will seek input from industry, and will offer a workshop on pesticide use reduction in January, 1994.

Johnson also indicated that the mandated re-registration of older pesticides, which were grandfathered during the initial setup of the EPA, was proceeding. More than 40 active ingredients have been processed to date.

In addition, a guide for the establishment of uniform regulations on lawn care application posting, pre-application notification, and registration of chemically sensitive individuals is in the draft stage. The guide (developed from industry focus groups and advisory councils) will provide a legislative manual for 20-odd states that do not currently have regulations covering these areas.

Additionally, the EPA announced that changes it was instituting in response to the NAS report would likely include:

- INCREASE TESTING for pesticide residues,
- EXPANDED REQUIREMENTS for pesticide use reporting,
- AND INCREASE SCRUTINY of minor use pesticides that are considered high risk materials.

In effect, the Clinton administration is revamping pesticide regulations, while scrapping the Delaney Clause. Under the plan, EPA will replace the absolutely no residue of potential carcinogens provisions of the Delaney Clause with a "minimal risk" standard for pesticide residues in the food supply.

Pesticides that do not meet the new standard will be removed from use more quickly than currently possible, and manufacturers will be required to re-register their pesticides every 15 years. Products that are not submitted for re-registration will be subject to immediate cancellation.

Bill would tax pesticides and fertilizers

A bill introduced in the U.S. Congress would tax pesticides and fertilizer components to provide funding for city water and sewer construction funds. By adding \$24.27 per pound of active ingredient on pesticides and \$.845 per pound of nutrient in fertilizer, HB 2199 would help raise \$4 billion dollars.

COMING ATTRACTIONS

JANUARY ISSUE

Biocontrols

Environmental regulations and related marketplace forces have complicated the use of pesticides. Biocontrols show promise, but are they a viable alternative? How will they fit in with the materials and practices already in use? Dr. Eric Nelson clarifies the scientific issues involved in this exciting new research.

The bill was introduced by Rep. Gary Studds (D-MA). If passed, it would add \$97.08 to the cost of one gallon of a typical 4E or 4S pesticide and \$14.79 to the average 50 lb. bag of 20-5-10 fertilizer. The legislation would, in effect, double the cost of pesticides and fertilizers.

New water pollution act introduced

The Water Pollution Prevention and Control Act of 1993 introduced by Senator Max Baucus (D-MN) would require that all state and federal water quality efforts be coordinated through a Water Quality Monitoring Council. The council would upgrade state regulations and projects for non-point water pollution control. It also would require EPA to identify 20 chemicals that pose the highest potential for toxic pollution and develop preventive strategies.

New wetlands policy proposed

The Clinton administration has proposed a new wetlands policy. Under the new policy previously converted wetlands would be grandfathered and given an exemption to the current re-establishment provisions. State and local governments would have expanded management roles in wetlands, and incentive programs to restore wetlands would be instituted by expanding the wetlands preserve program. Also, the current manual that defines a wetland would be scrapped in favor of the original 1987 definition, which will be superseded by an NAS study that is due in late 1994.

New off-road diesel standard proposed

EPA has proposed new standards for emissions from previously unregulated off-road diesel engines. Nationally, emissions from diesel engines in farm, turf, construction, and marine applications produce 9% of nitrous oxide air pollution. These first-time regulations apply to non-highway engines, and are expected to reduce their emissions by 37% by the year 2025.

STATE DEVELOPMENTS

More states pass pre-emption bills

The Illinois senate passed a bill (SB 85) that would prohibit local governments from passing any pesticide regulation legislations. The bill would require that "all pesticide regulations, including provisions for the registration, purchase, use, storage, and the disposal be handled by the state Department of Agriculture."

Three other Midwest states (Michigan, Nebraska, and North Dakota) have passed state pre-emption laws recently. Nebraska added a provision that all pesticide applicators within that state must become certified within 60 days of their employment. Two other Midwest states, Iowa and Wisconsin, and the state of Maryland are likely to pass pre-emption laws in 1994.

Ozone alert ban on landscape equipment proposed in DC

The Washington, D.C. area Council of Governments has proposed banning the use of gasoline powered commercial and residential lawn and garden equipment on "ozone alert days." The proposal is part of a plan to get the region to comply with the new federal clean air standards that mandate regional reductions in air pollution by 15% or loss of matching federal highway funding.

The proposed ban would restrict the use by homeowners of residential gasoline powered lawn and garden equipment on days forecast as ozone alerts. Commercial use of equipment would be limited to four out of five alert days. Each company would be assigned a number from one to five—with each alert day assigned a corresponding number. Company's whose assigned number matched the alert day assigned number would be banned from operating their equipment.

The council decided to propose this means of reducing the overall regional air pollution because it felt that the alternative, reducing the emissions from transportation, would be too costly. The Clean Air Act provisions take effect in November, 1996. ■

Thanks for all the calls

A number of *Turf Grass Trends'* original subscribers called to congratulate us on resuming publication. We appreciate your interest and support. We also appreciate your input.

Thanks from all of us. —JH

Who you gonna call?



GETTING CORRECT, current information is one way to purge the ghosts of unfounded rumors and other exaggerations. Here is a list of U.S. Environmental Protection Agencies and hotlines:

NAME	HOTLINE
RCRA/Superfund Hotline	800-424-9346
Emergency Planning and Community Right-to-Know Information Hotline	800-535-0202 (8:30 a.m.—7:30 p.m. EST)
EPA Safe Water Drinking Hotline	800-424-4791
EPA Storm Water Hotline	703-821-4616
Disposal of Hazardous Pesticides	800-262-8200
National Pesticides Telecommunications Network	800-858-7378
TSCA Assistance Office	800-424-9065

EPA REGIONAL OFFICES	PHONE	ADDRESS
Region 1 CT, ME, MA, NH, RI, VT	617-565-4502	JFK Federal Bldg. Boston, MA 02203
Region 2 NJ, NY, Virgin Is., Puerto Rico	212-264-2515	26 Federal Plaza New York, NY 10278
Region 3 DE, MD, PA, VA, WV, DC	215-597-9904	Curtis Bldg., 6th & Walnut Sts. Philadelphia, PA 19106
Region 4 AL, FL, GA, KY, MS, NC, SC, TN	404-347-3931	345 Courtland St., NE Atlanta, GA 30365
Region 5 IN, IL, MI, MN, OH, WI	312-886-6871	230 So. Dearborn St. Chicago, IL 60604
Region 6 AR, LA, NM, OK, TX	214-655-2270	1201 Elm St. Dallas, TX 75270
Region 7 IO, KS, MO, NE	913-236-2806	324 E. 11th St. Kansas City, MO 64106
Region 8 CO, MT, ND, SD, UT, WY	303-293-1723	1860 Lincoln St. Denver, CO 80295
Region 9 AR, CA, HA, NV, Am. Samoa, Guam, Pacific Trust Territories, Wake Island	415-974-0577	215 Fremont St. San Francisco, CA 94105
Region 10 AK, ID, OR, WA	206-442-1200	1200 Sixth Ave. Seattle, WA 98101

For information on state and local environmental regulatory issues, call your state department of agriculture or the environment. ■

For subscriptions, call 1-202-328-0888 or mail in today.

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Turf Grass Trends is published monthly.
1775 T St. NW, Washington, DC 20009
(202) 328-0888

Juergen Haber *Publisher*
Russ McKinney *Editor*
Christopher Sann *Field Editor*
Dr. Eric Nelson *Science Advisor*
Connee Wright McKinney *Art Director*

Subscriptions are \$120 per year for a single subscription and \$100 per year for multiple subscriptions. *Turf Grass Trends* accepts no advertisements. Not responsible for unsolicited manuscripts. © 1993 Turf Grass Trends

Turf Grass Trends
1775 T St. NW
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