Strategies for Effective State Early Detection/Rapid Response Programs for Plant Pests and Pathogens

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I. Executive Summary

In recent years, many states have been forced to grapple with both new introductions of terrestrial plant pests and pathogens and the spread of established pests. These pests defoliate and often kill hardwood trees, agricultural and horticultural crops, and other plants, giving rise to profound economic, ecological, and aesthetic harm in both traditional agricultural and forest areas and in heavily-populated urban and suburban zones.

While prevention is the most efficient invasive pest management strategy, some species are certain eventually to penetrate the most effective barriers to entry. Examples include both well-known scourges such as Dutch elm disease and chestnut blight and more recent invaders such as the emerald ash borer, Asian longhorned beetle, Asian gypsy moth, and hemlock woolly adelgid. After these pests are introduced, regulators may still eradicate them if they detect and respond to the infestation before the pest becomes established. Where early detection and rapid response fails, the consequences may be disastrous. The ash borer and adelgid, for example, have spread widely and threaten the continued survival of ash and eastern hemlock trees nationwide. Without effective early detection and rapid response programs, more pests will follow in their footsteps.

This report analyzes state laws that enable early detection and rapid response authorities to address terrestrial plant pests and pathogens and laws that may hinder the exercise of those response powers. Effective early detection/rapid response (ED/RR) systems address invasions by eradicating the organisms where possible and controlling them where the invasive pest is too established for eradication to be feasible. The robustness of state authority to detect and respond to infestations differs among states due to political, geographical, biological, and cultural factors. As a result, each state requires individualized policy analysis that addresses both its explicit invasive pest regulatory authority and other laws that may limit state agencies' powers to use certain response strategies.

Comparative study of state pest management policies reveals several commonalities. In Part II, this report presents the overarching issues and solutions identified for each of the regulatory variables discussed in the following state analyses. This introduction to the tensions facing policymakers informs the following federal and state-specific discussions by providing a framework for evaluating each individual state's laws.

Part III introduces two case studies drawn from recent ED/RR actions, thereby providing concrete examples of the concepts introduced in Part II. The case studies discussed were undertaken to combat plant pests in nonagricultural environments in two states with disparate regulatory structures. The first study examines New York's response to the Asian longhorned beetle (ALB). To date, the ALB infestation is limited to urban and suburban areas, centered in New York City and Long Island. The state response to the infestation of a highly-destructive pest in this area puts in sharp relief the need for access to private property and for authority to destroy and otherwise treat both infected trees and potential hosts. The second case study arises from efforts to eradicate the Asian gypsy moth (AGM) from a partially wooded, suburban county in Texas. Pest managers in this case provoked a successful community backlash against their proposed pesticide application. This case study similarly turned on access to private property, and illustrates the need for flexibility in the timing and development of response actions to suit local conditions.

Parts IV and V introduce the laws governing pest response actions. Laws and regulations other than those imposed by states themselves may impact the utility or implementation of pest controls in a given state. An understanding of certain federal provisions, for example, is necessary for a full comprehension of state laws relevant to the detection and eradication of plant pests and pathogens. As a result, Part IV addresses the Federal Plant Protection Act (PPA) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The PPA authorizes the federal government to prevent and manage some invasive plant pests and diseases. FIFRA and its state analogues, on the other hand, do not directly address invasive pest management but do establish limitations and requirements applicable to the use of pesticides by state and Federal actors to combat plant pest and pathogen invasions. It is important to note that while FIFRA is the only federal law of general applicability presented here, other state and federal laws also affect state invasive species detection and response. These include, but are not lim-

ited to, the Endangered Species Act, the Clean Water Act,[1] the National Environmental Policy Act, and their state counterparts. Although invasive species managers must be aware of the restrictions on control and management authority imposed by these and other similar laws, the extent and nature of these limits are beyond the scope of this study.

The federal government is not the sole source of laws and regulations that may affect state pest response actions. In addition to federal authority, local and regional governments sometimes affect pest management. Some states authorize political subdivisions, including counties, municipalities, water control authorities, and others, to supplement state pest control agency authority and undertake independent pest control actions. While important for understanding the true extent and limits on particular ED/RR systems, these local regulations are not captured by this analysis.

Finally, Part V analyzes the early detection and rapid response authorities for terrestrial plant pests and pathogens in each of the fourteen study states. The study states, which include California, Georgia, Hawai'i, Illinois, Indiana, Michigan, New York, New Jersey, Ohio, Oregon, Pennsylvania, South Carolina, Texas, and Washington, were selected because each has recently responded to invasions of terrestrial plant pests or pathogens. The discussion of each state's laws describes: (i) each responsible agency's jurisdiction over pests and the variety of potential pests subject to regulation; (ii) the extent of each responsible agency's authority to inspect private property; (iii) the extent of each responsible agency's authority to respond to infestations; (iv) the extent of each responsible agency's authority to quarantine infested areas; (v) the existence of provisions requiring compensation of landowners for response costs or property damage; (vi) limits on the responsible agencies' authority to destroy trees or other plants on state or private land; and (vii) limitations on the use of pesticides in the state.

The ongoing expansion of plant pest and pathogen issues across jurisdictional boundaries and into urban and residential environments makes this report vital for understanding the variety of existing ED/RR programs. In recent years, many states have been forced to grapple with both new introductions of terrestrial plant pests and pathogens and the spread of established pests.

Though most states have well-developed regulations governing pest response in agricultural and horticultural contexts, the expansion of pests into urban and other nonagricultural environments has created new challenges for pest control authorities. The expansion of invasion pathways requires agencies to have broad-based authority to utilize responses of varying destructiveness and to tailor those response actions to local conditions. The common need to impose draconian responses to infestation, including inspection, quarantine, pesticide application and wholesale removal of infested plants and trees, is often at odds with the values and desires of local residents and other interested parties in infested areas, and thus presents a challenge to both policymaking and implementation of ED/RR programs.

Notes

1. The CWA's complex interaction with FIFRA is briefly addressed below.

II. Surveying the Issues: Conclusions and Recommendations

The analysis of each state's ED/RR provisions for plant pests presented in this report reveals commonalities among the states as well as state-specific strengths and weaknesses. In developing an ED/RR program, each state must grapple with the resolution of similar tensions between environmental protection and privacy and similar questions of how to best distribute regulatory and management power among federal, state, and local authorities and individuals. This study reveals that states have resolved these dilemmas in several distinct ways. Prior understanding of the basic forms of power-sharing among agencies and individuals will enrich the state-by-state review of programs and authorities that makes up the bulk of this paper. Thus, this section introduces the problems faced by states in each of the seven study areas and discusses the variety of regulatory responses to problems used by states in addressing those problems.

The discussion in this section shows that no single ED/RR program is optimal for every state. Rather, different local environmental, cultural, historical, and socioeconomic conditions necessitate different policy responses to the ED/RR problem. The range of policy solutions that states have adopted – particularly with regard to access to property and pesticide application conditions – reflects these differences. While ideal policies are tailored for optimal operation under local conditions, some regulatory elements should be present in every ED/RR program. Thus, this section not only describes the variety of ED/RR policies, but also identifies elements that all ED/RR programs should share.

Jurisdiction and Definitions

The jurisdictional structure of plant pest and disease management authority is an important element of any state's ability to mount an effective ED/RR program. Many states vest jurisdiction over different types of pests in different agencies or divisions, thus balkanizing state authority to some degree. Split authority is particularly common in three contexts. First, forest pests are often regulated or managed by a different agency than that responsible for non-forest pests. Second, pests existing in commercial settings such as nurseries are sometimes regulated by a different agency than those occurring in non-commercial locales. Finally, one or more of the relevant pest management agencies is often not responsible for administering pesticide control laws.

There are good reasons to vest jurisdiction in multiple agencies. Forestry agencies, for example, likely have more expertise in forest pest management than do agriculture departments. Similarly, land management agencies are expected to have superior knowledge of local conditions on and threats to lands under their jurisdiction. On the other hand, there are also good reasons to consolidate management authority under a single agency in the ED/RR context. Most notably, a single-agency model requires no collaborative decision-making process and therefore should permit relatively swift and decisive response action. In multiple-agency systems, by contrast, responses should be slower due to the need for interagency consultation and alignment of response strategies in response to interjurisdictional pest infestations. Where agencies do not share priorities or are not on equal footing with regard to funding or expertise, this process may hinder both the effectiveness of and the rapidity with which the pest control action proceeds.

While interagency conflict is the most obvious source of potential friction, intra-agency balkanization could also potentially decrease ED/RR program effectiveness by differentiating tasks into separate divisions, thereby decreasing department-wide communication. This risk, however, is likely less than that inherent in separating jurisdiction among wholly separate agencies, where access to funding and expertise may be inordinately different. Simply put, a "nested" agency structure is likely to permit pest responses to be more rapid and coherent than possible in a multiple-agency, "separate but equal" system.

It is also important to note that the foregoing analysis is more applicable to pest response actions than to pesticide regulation. Agency balkanization is less of an issue for pesticides because, under the FIFRA scheme, pesticides must be registered prior to use. Given this forward-looking regulatory structure, it should be possible for a pest response agency to predict and work around limitations imposed by a separate pesticide regulator, with the potential exception of emergency actions aimed at wholly new pests.

Conclusion

Careful policy design can capture some benefits of both single- and multiple-agency systems. Regardless of jurisdictional structure, the most effective ED/RR systems are likely those that clearly identify the roles of responsible agencies at each point in the response process. Designation of lead agencies in each phase of the response action is one example of such a policy. Lead agency designation is likely to minimize the delay and controversy that may accompany the design and implementation of a specific pest response program, although such provisions also create a risk of focus on responses to areas within the special expertise of the lead agency. Thus, the state-by-state implementation of lead agency authority is likely to control the effectiveness of each system. Systems that effectively designate agency roles are likely to require consultation with all relevant agencies in developing rules, thereby promoting the harmonization of standards and encouraging joint planning prior to infestation. Similarly, where management authority is separated, information-sharing and cooperation are also vital to ensure that agencies act in concert to accomplish inspections and response actions most efficiently.

In addition to describing the jurisdictional structure of each state's pest management laws, this section describes the definitions used to define the scope of that jurisdiction. Pest management agencies, no matter how broad their powers, may only combat pests that are covered by their enabling statutes, so the definitional questions described below are fundamental to an evaluation of the strength of each state's direct authority. Each state's definitional structure can be described with reference to three variables: the breadth of the definition (i.e., are all potential pests captured by the definition?), the need for explicit listing prior to initiating pest management actions, and the provision for pests to be declared public nuisances and the need for listing prior to such declaration.

First, the broader the definition of pest under a given pest control statute, the more effective the pest manager can be when a new pest is discovered. On the other hand, where definitional gaps foreclose management authority over certain categories of organisms, agencies may be significantly handicapped or precluded from mounting response actions. Significantly, some states permit pest regulators to manage only "insects" without broadening that authority to include potentially harmful pests including non-insect arthropods and mollusks. In such states, an infestation by a non-insect pest could delay response until the federal Animal and Plant Health Inspection Service (APHIS), a unit of the Department of Agriculture, responds or until the agency's authority is expanded via legislation. Thus, the broader and more general the definition of "pest," the more potential there is for effective and rapid control action initiation.

Second, listing procedures are likely to impact the efficacy of each state's ED/RR program. This study revealed two models for pest listing.[1] States using the "dirty list" approach permit inspections and response actions only for infestations by organisms that the agency has explicitly declared to be pests. On the other hand, some states have adopted a "no list" approach, wherein the agency can inspect for any organism meeting the definition of pest, regardless of listing. These programs provide maximum flexibility to regulators and permit action without a lengthy listing process. For these reasons, this system is likely to be more effective in the ED/RR context, at least on an emergency basis.

Finally, the public nuisance definition question revolves around the same arguments that apply in the pest definition context. Among other things, a nuisance is defined as an unreasonable interference with the rights of another person or to rights common to the community as a whole.[2] Maintenance of a nuisance on private land is not permitted. Plant pests are an archetypal example of a nuisance because the maintenance of an invasive pest on a property imposes extreme hardships and costs on neighboring landowners and pest management agencies.

As explained below (see *Compensation*), public nuisance provisions may preclude claims for compensation for the destruction of infested plants. As a result, nuisance provisions are beneficial elements of ED/RR systems. States have several ways of approaching the public nuisance issue. Some are silent on whether pests constitute a nuisance, leaving that question to the judicial branch. Other states provide that the responsible agency is permitted to list certain pest

Table 1. State Definitions and Nuisance Provisions

State	Notable Definition Limits	Nuisance Provision Type
California	Insect pests and plant diseases only; other organisms if detrimental to agriculture	Automatic
Georgia	In forests, insects and diseases only	Declaration required
Hawai'i	No definitional limits, but no action permitted until declared as pest	No nuisance provision
Illinois	No definitional limits	Automatic
Indiana	Must be injurious to nursery stock, agricultural crops, other vegetation, or bees	No nuisance provision
Michigan	Split into insect pests and plant diseases; both categories are widely inclusive	Automatic, including uninfected but susceptible hosts "not essential to the welfare of the state"
New Jersey	Declared species of "dangerous plant diseases" and "dangerously injurious insects" only	Nuisance pests declared as part of pest designation; infested plants are automatic nuisances
New York	Invertebrates limited to insects; plant disease definition is broad; forest-specific jurisdiction similarly limited	Automatic, but applies only to articles exposed to qualifying pest
Ohio	No definitional limits; pests must be declared by agency	No nuisance provision
Oregon	"Dangerous insect pests and plant diseases" only; term is not defined	Automatic
Pennsylvania	No definitional limits	Declaration required
South Carolina	Must be threat to agriculture; in forests, insects or "related" organisms only	No nuisance provision
Texas	Insects and diseases only	Automatic
Washington	In forests, limited to organisms harming trees	Automatic for pests; premises can be declared a nuisance by judicial order only

species as nuisance species, thus requiring overt rulemaking action before clarifying the question. Further, some states provide that all organisms listed as pests by the agency constitute a nuisance – a stance that interacts fully with the pest definition question. Finally, some states automatically declare that all organisms meeting the definition of pest constitute nuisances – that is, that every plant pest or pathogen causing harm to agriculture or the environment is a nuisance.

As for jurisdiction, no single model for establishing pests as public nuisances can be considered superior. On one hand, ambiguity may be a positive, allowing for case-by-case determination of whether a pest qualifies as a nuisance. On the other hand, automatic nuisance designation eliminates costs created by uncertainty and judicial action, but may be over-inclusive and inflexible. Finally, the middle ground requiring administrative rulemaking permits agency flexibility but may be overly time-intensive to operate effectively in an ED/RR context.

Conclusion

Ultimately, the most effective ED/RR provisions define the pests subject to regulation in as general a form as possible and require no formal, explicit statement from an agency before a pest is subject to a response action. These systems also provide that at least some pests are a nuisance when discovered in the state.

Inspection Authority

Surveys and inspections are the primary method for detecting infestations before they spread widely. Without broad inspection authority and implementation of that authority by agencies, infestations may spread widely enough to become established, thereby precluding rapid response to eradicate the pest. Some states, recognizing the importance of early detection, require pest management agencies to survey the state for pests. Others do not overtly require surveys, though none prohibits inspection.

Providing authority for the agency to inspect is not sufficient to allow for inspection of private lands. Rather, agencies require authority to enter lands to carry out their inspection authority. All states provide some entry authority, but few include authority to enter all private lands. The entry authorities are amenable to separation into commercial and noncommercial venues. Authority to enter and inspect commercial venues is vital because businesses may import pests and they certainly provide concentrations of plants susceptible to infestation. Noncommercial lands may not pose as severe a threat of infestation as commercial lands, but private, noncommercial lands and dwellings may still harbor infestations that must be eradicated before an invasive pest threat is eliminated. As a result, the strongest inspection provisions grant inspectors access to noncommercial lands as well as to commercial locations in order to survey and delineate the spread of invasive pests.

All states permit some inspections on commercial lands such as nurseries, farms, and other horticultural and agricultural properties. Nursery inspections are a common thread among states, although states differ as to the periodicity of inspections. State laws diverge more with respect to inspections allowed on non-nursery property, imposing different limits on entry for the inspection of farms, orchards, and privately-owned timber lands.

Authority to enter and inspect noncommercial private land is unfortunately much rarer than that applicable on commercial lands. Although some states have adopted unalloyed inspection authority, most limit inspections in some way. Some are completely silent on the subject – a poor choice – but others take a middle approach that balances the privacy and civil rights concerns of landowners with the need for access to prevent harm to the public. These states permit inspection when inspectors reasonably believe that a pest might be present on their property. These provisions permit the accurate delineation of existing infestations but do not allow general surveys in the absence of foreknowledge of infestation, perhaps a reasonable concession to the funding limitations affecting pest management agencies. These states may also explicitly limit the scope of entry solely to inspection for plants to the exclusion of more controversial reasons for entry. It is also worthwhile to note that a few states have adopted another creative approach to the access issue by allowing citizens to petition for inspection of privately held lands. Similar to the petition process for listing under the Endangered Species Act, state petition authority imposes a non-discretionary duty on agencies that can potentially be useful for encouraging prompt detection actions.

Conclusion

Unlike the jurisdictional discussion above, some general conclusions do apply in the inspection context. Authority to inspect is always beneficial when paired with authority to enter private lands. Inspection mandates and broad authority generally enhance the utility of the inspection provision as well – although unbounded entry authority on noncommercial lands may run afoul of individual privacy concerns.

Table 2. State Inspection Provisions

State	Inspection Access	Special Inspection Provisions
California	"Whenever necessary" to premises, conveyances, articles	Can inspect for creation of host registry
Georgia	Any lands for forestry; conveyances and premises where plants are grown or sold	Citizen petitions allowed
Hawai'i	Conveyances with "good cause"; no property inspection access	Robust importation inspections
Illinois	Any place that could become infested, including buildings and coneyances	Citizen petitions allowed
Indiana	Only where agricultural, horticultural, or sylvan products are grown, shipped, or stored.	If inspection shows infestation, agency must survey and monitor surrounding area for 2 years
Michigan	"Any premises in the state" when infestation is suspected; at other times, any place that might become infested except cellars and private houses	
New Jersey	Can inspect private lands for declared nuisance pests; no general access provision	Citizen petitions allowed
New York	"Full access" to any premises, including buildings, to enforce pest law; law permits inspection of articles susceptible to infestation; forest agency may enter any lands in its jurisdiction	
Ohio	Any premises for nurseries; other locations when agency reasonably believes that an infestation exists; premises in quarantine area when authorized by political subdivision	
Oregon	"Any place or thing" by agriculture agency or county horticultural commissioner; non-federal forestlands with warrant or permission by forest agency	
Pennsylvania	Any lands or buildings during reasonable hours	Pest surveys are authorized
South Carolina	Must first quarantine and promulgate regulations regarding inspection; forest agency required to survey when infestation suspected and can enter any lands in its jurisdiction for that purpose	Forest agency must consult with crop pest commission regarding forest pest outbreaks; reporting of pests by agriculture workers is required
Texas	Agriculture agency can inspect conveyances after quarantine and can inspect counties upon request from the county commissioners, but no private land inspection provision; forest agency may enter lands only with permission to survey for and investigate pests	
Washington	Any premises at reasonable times with warrant; horticultural premises at any time; Local Boards can enter and inspect any premises for horticultural pests	

Response Authority

Once an infestation has been detected, the early detection phase of the ED/RR program is complete. States must then initiate rapid response actions to control the spread of the pest and ideally to eradicate it before it becomes established. As in the inspection context, the effectiveness of each state's response authority largely depends on access to private land. Also important, however, is the extent of the responsible agency's authority to respond once it obtains access – that is, what the agency can do once it enters private land. States differ on this question both with respect to the types of response actions permitted (e.g., treatment, destruction, etc.) and the agency's authority to address host plants that are not yet actually infested. States address these questions in several ways.

State laws that include mandatory pest response action on private land have adopted one of two models for the role of pest management agencies in the pest control process. First, the agency can be authorized to enter property immediately upon detection of a pest to treat or destroy the pest or its host (agency-response model). This type of structure grants the agency maximum power and flexibility to respond to infestation quickly and to fully utilize its expertise. The second, more common, regulatory structure does not permit the agency to act immediately. Instead, the agency must notify each landowner of the infestation and order the landowner to undertake control or eradication measures (landowner-response model). In landowner-response states, the agency is generally authorized to act if the owner fails or refuses to do so. The landowner-response model may be less effective than the agency-response model due to inherent timing and expertise penalties, including the possibility of lengthy appeals by landowners. However, it may minimize concerns about infringement on the rights of property owners, potentially increasing public acceptance of response actions. Ultimately, the effectiveness of each state's response system is likely to depend on its specific design.

The design of landowner-response systems varies from state to state with respect to the amount of authority retained by the agency and the procedures for agency action where the landowner fails to act. In some cases, the agency can require particular treatments and can impose strict time limits for completion of the treatment. In others, they can only advise the landowner of potential response actions. Response actions may be more effective in states where the agency is authorized to prescribe the timing and manner of response because of agency expertise and the resultant standardization of response strategies. On the other hand, provisions for landowners to select and implement chosen response strategies – potentially with agency input – may minimize equity issues and interference with property rights, while securing community acquiescence.

In addition to retaining different levels of authority, state agencies in landowner-response models have differential abilities to respond when landowners fail to control or eradicate a pest. Agencies need some authority to undertake response actions in the face of failure to act by landowners – from time to time, property owners are certain to be absent, unable, or unwilling to mount an effective response. States impose different requirements before the responsible agency can use its authority to address landowner noncompliance. Some states merely require the agency to wait for a set period, whereas prosecution and judicial orders are needed in others. These provisions all delay responses and increase agency response costs (both monetary and in staff time) by some amount, which are a concern for ED/RR programs because the infestation may grow out of control before the agency can initiate action and because agency resources are limited. Where the judicial branch is involved, delays and costs to the agency may increase, although some states have mandated time limits on the resolution of pest response questions. Regardless of the manner in which agency response actions can be initiated, statutes that provide for timely use of agency response authority are likely to increase effectiveness of the response actions.

Regardless of the state response model, the extent and specificity of the response strategies available to agencies may be an issue of concern. State laws vary with respect to the specificity and extent to which they identify the agency's ability to treat or destroy plants and their authority to treat or destroy as-yet-uninfested plants. No state law expressly prohibits either treatment or destruction of infested plants, but some are silent on the issue. Most permit "treatment and destruc-

tion" – a general category that in all likelihood includes both tree cutting and pesticide use and that clarifies the extent of the agency's power without unduly restricting its authority. A few states include more specific lists of permitted response actions, thus ensuring that their agencies are granted broad powers but risking that the agency may limit itself to the specified actions even if the list is not meant to be exhaustive. Ultimately, the effectiveness of each approach is likely to depend on its interpretation, so either model can be successful under the right circumstances.

The state's approach to the treatment or destruction of uninfested plants is a more difficult issue because uninfested plants are not certain to become infested and because they cannot easily be considered to be nuisance plants. Notwithstanding the arguments against establishment of authority to treat or destroy uninfested plants, effective rapid response actions may require the creation of a pest "firebreak" or host-free district by eliminating plants to which the pest may be likely to spread. Other prophylactic measures, such as pesticide application, may also halt the spread of the pest and are thus also important.

Many states are silent on their agencies' authority to treat or destroy plants susceptible to infestation, and those that do address the issue often impose specific limits on the exercise of this authority that may or may not comport with the dispersal characteristics of specific pests.[3] The lack of authority to address as-yet-uninfested host plants in most states and the inflexible approaches adopted by others are both problematic. Development of this authority is important to minimize the size of the infestation and prevent the establishment of permanent pest populations in the ED/RR context. Even if this authority is only available in emergency situations, ED/RR states that have explicit authority are more likely to have effective ED/RR programs.

Conclusion

Landowner-response and agency-response models may both be effective at halting the spread of infestations if developed with sensitivity to local conditions, equity considerations, and funding constraints. Commitment to rapid action and recourse to direct agency action when landowners fail to respond are vital components of either form of regulation, as is broad agency authority to treat and destroy both infested and potentially-infested plants or articles. Response authorities lacking explicit provisions on these issues risk untimely or ineffective responses.

Table 3. State Response Provisions

State	Response Access	Responsibility for Control	Allowed treatments; application to uninfested plants
California	Only after landowner failure	County authority, landowner response; agency response on timberlands in zone of infestation	Treat or destroy
Georgia	Only after landowner failure	Landowner; must be nuisance pest (agriculture) or in zone of infestation (forest)	Treat or destroy
Hawai'i	Any lands except dwellings with 5 days notice	Agency	Treat or destroy
Illinois	Only after landowner failure	Landowner	Treat or destroy infected or susceptible plants
Indiana	Only after landowner failure	Any horticulture, agriculture, or sylvan landowner; all landowners in declared infested areas	Treat or destroy; can issue emergency orders
Michigan	Any premises for which inspection is permitted; for nuisance articles, can access after 10 days	Agency or landowner, at agency discretion	"Such steps as necessary"; includes susceptible but uninfested hosts; can require treatment or destruction
New Jersey	Only after landowner failure, after judicial order, where specifically authorized for certain pests	Landowner	Treat or destroy
New York	Only after landowner failure; any infested lands and nearby areas (forests only)	Landowner; agency (in forests only)	Treat or destroy; can treat forest areas near infested sections to create barrier zone
Ohio	When agency believes that an infestation exists and landowner fails to respond; political subdivisions may enter with permission	Landowner	Treat or destroy; can order remedial and preventive measures
Oregon	Ag. agency only after landowner failure and with judicial approval, but immediately in urgent emergency; county horticulture inspectors when quarantine applies; forest agency requires permission	Landowner	Treat or destroy; department can seize with judicial approval
Pennsylvania	Any premises upon notice to owner (serious pest situations); only after landowner failure (other cases)	Agency (for serious pest situations); Landowner (other cases)	Any necessary measures
South Carolina	Any lands (agriculture agency); only after landowner failure (forest agency)	Agency or landowner, at agency discretion (agriculture agency); landowner (forest)	Seize, treat, or dispose of infestation
Texas	Only after landowner failure, can require local law enforcement to act	Landowner	Seizure, condemnation, treatment, destruction
Washington	Only after landowner failure or nuisance declaration (horticultural pests, local boards, forest agency), but any lands in forest health emergency; no access to inspect articles	Agency (articles, forest health emergencies); landowner (horticultural pests, local boards, forest agency)	Treatment and destruction (available for articles only if treatment impossible, in emergencies, or for illegal shipments)

Quarantine Authority

Like authorization to treat or destroy infested plants, quarantine authority is a bedrock element of effective ED/RR programs. When effectively implemented, quarantines can halt or slow the spread of pests by immediately eliminating anthropogenic invasion pathways. Quarantines alone, however, do not suffice to respond to invasion absent independent response authority – that is, quarantines are only a first step in an ED/RR action. In addition, quarantines must be declared as soon as an infestation has been detected in order to be effective. Limits on quarantine authority and disincentives to implementation of that authority thus threaten the effectiveness of state quarantine authority. States have established several forms of quarantines to address these difficulties.

Quarantine authority among states differs in several ways. Delineation of quarantine boundaries is one variable. Most states permit an agency to institute quarantines on both in-state and out-of-state areas. While out-of-state (external) quarantines may be of little utility in the ED/RR context, they are useful as a prevention tool against importation of infested items. In-state (internal) quarantines differ in several additional ways. First, internal quarantines may be limited to the area actually infested or they may allow the agency to build a buffer zone into the quarantine zone. The responsible agency's authority to limit movement also varies. Quarantine declarations, at a minimum, seek to eliminate movement of infested or potentially-infested articles or plants across quarantine boundaries. Many states, however, permit the agency to regulate movement of infested articles in broader ways, including outlawing such movement both within the quarantine area and across its borders. This supplemental, intraquarantine movement authority may increase the effectiveness of the quarantine declaration, especially where the agency is authorized to quarantine an area larger than that actually infested when the quarantine order is issued.

The scope of the agency's regulatory authority in the zone of infestation is yet another facet of the quarantine authority question. While some states' quarantine provisions merely permit the agency to outlaw the movement of infested articles, agency management authority is broader in other states. That is, the agency's normal inspection and response authority may be different in quarantine areas than in other areas. In a few states, in fact, inspection and response is allowed only after a quarantine has been declared. For several reasons, states with this type of authority are likely to be handcuffed in their attempts to implement ED/RR actions and may be forced to rely on cooperative and voluntary action. First, early detection in this model depends on reporting by individual landowners or discovery on public land, so delineation of the infestation area may be inhibited and the subsequent response action delayed. In addition, quarantines impose significant economic costs to the nursery, transportation, and other industries. These costs could create a potent disincentive to quarantine declarations. Where pest management authority is tied to quarantine declaration, this disincentive may discourage exercise of the agency's broader powers. In most states, however, declaration of a quarantine either does not affect inspection and response authority or merely expands the extent of the agency's powers. The degree to which these authorities are expanded depends on the policy choice of the individual state.

The economic disincentive inherent to quarantine declarations is a threat not only in states where inspection and response authorities are tied to such declarations. In fact, all states share disincentives to declarations that may in practice preclude the use of quarantine authority where they can be most effective – that is, in ED/RR situations where the pest has not yet become established and can still be eradicated. It is impossible to eliminate this economic disincentive, but it can be mitigated through proper regulatory design. To this end, many states have permitted their agencies to establish either general or limited quarantines as necessary to minimize economic costs while still preventing the spread of the pest. For example, many have accomplished this by allowing waiver of movement authority for low-risk articles. Quarantine limitation provisions may encourage rapid quarantine declaration and thereby be more likely to constrain incipient infestations before they spread too widely to be eradicated.

Table4. State Quarantine Provisions

State	Allowed Quarantine Types	Movement Limits	Other (prerequisites, buffer zones)
California	All or parts of state, other states	Across quarantine boundaries only	Can hold uninfested plants within 5 miles of infestation
Georgia	All or parts of state, other states	Across state borders or within the state; can be limited	Quarantine declaration required to impose specific response on forest lands
Hawai'i	All or parts of state, import	Inter-island only	
Illinois	All or parts of state, import	Required with declaration of quarantine; not limited to movement across quarantine boundaries	Can prohibit farm practices and require farm operations and procedures as part of quarantine
Indiana	Parts of state, other states	Pests may not be moved within the state, but the application to quarantine goods is uncertain	Any declared infested area requires quarantine; agency required to declare farm management standards; must consider economic impact
Michigan	Eradication zone (applies to host plant nuisances), external	Across state boundaries only	
New Jersey	All or parts of state	Unspecified	
New York	Any deemed necessary	Unspecified	Forest agency can create barrier or protective zones
Ohio	All or parts of state, other states	Across quarantine boundaries only	Can limit regulations to subset of entire quarantine area; quarantine declarations provides local governments with authority
Oregon	All or parts of state, other states, pest-specific quarantines	Across state borders and within the state; can limit at agency discretion	Emergency declarations possible; pest control areas allowed for general protection of industries or to exclude pests
Pennsylvania	Entire state or other states	Across quarantine boundaries only	May include buffer zone; may regulate growing or harvesting of host crops
South Carolina	All or parts of state, other states if based on other state or federal quarantines	Across state borders or quarantine boundaries; any needed safeguards in forest pest control zones	May include buffer zone
Texas	Parts of state, other states, pest-free areas	Across quarantine boundaries only	Emergency declarations possible; declaration requires promulgation of inspection and response regulations
Washington	Parts of state, other states, individual premises	Across quarantine boundaries only (ag. agency); none (forest pest control districts)	Not limited to area actually infested, can include threatened areas

Conclusion

Quarantines are thus a limited, though useful, tool for constraining the spread of invasive species while the rapid response protocol is established. The most effective provisions recognize the importance of allowing the responsible agency to delineate the quarantine area to include some uninfested areas and to permit some activities within the quarantine area – in short, to tailor the regulatory environment to the needs relevant to the specific pest at issue.

Compensation

The effectiveness of any ED/RR action is affected not only by the responsible agency's legal authority to act, but also by the fiscal implications of agency action. Response actions may have both direct, financial implications (e.g. the cost of pesticide treatment) and cause indirect harm (e.g. loss of sales of nursery crops, reduced property values due to loss of tree cover). In most cases, either the agency or the landowner must bear these costs. Cost-sharing, if any, arises either through statutory response cost allocation provisions or judicial actions by the landowner for losses associated with the response action. Liability can arise in several ways. Pest control agents and the agency could be liable in tort both for trespass on private lands during the inspection or response action and for harming or destroying the private property (i.e., the infested or susceptible plants) on the land.[4] Agencies could also be liable for effecting a "taking" on private land in violation of federal or state constitutional law. These avenues of liability are not exhaustive, nor does this study address the legal validity of these or other potential forms of liability. Nonetheless, this report does review the statutory provisions that address both costs of response and liability.

Several state laws include explicit provisions precluding both cost and liability compensation for any pest detection or response action. These provisions are likely to eliminate most state compensation derived from response actions. Because state laws cannot override constitutional provisions, however, these provisions are incapable of precluding liability for takings violations. Takings liability is thus uncertain even in the face of explicit statutory guidance. Despite this difficulty, the presence of such provisions may not be fruitless, as courts may nonetheless treat the presence of a legislative pronouncement as relevant persuasive authority.

In addition to explicit limitations on liability, state laws can also indirectly limit agency liability by declaring pests to be a public nuisance. As noted above, no landowner has the right to maintain a nuisance on her land, so states can sue individuals to abate the condition without incurring liability. Thus, a legislative pronouncement that a plant pest or pathogen constitutes a nuisance may shield the agency from liability, especially where plants infested with a nuisance pest are destroyed.[5] The manner in and degree to which states protect themselves against liability through nuisance provisions presents a balance between cost certainty for the agency and economic incentives for and against action.

The legal questions involved in response cost allocation provisions are less complex, but the response cost issue nonetheless presents significant policy difficulties because the costs may be significant and neither agencies nor affected landowners are responsible for the infestation in most cases. Because the source of infestations is rarely immediately determinable, there is a strong argument that the government, as the representative of all citizens, should bear the costs of response actions that benefit all citizens. Meanwhile, equitable principles demand that landowners who do not bring pests onto their lands or maintain conditions encouraging their spread should not be held fiscally responsible for their presence there.[6] However convincing this argument, real-world fiscal constraints complicate the issue. Agency budgets are often thin and staff time limited, precluding effective agency actions on the state level. Similarly, landowners who bear the burden for response costs may also lack access to sufficient capital to effectively respond, even if forced by law to do so. Without careful distribution of responsibility and prearranged funding sources, this situation is likely to create a Hobson's choice, where effective responses are rendered unlikely.

States have not been creative in remedying these inherent inequities and practical difficulties. Rather, the applicable state response model generally establishes the entity responsible for the full costs of the response action. Landowner-response states generally impose the response costs on the landowner, while states utilizing an agency-response model require the agency to pay. These state laws therefore do not attempt to strike a balance between the duty of the taxpayers to underwrite the costs of response actions and the ability of landowners, as stewards of the land, to assist in those actions. As a result, no truly fair solution to the problem of allocating costs exists under current law.[7]

Table 5. State Compensation Provisions

State	Explicit Compensation Provision	Response Cost Allocation
California	No mention or provision	Landowner
Georgia	No compensation allowed; profit from tree cutting remitted	Landowner
Hawai'i	No compensation for seizure of illegal imports	Landowner
Illinois	No mention or provision	Landowner
Indiana	No mention or provision	Landowner
Michigan	No compensation for destruction of infested plants; compensation for destruction of plants not yet infested	Landowner
New Jersey	No mention or provision, except no compensation relating to Dutch Elm disease	Landowner
New York	No compensation for destruction of infested plants; compensation for destruction of non-infested trees (limited to forest agency action)	Landowner
Ohio	No mention or provision	Landowner
Oregon	No mention or provision	Landowner; forest agency must "assist" with control costs up to limit of preexisting fund
Pennsylvania	No mention or provision	Landowner
South Carolina	No mention or provision, except that landowners can seek compensation in court	No mention or provision
Texas	No mention or provision, except that cotton growers in a boll weevil eradication zone may recover if the cotton was planted prior to eradication zone declaration	Landowner; forest agency costs cannot exceed $10/acre and must be borne by agency for landowners with less than 50 acres of forest land in a county.
Washington	No compensation for articles destroyed pursuant to general agriculture law; no mention or provision for forests	Landowner; state (forests)

Conclusion

These considerations illustrate the interactivity of inspection, response, and compensation authority. Under current law, broad agency authority to inspect and respond to infestations generally results in higher costs to the state, and vice versa. Notwithstanding the justification for doing so, it is clear that most ED/RR programs shift some costs to landowners through public nuisance designation or explicit allocation of response costs. In all cases, compensation allocation requires careful consideration of equity issues and a proper incentive structure to encourage both rapid landowner disclosure of infestations and rapid responses to such infestations.

Tree Cutting

Recent history has shown that many forest pest infestations originate in urban or suburban areas. As a result, the success of ED/RR actions for these pests may be determined by state authority to cut trees in these areas. In addition to private land, public parks and rights-of-way are the lands most at risk in these outbreaks. Despite the importance of clear rules to address urban pest issues, state plant pest and pathogen laws have heretofore been silent on agency authority to cut trees – as opposed to other kinds of plants – as part of a pest response action. Thus, agency authority to cut trees is identical to any authority under the state "treat or destroy" provisions for other plants discussed above.

Pests and pathogens may eventually be introduced into state parks, forests, and other designated lands. Additional restrictions to tree cutting may apply in these areas, including state forestry and public lands laws. States have disparate laws regulating these issues and it is difficult to generalize about them. Nonetheless, this section seeks to draw some conclusions about tree cutting authority on designated park and forest lands.

Many state lands are subject only to designated uses, including forestry, recreation, or watershed protection. These lands are generally managed according to a parcel-specific management plan that may prohibit activities, including tree cutting, incompatible with the intended use of the lands at issue. Tree cutting by state agencies is rarely prohibited on state forest and state park lands, though units such as state wilderness areas may be more restrictive. Most state laws governing development and implementation of management plans are silent on exceptions to management plans that may be required to respond to invasive species infestations. In these states, the specific provisions of the management plan will govern whether tree cutting is permitted. Other states, however, provide specific authority expressly permitting tree cutting and other invasive pest response actions on state public lands regardless of contrary provisions in the management plan.

Conclusion

The most effective ED/RR programs recognize the importance of providing response authority in both public and private forests. Thus, in addition to providing broad general response authority as discussed above, these states provide either general or emergency exceptions from restrictive forestry laws to protect against accidental limitations on tree-cutting authority, even in otherwise pristine areas.

Pesticide

The presence of a comprehensive federal statute prescribing certain pesticide standards limits the variety of regulatory strategies employed by states for pesticide regulation. With very limited exception, each state uses a similar or identical definitions of "pest" and "pesticide." In addition, all require registration of pesticides and use of restricted use pesticides only by certified applicators in accordance with the pesticide label.

In addition to these standardized provisions, most states permit emergency exemption from pesticide registration and registration for special local needs as provided by FIFRA – although the manner of obtaining a permit under each of these provisions differs by state. Application for emergency or special local needs (SLN) registration in some states requires a lengthy process that could delay pesticide application and thereby threaten the viability of the pest response action. Other states, by contrast, require more or less extensive information in support of the emergency petition. In still others, the state pesticide agency must apply to EPA for the exemption. The choice of application method requires states to balance rapidity of the application against potential damage that can occur as a result of an application of a harmful chemical.

Restrictions on particular application methods also affect the practice of pesticide application. The presence of federal regulation does not foreclose variety in this regard, as several states have used their independent authority to impose strict notice provisions, restrict aerial and other methods of application, and restrict use in some geographic locations, such as areas surrounding schools and apiaries. Each of these restrictive provisions is supported by legitimate con-

cerns about public and environmental health and safety. Some states have balanced these concerns against the importance of permitting some pesticide application, however, by adopting emergency waiver provisions that allow the state to apply pesticides in an otherwise-restricted manner to respond to a newly-discovered and harmful plant pest infestation.

Conclusion

The most effective ED/RR programs are those that provide for emergency use of some pesticides, with time-limited notice and application restrictions that provide for community input while still protecting against the spread of pests. The sensitive nature of pesticide application prohibits more specific recommendations, but laws that are either too permissive of pesticide use or too restrictive may not be effective in either gathering public support for response actions or permitting effective responses.

Notes

1. A third option, the "clean list," would permit an agency to inspect for and respond to any infestation other than those caused by organisms that have previously been explicitly excluded from consideration as pests.

2. Black's Law Dictionary 1065-66, 1230 (6th ed. 1990).

3. As noted below, some states do provide response authority against uninfested plants by providing for host-free districts in their quarantine provisions.

4. Such liability, however, is likely constrained in most cases by the doctrine of sovereign immunity. Discussion of this doctrine and its applicability in each state are beyond the scope of this report.

5. Destruction of uninfested host plants raises a closer legal question, since it may be unclear whether those plants constitute a nuisance. Some states, notably Michigan, have distinguished between uninfested host plants and infested plants, and have provided for compensation for the former but not the latter.

6. The strength of this argument is likely to depend on a case-by-case analysis of the burden of the response action. It is possible that in some cases, such as where the required response costs are *de minimis*, or where the landowner has maintained conditions that exacerbated the spread of the pest, landowners could fairly be asked to contribute to the response costs. The common provision for nursery owners to control and eradicate pests on their lands at cost may be an example of this phenomenon.

7. Despite significant room for negotiation between agencies and landowners, no states provide for cost-sharing, reimbursement, or other provisions that could move away from the single-party-payor model that the states have uniformly adopted. If adopted, such provisions could both mediate the inequities produced by current law and strengthen the incentives for rapid landowner response action. The development of other funding sources, such as forward-looking taxation or permitting fees for importers or other potential sources of pest introductions, could reduce the externalities associated with response cost allocation. Such systems merit further study.

III. Case Studies

Two case studies, drawn from forest insect pest responses in each of New York and Texas, illustrate the importance of the legal and policy options available to the states and the pitfalls that complicate response actions.

New York: Asian Longhorned Beetle

The Asian longhorned beetle, *Anoplophora glabripennis* (ALB), is an insect native to China, Japan, and Korea that invaded the United States via untreated solid wood crates and other packing material used in the import of goods from Asia.[1] The beetle was detected in the New York metropolitan area in 1996 and has since been the subject of an intensive interagency rapid response effort.[2] The experience gleaned from this response action highlights the difficulties in mounting effective responses, especially in urban areas, and offers lessons that can be used to improve the efficacy of future pest detection and response actions.

The ALB is a black beetle with white spots that ranges from an inch to an inch and a half in length. The ALB infests many hardwood tree species, including all maples and birch, horse chestnut, poplar, willow, elm, ash, mimosa, hackberry, sycamore, mountain ash, and London plane.[3] ALB is a particularly problematic pest because ALB infestations result in the death of the host plant. This outcome is a product of the ALB's life cycle: after mating, female beetles lay their eggs deep under the bark of host trees. When the eggs hatch, the larvae subsist on the tree's phloem before ultimately emerging as adults, starving the tree of needed water and nutrients. Eventually, this nutrient disruption causes the tree to die.

ALB was first detected in Brooklyn, New York by a private citizen.[4] Despite the fact that the port of New York is a known infestation pathway, it does not appear that state or federal monitoring of surrounding areas was sufficient to allow early detection of the infestation.[5] Subsequent surveys, however, identified beetle infestations near Islip airport on Long Island, in Queens and Manhattan, and in areas of New Jersey within the New York-Newark metropolitan area. The beetles have not yet been eradicated in New York or New Jersey and new infestations continue to surface.[6] Nonetheless, each infestation has been sufficiently limited to be susceptible to eradication, and eradication remains the goal of the response effort.[7] This result cannot mask the failure of survey efforts in this case, however; adequate funding and support for expanded detection efforts around known invasion pathways would increase the likelihood that future infestations will be discovered more rapidly.[8]

The risk of severe damage posed by ALB triggered a rapid response after the infestation was discovered. APHIS led the effort in cooperation with federal land management agencies, the New York Department of Agriculture and Markets, and the New York City Department of Parks and Recreation. The response has successfully reduced the range of the pest but has not yet eradicated the infestation, in part due to funding constraints. The response has partially relied on emergency funding appropriations, which may diverge widely from year to year, and on contributions by states and municipalities.[9] These constraints may allow the continued existence of ALB in New York for years to come.[10]

The ALB life cycle presents challenges to mounting an effective response. First, because the ALB larval stage is completely contained inside host trees and because there are many species of potential hosts, it is difficult to detect infestations before the larvae emerge as sexually active adults. Identification of infestations requires manual inspection of each tree susceptible to infestation – including the crown – within a mile and a half of known infestations.[11] Delineation of the infestation is thus time- and manpower-intensive.

In New York, federal authorities initially addressed the manpower and expertise problem in part by using "smokejumpers" to survey Central Park trees.[12] Smokejumpers, parachute-based forest firefighters employed by the United States Forest Service, are expert climbers, making them well-suited to perform this task when not in fire season. Though the extensive overlap of federal, state, and municipal authorities undoubtedly increased the complexity of mounting a coordinated response effort, nontraditional sources of pest control expertise such as the smokejumpers would have been unavailable without federal participation. Limitation of jurisdictional overlap among agencies and clarification of each agency's responsibility is generally beneficial, but this case study illus-

trates the advantages to retaining a multi- jurisdictional system, including the ability to leverage multiple sources of funding and expertise. In this case, these benefits seemingly outweighed the complications inherent to the multi- jurisdictional response.

Response to ALB infestation is similarly intensive, requiring the physical removal and incineration or chipping of infested trees. All told, agencies destroyed 6,104 infested trees in the New York metropolitan area through the end of 2006.[13] Manual response is required because no pesticide or other non-destructive treatment is known to be 100 percent effective in eliminating active ALB infestations.[14] The only approved injected pesticide to counter ALB, Imidacloprid, causes larval and adult mortality during feeding on treated trees, but is insufficiently consistent to replace destruction of trees.[15] Imidacloprid, however, has been injected into uninfested host trees to prevent egg-laying by adult ALB.[16] Regulators have now treated more than 100,000 susceptible host trees since the Imidacloprid program started in 2001 and have also delivered 347,316 treatments for application by private entities.[17] This preventative use of chemical control is vital for constraining the infestation and is only possible before the pest is widely established.

The need for manual inspection and treatment of susceptible host trees makes access to private property a prerequisite to pest detection and eradication. While access to trees on city and state lands has not proven problematic, private property has presented more of a challenge, particularly because the ALB infestation is centered in an urban area replete with residential dwellings, where privacy concerns are paramount and inspection authority most difficult to implement. Interior courtyards and ornamental plants are prevalent in private residences and other buildings in New York and can provide a refuge for ALB infestation, preventing eradication of the infestation. Inspectors, however, may not know that these host plants even exist and, regardless of their legal authority to do so, have difficulty in accessing them to inspect without first requesting permission to enter each building.[18]

While New York law authorizes inspectors to enter private buildings to inspect for pests, this authority is limited in practice. The ALB pest response guidelines require a variety of public contacts following pest detection, including informational public meetings, media contacts, and individual notification prior to removal of infested material.[19] To carry out these mandates, the guidelines require the identification of a project leader and regulatory and media coordinators, each of whom has explicit responsibility for notification of residents.[20] Unfortunately, however, the guidelines explicitly discuss notification only to owners of infested trees.[21] They are silent with respect to notification prior to mere inspection, although in practice inspectors are apparently required to attempt to obtain consent and, if unsuccessful, an administrative warrant prior to conducting a search.[22] Clarification of individual notification requirements – in addition to the required phone banking, media contacts, and public meetings – would be a laudable addition to the Guidelines.

Even these limited public notice provisions raise important policy issues. Public notice protections likely originate from two causes. First, permissive inspection is less problematic than forced inspection because it avoids civil liberties concerns – most notably the constitutional right to freedom from unreasonable search and seizure. Second, permissive inspection minimizes concerns about the potential for governmental takings without compensation should a landowner's trees prove to be infested. Thus, educational and notification provisions serve important purposes in minimizing public consternation and misinformation about the need for inspections and response actions.

Public notice provisions, however, are costly in some ways. First, they constrain the timing and scope of inspections on private lands. Cases such as the ALB suggest that the consequences of limiting or delaying access to property for inspection or response may be severe in both economic and social terms. Second, inspectors may fail to obtain permission to inspect for or respond to infestations, especially in the latter case, where owners may be concerned that their trees will be destroyed without compensation. This has already occurred in one instance during the ALB response, when community advocates threatened to bar inspectors from accessing private land to remove known infested trees without a guarantee of funding for tree replacement.[23] While New York law does not authorize compensation for the destruction of infested trees,

community resistance was sufficient in this case to require state and city officials to negotiate with residents to replace the destroyed trees at the state's expense.

Notification provisions thus require a balancing of the twin, opposing demands of privacy and exigency. This balancing process illustrates the limitations of the law: public perception and pressure are powerful forces that may influence the outcomes of inspection and response programs on a local level in spite of legal authority. The ALB Guidance has balanced these demands by requiring robust public education and compensation while only requiring notification – and not permission – for response actions. This balance has seemingly been effective, as no public protests have arisen in recent years.

The potential for ALB to spread via human vectors during its hidden larval stage raises a separate concern. ALB arrived in this country in untreated packing material, and could easily spread further through that pathway or others, such as the transport of infested firewood. The Emerald Ash Borer (EAB), an emerging invasive pest threat with a life cycle similar to the ALB, has spread rapidly through the latter pathway despite quarantines and other limitations on transport.[24] Happily, the ALB does not appear to have been spread in this manner, and new infestations have not been detected since the original invasion pathway was closed off by regulation. Identification of invasion pathways and authority to make and enforce quarantines thus played an important role in making the rapid response to infestation possible.

Finally, the difficult and time-sensitive nature of the ALB response and prevention efforts illustrates the need for broad agency authority to mandate varied response actions, including tree cutting and chemical and biological treatment. The federal and New York agencies in this case used several forms of control, including destruction of infested trees and pesticide application. These control methods were both authorized in this case, allowing the agencies to develop a comprehensive response strategy. Loss of any authority, by contrast, would have increased the difficulty and decreased the effectiveness of the response. Had New York lacked authority to destroy trees for example, the response action would have been impossible. Similarly, prophylaxis using Imidacloprid and bark sprays would be impossible without proper registration and application of the state and federal pesticide laws.

Texas: Asian Gypsy Moth

A second useful illustration of weaknesses in plant pest regulation is offered by the September, 2005, discovery of an Asian gypsy moth, *Lymantria dispar* (AGM), near Austin, Texas. Gypsy moths are not new to the United States – the European gypsy moth is present throughout the eastern United States, where it is a voracious defoliator of hardwood trees and thereby affects wildlife habitat, water quality, recreational and aesthetic values, and property values.[25] AGM is similar in appearance to and can interbreed with its European counterpart, but it is not established in the U.S. AGM is of particular concern because it is capable of rapid natural dispersion: the female AGM can fly, while its European cousin cannot. In addition, AGM may feed more readily on conifer species than the European variety.

Gypsy moths commonly invade new territory along roadways, where gypsy moth egg masses are commonly found on vehicles and other outdoor equipment. As a result, Texas established an ongoing gypsy moth early detection effort along these known invasion pathways. Although designed to monitor for the presence of European gypsy moths, this program yielded dividends when a trap in Travis County revealed the presence of a single male AGM.

The discovery of AGM prompted an immediate response from both APHIS and state authorities, including the Texas Department of Agriculture (TDA) and the Texas Forest Service (TFS). Pest control agents sought to aerially apply *Bacillus thuringiensis* (Bt), a bacterial control agent lethal to all Lepidopteran caterpillars, over a one-square-mile area surrounding the site of the trap in conjunction with the application of a pheromone for mating disruption over the same area. In order to be effective, Bt needed to be applied in mid-March, and the pheromone in April.

As noted in Part V, TDA is authorized to require property owners to undertake specified control measures only pursuant to a declared quarantine. In this instance, the Department decided not to quarantine the area. Instead, TDA, TFS, and APHIS sought volun-

tary permission to spray from each landowner in the proposed application zone. As the application zone contained 160 private parcels, 2 schools, and 24 commercial properties in addition to 120 undeveloped wooded areas, unanimous consent was not achieved. Instead, despite APHIS's production of an Environmental Assessment and Finding of No Significant Impact (FONSI) for the Bt and pheromone applications, the pest control authorities met with significant public resistance to the Bt spraying. Community activists were concerned about the bacterium's adverse impact on non-target butterfly and moth species, whether the existence of a single, hybridized moth could truly be considered an infestation, and the safety of applying pesticides near dwellings and schools.

The community resistance to Bt application was strong enough to make a mid-March application of the pesticide impossible. After winning this victory against Bt spraying, however, the local environmental community and the landowners consented to the pheromone treatment. APHIS applied the mating disruptor to the area in April, 2006, and subsequent trap surveys have revealed no additional AGM individuals. TFS has therefore declared its AGM response a success.

Although the pest response action here was ultimately deemed successful, this case study presents a cautionary tale about the difficulty of developing adequate pest response strategies. It also illustrates the importance of engaging with property owners for cooperative pest management. Although neither APHIS nor the state regulators were able to implement their desired response, the community proved responsive to arguments about the importance of the threat and allowed a modified treatment plan to proceed once its concerns were addressed.

First, it is important to note that the early detection program in place for gypsy moths was apparently effective in this case. By concentrating survey efforts along a known invasion pathway, the regulators were able to identify the threat before the AGM became established. This survey program was only possible because the survey traps were on public lands, however; had the invasion pathway been centered on private lands, the Department would have lacked authority to place AGM traps. Though many states permit inspections and surveys on private lands, no state explicitly permits the agency to install permanent survey traps on private property. While it is important to note that permanent emplacements could affect other areas, such as compensation to landowners, provision for such emplacements either as a mandatory aspect of permitting or as a voluntary measure could be a subject for future regulation.[26]

Second, this case illustrates that cooperation between agencies may complicate the response effort to some degree due to independent regulatory requirements. Proper planning can mitigate this concern, however; in this case, APHIS effectively planned its AGM response strategy in advance and thereby increased the rapidity of the potential response. APHIS was required to develop an environmental assessment for the particular plot at issue in order to comply with its National Environmental Policy Act (NEPA) obligations. Although the NEPA process can be lengthy, APHIS had previously developed a comprehensive, global gypsy moth environmental assessment, so only the site-specific NEPA process remained. This assessment included several possible responses and was accomplished within the time limit required for an effective response.

This episode shows that provisions encouraging recognition of potential pests and development of appropriate response strategies *before* infestations are detected are important elements of an effective rapid response system. In this respect, APHIS's prior planning for infestation can be seen as a model for other potential infestations. The AGM response was less effective, however, in dealing with the requirements of the local community. These programs could be introduced to at-risk communities prior to infestation; although it is impracticable to obtain consent or develop specific responses without knowing the extent of an infestation, state pest control departments are well-positioned to develop generalized, model responses for future invasions and to obtain comment on them from diverse stakeholder groups before suffering infestation.

Third, this case study illustrates the necessity of responding to infestations rapidly. The biology of the AGM and its interaction with Bt and pheromone sprays mandated a particular response date. Texas law con-

tained insufficient authority to allow the regulators to follow the timetable, and the opportunity to use Bt was lost. Delay, in this case, narrowed the range of response options available to the regulators. Had they suffered further delays, it is possible that the opportunity to respond using pheromone spray would have been lost as well.

Had pest managers not obtained consent to use pheromone spray in time to disrupt AGM mating, the infestation could easily have spread. Consent was only required, however, because TDA declined to quarantine the area and APHIS declined to declare an extraordinary emergency. In states like Texas, where response authority is tied to quarantine provisions, a decision by pest controllers not to impose a quarantine eviscerates the agency's ability to respond effectively. There are several potential reasons why neither TDA nor APHIS chose to exercise their powers, including the economic disturbance that would have resulted from a quarantine declaration and the small geographic extent of the infestation. In urban settings, economic disruption is likely to be extensive, and in this case could potentially have been extreme in comparison to the magnitude of the infestation. Whatever the reason for the agencies' failure to quarantine the area, this example illustrates that quarantine declarations may not be a *fait accompli* in the rapid response context and that agency access to response tools independent from their quarantine authority is therefore important.

The most interesting aspect of the AGM response story is the extensive involvement of the local community in the decision-making process due to Texas's weak response authorities. This community involvement had both positive and negative implications; while it restricted the response options available pest regulators attempting to nip the AGM infestation before it could spread, the successful incorporation of desires expressed by the community may be a positive in future response actions. Public participation prior to the aerial application of a pesticide in a residential neighborhood – including over two schools, whose students may be hypersensitive to chemicals – can be used to encourage public participation in detection activities. Not only do landowners in such areas have valid concerns over the use of such chemicals on their lands without their consent, but the funding, manpower, and authority limitations of pest managers require public assistance in emergencies. Thus, it is very important to consider the interests of non-commercial landowners in designing the optimum ED/RR structure. In this case, private citizens pushed for a response that may have been less certain of success but which was targeted specifically at the AGM rather than at all similar insects. The selection of this alternative response strategy was reasonable and resulted in a response action that may have been better targeted to the magnitude of the threat at issue.

Notes

1. The use of untreated wood packing material has since been banned, in accordance with international standards, due at least in part to infestations by ALB and the Asian pine shoot beetle. U.S. Dept. of Agric., Importation of Wood Packaging Material, 69 Fed. Reg. 55,719 (Sep. 16, 2005); *see also* 7 C.F.R. §319.40-1 *et seq*.

2. The ALB was thought to have been initially introduced to New York in the late 1980s. *See* Jennifer Smith, Monsters in Miniature: An Exotic Invader Threatens U.S. Hardwoods, NEWSDAY, Apr. 13, 2003.

3. U.S. Dep't of Agric. – APHIS ALB Cooperative Eradication Program, pers. comm. (2007) [hereinafter ALB Program].

4. Although separate infestations have since been identified in Chicago, Illinois (since eradicated), New Jersey, and Toronto, Canada, the New York infestation was the most extensive.

5. APHIS operates an established surveillance program, the Cooperative Agricultural Pest Survey (CAPS) in all 50 states in cooperation with state agencies. APHIS, Invasive Species and Forest Health (2006).

6. In March 2007, a survey revealed an infestation was discovered on an uninhabited island lying between New Jersey and Staten Island, New York. USDA-APHIS, Asian Longhorned Beetle Infested Trees Found on Uninhabited New York Island off Staten Island (March 12, 2007).

7. *See* GAO, Invasive Forest Pests: Lessons Learned from Three Recent Infestations May Aid in Managing Future Efforts 3 (GAO-06-353, 2006).

8. *See id*.

9. *See* Christine K. Markham, Asian Longhorned Beetle Cooperative Eradication Program: Program Status Report FY 2003, *in* Proceedings, XV USDA Interagency Research Forum on Gypsy Moth and Other Invasive Species 2004 55 (2004).

10. *See* Reps. Anthony Weiner, Carolyn Maloney, Longhorned Beetle, Shortchanged City: The Asian Longhorned Beetle in the Big Apple (2006) (unfavorably charting federal funding in comparison to budget needs expressed by APHIS).

11. Suzanne Bond, pers. comm.

12. As the ALB Program became more sophisticated, both the program and each affected state have trained their own staff climbers to carry out inspections. Suzanne Bond, pers. comm.

13. Suzanne Bond, pers. comm.

14. *See* USDA-APHIS, New Pest Response Guidelines: Asian Longhorned Beetle *Anoplophora glabripennis* 14 (2007) [hereinafter "ALB Guidelines"] (noting that chemical treatment is not known to be effective against large larvae).

15. Several additional pesticides are discussed in the ALB Guidelines. These pesticides are discussed for use as bark sprays on infested trees to prevent dispersal of emergent adult ALB and on larger tracts to quickly suppress ALB populations or protect an area from infestation. ALB Guidelines at 21-23.

16. Other treatments, such as pheromone injection and biocontrol, are also promising. *See* Robert A. Haack, *Research on* Anoplophora glabripennis *in the United States*, 55 NACHRICHTEN-BLATT DES DEUTSCHEN PFLANZENSCHUTZDIENSTES 4, 68-70 (2003).

17. Suzanne Bond, pers. comm.

18. Barbara Stewart, *A Devastating Invader Behind Closed Doors: Asian Beetles May Be on Private Property, but Inspectors Often Can't Get in to Check*, N.Y. Times, at B1 (Oct. 14, 2002). *See also* Robert A. Haack et al., New York's Battle with the Asian Long-Horned Beetle, J. FORESTRY, Dec. 1997 11 (noting the need for public meetings, the use of aerial photography to identify host trees, and access to private property). In recognition of this issue, a proposed New York City ordinance expressly permitting the city to inspect for and respond to pests in residences was introduced by the city council in 2003. That ordinance was not adopted. Int. 0388-2003 (New York, N.Y. 2003).

19. ALB Guidelines at 26.

20. ALB Guidelines at 5-6.

21. ALB Guidelines at 26.

22. Suzanne Bond, pers. comm.; Final Report of the New York Invasive Species Task Force 54-55 (2005).

23. David Rohde, *State Trying to Beat Beetles' Clock*, N.Y. Times, (Feb. 23, 1997).

24. EAB can be distinguished from ALB in some ways, including the depth of egg deposition within host trees. ALB Program, pers. comm. Nonetheless, because both insects are borers, they spread along similar invasion pathways and therefore give rise to similar regulatory challenges.

25. U.S. Dep't of Agric., Asian Gypsy Moth Cooperative Eradication Program, Travis County, Texas: Environmental Assessment 1-2 (2006).

26. The effect of such emplacements on compensation could implicate takings law. This concern could be mitigated, however, by careful regulatory design.

IV. Federal Authority

State authorities are usually permitted to enact laws and promulgate regulations as they see fit to match the needs of local constituencies. In some areas, however, Congress has determined that it is in the nation's interest to "preempt" the operation of state laws, thus limiting the ability of states to enact regulatory schemes that conflict with federal law. There are several types of preemption: Congress can ban all state regulation, it can establish regulatory "ceilings" beyond which states cannot regulate, or it can establish minimum federal standards ("floors") and permit states to enact more restrictive laws. In the environmental arena, federal laws generally contain some aspects of the latter two categories, which are often variously referred to as "cooperative federalism."

Invasive species management is a cooperative venture in this country; the federal pest regulatory agency, APHIS, has broad powers to regulate some aspects of the invasive species problem, notably including regulation of import and other issues affecting interstate and international commerce. States, meanwhile, are not prohibited from regulating invasive species in their own right. Every state has thus developed more or less authority to take action to detect and respond to invasive plant pests. Although this study focuses on state laws, a general understanding of federal invasive species standards is necessary to understand the strengths and weaknesses of the regulatory systems used by states.

Pesticide regulation is also cooperative. Of the specific response strategies discussed in this report, pesticide regulation is the only area where a federal law has explicitly adopted a cooperative federalism structure. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) establishes a common regulatory floor that must be followed in every state, so an understanding of federal pesticide law is necessary to understand state pesticide regulatory schemes.

The Plant Protection Act of 2000

The Department of Agriculture's responsibility for invasive plant pests and pathogens can be traced through eleven separate Acts of Congress, beginning with the Plant Quarantine Act of 1912.[1] The Plant Protection Act (PPA) consolidated and updated most of these authorities and prohibits the "importation, entry, exportation, or movement" "in interstate commerce" of any plant pest unless in accordance with APHIS regulations and authorized by a general or specific APHIS permit.[2] The PPA thus imposes restrictions on the entry and movement of listed species within the United States. It also authorizes emergency remedial measures *within* a state (i.e., when interstate movement is not involved) if "the measures being taken by the State are inadequate to eradicate the plant pest or noxious weed."[3]

These provisions apply to all "plant pests." The statutory definition of "plant pest" expands APHIS's jurisdiction beyond traditional agricultural pests to include any living stage of a nonhuman animal or disease organism that can "directly or indirectly" injure a plant or plant part.[4] APHIS regulations are more specific, listing both complex organisms and diseases, including "insects, mites, nematodes, slugs, snails, protozoa, or other invertebrate animals, bacteria, fungi, other parasitic plants or reproductive parts thereof, viruses, or any organisms similar to or allied with any of the foregoing, or any infectious substances which can directly or indirectly injure or cause disease or damage in any plants or parts thereof, or any processed, manufactured, or other products of plants."[5] To enforce its mandate to protect against plant pest invasions, APHIS requires permits for the import or interstate movement of live plant pests.

In addition to these direct limitations on the transport of plant pest, the PPA also authorizes APHIS to limit the importation and use in commerce of any plant, biological control organism,[6] or other articles as necessary to prevent the introduction of plant pests or noxious weeds.[7] Using this authority, APHIS requires permits for the use of articles from foreign sources that can provide a pathway for the introduction of pests, such as wood products, living plants, soil, and fresh fruits and vegetables.[8]

Although the PPA strengthened federal plant pest provisions, several gaps remain in that authority. APHIS's authority to declare quarantines, declare extraordinary emergencies, or take other remedial measures is limited to plant pests or noxious weeds that are "new to or not known to be widely prevalent or distributed within and throughout the United States."[9] Thus, APHIS cannot regulate pests that have already become

widely established in the United States. APHIS also lacks authority to return shipments from quarantined areas to their place of origin, although several states authorize their pest response agencies to take this action pursuant to state quarantines. Unfortunately, such robust state law provisions may be undermined by the PPA's preemption provision. Section 436 of the PPA specifically preempts state and local plant protection regulations where APHIS has issued a regulation or order to govern that pest. There is an exception only for state regulations that are consistent with federal requirements and for states that can demonstrate a "special need" for additional restrictions.[10] Such a demonstration must be based on "sound scientific data or a thorough risk assessment."[11] Thus, while creative state provisions such as the "return to origin" clauses are permitted for pests that are not subject to federal regulation, these provisions may cease to take effect if and when the federal government chooses to act to prevent the dissemination of a pest. This complex relationship necessitates careful, case-by-case scrutiny to determine the applicability of state laws in specific circumstances.

Federal Insecticide, Rodenticide, and Fungicide Act

Congress regulates pesticides through FIFRA. In simple terms, FIFRA requires pesticide manufacturers to specify the approved uses for their products, and consumers cannot use those pesticides for any other purpose. FIFRA is administered by the Environmental Protection Agency (EPA),[12] but enforced by states.[13]

A. FIFRA Requirements

Not all pest control products are governed by FIFRA. Rather, the statute regulates only "pesticides," as defined to include any substance or mixture intended to combat any pest.[14] "Pests" are further defined as "any insect, rodent, nematode, fungus, weed, or [] any other form of terrestrial or aquatic plant or animal life or virus, bacteria, or other micro-organism . . . [not living on or in man or other animals]" that EPA declares to be a pest.[15] EPA regulations require that an organism be deleterious to man or the environment to qualify as a pest.[16]

Some categories of pest control chemicals do not qualify as pesticides, though they could hypothetically be covered by these definitions. First, EPA has identified several "minimum risk pesticides" that are exempt from FIFRA.[17] In addition, biological control agents, including pheromones and pheromone traps, are excluded from the definition of pesticide[18] and thus not regulated by FIFRA or its state counterparts.[19] On the other hand, so-called "plant-incorporated protectants" – both pesticides produced by genetically modified plants and the genetic code required to produce them – are considered to be pesticides unless occurring through natural means.[20]

For regulated pesticides, FIFRA imposes certain requirements. First, pesticides cannot be sold unless they are registered with EPA.[21] Registration is an expensive and time-consuming process[22] requiring the development of a label that specifies the pest, host, or site on which the pesticide is to be used, as well as the concentration, dosage, and application method to be used.[23] Registered pesticides are also classified (and labeled) for each approved use according to how dangerous they are to "man or the environment." The classifications include general use and restricted use.[24] Restricted use pesticides can only be sold to certified pesticide applicators, who must be certified in particular categories of use, such as regulatory pest control or forest pest control.[25] Once properly registered and labeled, pesticides may be sold only by registered dealers. Pesticide applicators in turn can use the pesticide only in accordance with the label.[26] Violations of these requirements may result in criminal or civil penalties, but those penalties do not apply to public officials engaged in their official duties.[27]

FIFRA contains an important exemption for emergency actions. EPA can exempt any federal or state agency from any FIFRA provision in emergency conditions (the "section 18 exemption").[28] EPA must consult with the Department of Agriculture and the Governor of the applicable state before making the exemption decision if either party requested the exemption. Section 18 exemptions are available in "urgent, nonroutine situation[s] that require[] the use of a pesticide" but where there are no effective registered pesticides labeled for control of the pest under the emergency conditions and no economically or environmentally feasible alternative control practices are available.[29]

Three types of emergency exemptions are relevant to plant pest and pathogen management: specific exemptions, quarantine exemptions, and crisis exemptions.[30] A specific exemption is permitted to avert a "significant economic loss" or a significant risk to an endangered or threatened species, beneficial organism, or the environment. Such exemptions can last no longer than one year. Quarantine exemptions are used to prevent the introduction or spread of a new pest or one that not widely distributed, and may last up to 3 years (they may be renewed). Because these exemptions require a detailed and potentially time-consuming application process,[31] a response action may be required before the agency can obtain another type of exemption. In these cases, states or agencies can declare a crisis exemption, which requires no prior approval by EPA.[32] These exemptions are limited to 15 days, unless an application for another emergency exemption category is pending with EPA.[33] EPA, however, performs an expedited review of crisis exemptions and can revoke them if there is insufficient data to determine the risks presented by the application, if revocation is necessary to protect "man or the environment," or if the state or agency did not comply with the rules.[34]

B. The State's Role in FIFRA

States have a prominent role in the federal pesticide regulatory system. They bear primary enforcement responsibility for FIFRA violations and have joint regulatory authority over pesticides. States may also impose additional requirements for pesticide use so long as they do not permit sales or uses contrary to FIFRA.[35] EPA, however, retains the authority to reject some state actions on a case-by-case basis. States, for example, can register pesticide uses that are not approved on a federal level if those additional uses are required to meet special local needs (SLN registration). They cannot do so, however, if EPA has previously rejected a registration application for that use, and EPA can unilaterally deny the SLN registration within 90 days.[36] FIFRA also fully preempts all state regulation as to pesticide labeling: states cannot require pesticide labels that are different than *or additional to* the federal label.[37]

Each state examined in this study has adopted an EPA-approved pesticide regulatory system requiring pesticide registration, classification, labeling, sale only by certified dealers, and use only by certified applicators. These state systems sit alongside federal requirements, thus requiring duplicate compliance with both systems. While state requirements could in theory deviate from FIFRA's structure, they rarely do so, instead adopting regulatory structures parallel to the federal system. Thus, this report does not detail the specifics of each state's registration or certification regulations. Instead, deviations from standard practice, such as notice provisions, are the focus of each state's pesticide discussion.

C. FIFRA and the Clean Water Act

As noted above, the Clean Water Act (CWA) interacts with FIFRA in a complex manner because pesticide discharges can be considered pollutant discharges and therefore can require CWA permitting prior to application. This issue is especially complex due to several conflicting judicial opinions regarding whether a pollutant discharge permit is required before a pesticide can be applied. EPA recently issued a regulation clarifying that a CWA permit is not required for FIFRA-compliant pesticide applications directly to waters to control pests in those waters or applications intended to control pests over or near such waters, where a portion of the pesticide will unavoidably be deposited in the waters.[38] As EPA explains, "wide-area forest canopy insecticide applications can result in [pesticide] deposition to streams and other waters of the U.S. which are either not visible to the aerial applicator or not possible to avoid given the location of aerial application, and that in such circumstances, it is unavoidable that the pesticide enter the water in order to effectively target pests living in the canopy."[39] This provision directly eliminates CWA permitting as a precondition for pesticide application against invasive plant pests.[40]

Notes

1. *See* Alejandro E. Segarra & Jean M. Rawson, Agricultural Quarantine: Congress Debates Reform of Plant Protection Authorities, Cong. Res. Serv. Rep. RS20401 (1999).

2. 7 U.S.C. § 7711. Authority to take remedial actions extends to the progeny of restricted products as well as the facilities and the means of conveyance used in the movement of these products. 7 U.S.C. § 7714(a).

3. 7 U.S.C. § 7715.

4. *See* 7 U.S.C. § 7702. "Plant pests" are defined as "any living stage of any of the following that can directly or indirectly cause damage to, or cause disease in any plant or plant product: A protozoan, nonhuman animal, parasitic plant, bacterium, fungus, virus or viroid, infectious agent or other pathogen, or any article similar to or allied with any of the preceding."

5. 7 C.F.R § 330.100. Federal Plant Pest regulations are found at 7 C.F.R. Part 330.

6. The PPA permits APHIS to regulate "biological control organisms," which are defined to include "any enemy, antagonist, or competitor used to control a plant pest or noxious weed." 7 U.S.C. § 7702.

7. 7 U.S.C. § 7712.

8. *See*, *e.g.*, 7 C.F.R. Part 319 – Foreign Quarantine Notices, 7 C.F.R. § 330.330 – Soil From Foreign Counties, and 7 C.F.R. § 319.56 – Fruits and Vegetables.

9. 7 U.S.C. § 7714-15. *See also* 7 C.F.R. § 330.106 (describing authorized emergency measures when international or interstate inspections reveal new plant pests).

10. *See* PPA Sec. 436 (7 U.S.C. § 7756).

11. *Id.*

12. 7 U.S.C. § 136(b).

13. 7 U.S.C. § 136w-1(a).

14. 7 U.S.C. § 136(u).

15. 7 U.S.C. § 136(t).

16. 40 C.F.R. § 152.5.

17. *See* 40 C.F.R. § 152.25(g).

18. This exemption does not apply to eukaryotic and prokaryotic organisms (including protozoa, algae, fungi, bacteria) and viruses.

19. 40 C.F.R. §§ 125.20, 125.25(b).

20. 40 C.F.R. Part 174. These are defined as "a pesticidal substance that is intended to be produced and used in a living plant, or in the produce thereof, and the genetic material necessary for production of such a pesticidal substance. It also includes any inert ingredient contained in the plant, or produce thereof." 40 C.F.R. § 174.3.

21. 7 U.S.C. §§ 136a(a), 136j(a)(1)(A).

22. The burden of registration is lessened for some categories of pesticide, including minor uses. 7 U.S.C. § 136a(b)(3)(C). One minor use, for example, is use on a commercial agricultural crop or site where the total acreage of the crop does not exceed 300,000 acres under cultivation in the US. *See* 7 U.S.C. § 136w-6 (EPA minor use program); 7 U.S.C. § 136w-7 (Department of Agriculture minor use program).

23. 7 U.S.C. § 136a(c)(9), 40 C.F.R. § 156.10 *et seq*.

24. 7 U.S.C. § 136a(d). *See also* 40 C.F.R. § 125.160 *et seq*.

25. 7 U.S.C. § 136j(a)(2)(F); *see also* 40 C.F.R. §§ 125.167, 125.170, 40 C.F.R. § 171.3.

26. 7 U.S.C. § 136j(a)(2)(G).

27. 7 U.S.C. § 136j(b)(3).

28. 7 U.S.C. § 136p.

29. 40 C.F.R. § 166.3(d).

30. *See* 40 C.F.R. §§ 166.2, 166.28.

31. *See* 40 C.F.R. § 166.20. EPA must respond to applications "as expeditiously as possible." 40 CFR 166.25.

32. 40 C.F.R. § 166.40. The crisis exemption is not available for chemicals not previously registered or for new uses of pesticides on food crops. 40 C.F.R. § 166.41.

33. 40 C.F.R. § 166.45.

34. 40 C.F.R. § 166.53.

35. 7 U.S.C. § 136v(a).

36. 7 U.S.C. § 136v(c)(2); s*ee also* 40 C.F.R. § 162.150 *et seq*.

37. 7 U.S.C. § 136v(b).

38. 40 C.F.R. § 122.3(h).

39. Application of Pesticides to Waters of the United States in Compliance with FIFRA, 71 Fed. Reg. 68,483 (Nov. 27, 2006).

40. Note that this applies only to permitting for direct application from a point source under the National Pollutant Discharge Elimination System (NPDES), not to pesticide runoff or other non-point source limitations that may be imposed by other provisions of the CWA.

V. State Authorities

California

Jurisdiction and Definitions

Plant pests and pathogens are managed by several state agencies. The Department of Food and Agriculture (CDFA), however, has primary responsibility for preventing the introduction and spread of plant diseases, injurious insects, and other pests.[1] The Department of Public Resources (CDPR), through the Division of Forestry and Fire Protection, has additional regulatory and management authority on timberlands.[2]

For CDFA, "pest" may include any infectious, transmissible, or contagious plant diseases and syndromes causing disease-like symptoms and any form of animal or vegetable life. To qualify as pests, these organisms must be "dangerous or detrimental" to California's agricultural industry.[3] Thus, while the definition is extremely broad from a taxonomic perspective, organisms are excluded from CDFA's definition unless they cause direct harm to agricultural interests[4] – potentially a severely restrictive provision.

CDPR's pest authority is differently worded and contains no explicit section defining "pest." The statute, however, explicitly permits regulation of "insect pests and plant diseases" – a general and broad formulation that should allow the Department to address many potential pests.[5] The restriction to "insect pests" is troubling, however, since mollusks and other non-insect invertebrates are potentially beyond the scope of the definition.

Although CDFA is the state department responsible for oversight of California's agricultural pest law, it is county agricultural agencies, acting through their commissioners (Commissioners), who primarily implement the provisions of the law on a local level, subject to recommendation and instruction from the Department.[6] The law preempts any local pest control ordinance not "clearly consistent" with the pest law and necessary to its implementation, but nonetheless anticipates that local agencies' generally-applicable ordinances and regulations may at times interfere with CDFA's statewide pest response efforts.[7] When the governor has declared an emergency, therefore, CDFA may overrule any local provision that threatens statewide agriculture or "materially interfere[s]" with the Department's ability to eradicate a pest, or where the pest could spread rapidly beyond the local area.[8] This section thus balances the state's interests in promoting local management of pest infestation while retaining statewide control in emergency situations.

In addition to its pest management authority, CDFA and the Department of Pesticide Regulation are variously responsible for implementing different elements of the state FIFRA analogue and other laws related to pesticides.[9] For this purpose, "pest control" is defined to include the use of any pesticide to prevent, control, or eliminate a pest infestation or "plant disorder."[10] The pest control section precludes all local regulation of pesticide use except as specifically provided.[11] The definition of "pest" is three-pronged, and can include: (i) any insect, nematode, weed, predatory animal, or rodent; (ii) any pest meeting the definition of pest in FIFRA; or (iii) anything declared to be a pest by the Department.[12] These definitions are sufficiently broad to encompass all potential pests against which an ED/RR campaign could be mounted.

Inspection

No California citizen or business is required to report the presence of pests on its lands. State-funded employees who discover new or incipient pests as part of an inspection or survey, however, must report that discovery to CDFA.[13] CDFA, in turn, must "thoroughly investigate" the existence of the pest, the probability of its spread, and the feasibility of a response action.[14]

California law also provides broad inspection authority to both CDFA and Commissioners regardless of employee reporting. CDFA may enter any premises to inspect that premises or anything located on the premises.[15] Similarly, "whenever necessary," Commissioners may enter and inspect any premises, conveyances, plants, and other "things" in the Department's jurisdiction.[16]

In addition, CDFA may conduct surveys and investigations of any agricultural location or other premises "liable to be infested" with any pest. These inspections may be used to determine the existence of the pest or its status.[17] CDFA and the Commissioners are required to cooperate in carrying out these surveys.[18]

Commissioners also have additional authority. During quarantines, Commissioners are required to inspect

any plant or thing that is or may be infested with the quarantine pest or which may be a pest vector.[19] The Department is prohibited from allowing any plants or potential vectors from crossing any quarantine boundary until inspected and certified, except where CDFA authorizes a waiver for an item or type of item that poses no threat of infestation.[20] These shipment certifications are in addition to the Commissioners' normal duties, which permit them to certify agricultural shipments.[21] CDFA is required to maintain "plant quarantine inspection stations" where all motor vehicles carrying shipments of agricultural commodities must report for inspection, and must also provide for inspection of airplanes and ships.[22]

CDFA is additionally empowered to provide horticultural inspection services by request and to regulate nursery imports and inspect, respond to, and quarantine infestations in nurseries.[23] These authorities are paired with specific inspection, response, and quarantine responsibilities for specific pests.[24]

Finally, California law includes a unique authority that could enhance rapid response programs. CDFA is authorized to inspect plants and premises for the purpose of creating a registry of uninfested plants that could be susceptible to infestation.[25] This information-gathering tool could thus be used to plan for future infestations.

CDPR has separate inspection authority. The CDPR statute permits the Department to make "necessary surveys and appraisals" to obtain "pertinent data" on infestations.[26] While the presence of an inspection provision is beneficial, the extent of the authority granted by the provision in this case is unfortunately unclear. Although this provision might permit the Department to access private land, its silence on the issue makes that proposition debatable.

Response

All premises and articles that are infested with pests automatically constitute a public nuisance.[27] In addition, uncultivated cotton plants and other neglected or abandoned plants that are infested with a pest, are host plants of a pest, or area otherwise a menace to agriculture also constitute a nuisance.[28] As it is illegal for any person to maintain a public nuisance, private individuals are responsible for controlling or eradicating all pests that occur on their property.[29]

In addition to this individual response requirement, CDFA and Commissioners also share separate response authority. When CDFA discovers a pest, it must notify the Commissioner in the county where the infestation was discovered, describe the best known procedures for eradicating or controlling the pest, and provide advice as to the treatment to be undertaken.[30] The Commissioner is then responsible for disseminating CDFA's statement, in whole or in part, to affected landowners.[31] On the other hand, when Commissioners themselves discover infestations on private property or certain property owned or managed by a political subdivision, or when they discover a neglected or abandoned plant constituting a nuisance, they may notify the landowner or responsible municipality and require the responsible party to control or eradicate the pest within a specified time.[32] CDFA thus cannot itself respond, instead acting through the Commissioners, who themselves appear unable to require the use of particular response actions.[33] It is also important to note that all orders and actions by a Commissioner, except summary actions, are subject to appeal to CDFA within five days. Appeals must be decided within 10 days thereafter, and the decision of CDFA is final.[34] The order or action appealed is stayed while the order is pending.[35] This provision for limited appeal thus balances the need for finality and rapid action against the importance of appeal.

Should the owner fail to respond to a pest response notice in a timely manner, the Commissioner is then authorized to abate the nuisance through control, destruction, or eradication of the pest or nuisance plant.[36] The Commissioner may also act prior to expiration of the time in the notice upon a determination that the pest constitutes an "immediate hazard" to other property that would result in "great or irreparable

injury" without immediate action. Finally, the Commissioner can act summarily to destroy cotton that is grown in violation of a host-free period.[37] The statute thus balances between its preference for owners to individually treat their property, the ability of the agency to respond despite absent or inactive owners, and the need for broader emergency powers to address extreme threats of dispersal of incipient infestations.

CDPR's statute contains additional response authority. First, the statute declares pine beetles and all other "insect pests and plant diseases detrimental to forest growth" to be a public nuisance and requires timberland owners to control or eradicate those pests on their lands.[38] The Department itself also has pest response authority. After establishing a zone of infestation, CDPR agents are permitted to enter on any private lands within the zone and to eradicate or control pests on those lands.[39] Thus, so long as the Department is willing to use its authority to declare a zone of infestation, its authority to control pests is almost unbridled.

Quarantine

CDFA is permitted to impose quarantines.[40] The statute functionally allows both internal and external quarantines, as the quarantine boundaries can be identical to the state boundaries or encompass a smaller area of the state.[41] While this setup allows CDFA to prohibit entry of products from infested areas, it is significantly broader than statutes in other states that permit quarantines of specific out-of-state areas. In the latter case, only shipments from the infested area are permitted, but in California, all shipments – originating from infested area or not – are prohibited. As a safeguard against overuse of this authority, however, all quarantine regulations involving other states or areas must be approved by the governor – a provision that could either protect against overuse of quarantines or serve as a choke-point for needed regulation.[42]

While its authority to impose quarantines is extremely broad, CDFA's quarantine regulatory authority is much narrower, as it applies only to transport of potential vectors across quarantine boundaries.[43] Thus, transport within a quarantine area is permitted. During quarantines, as noted above, Commissioners are required to inspect and certify plants and other potential vectors.[44] Commissioners otherwise lack authority to declare quarantines without CDFA consent.[45]

CDFA is also empowered to declare eradication areas using the same regulations applicable to quarantine area declarations. Unlike quarantine areas, eradication areas do not regulate movement, however; instead, they simply establish that all pests and hosts within the area are automatically nuisances and subject to abatement.[46]

California law also includes a special localized quarantine provision. After identifying a pest on a premises, both CDFA and Commissioners are authorized to "hold" any susceptible host plant or vector in the area where the pest is likely to spread (up to five miles away from the infested premises).[47] These holds make it illegal to move any plant from the premises where found without written authorization.[48] The Department or Commissioner can then release potential hosts that it determines are not infested and enter compliance agreements with other shippers to protect against infestation.[49] This provision thus permits immediate, extremely localized responses to incipient infestations, and thus should be very useful in the ED/RR context.

Finally, CDFA is empowered to declare host-free periods or host-free districts when it determines that a pest cannot be controlled or eradicated using normal means.[50] These districts or periods are extremely restrictive, as no person may plant, grow, or maintain the pest host in the area and for the time specified.[51]

CDPR has separate quarantine authority. When the Department determines that an area is infested with a pest that is so severe as to menace the timber on the infested land or on adjacent land, it can declare a zone of infestation in that area.[52] The zone persists until the Department determines that its maintenance is no longer necessary or feasible.[53]

Although the boundaries of the zone must be precise, the statute is silent on the Department's regulatory power within the zone; as a result, the extent of the Department's authority to limit movement within or across zone boundaries is unclear. The only authority explicitly addressed in the section is that described above, permitting the Department to control or eradicate the infestation.

Compensation

As noted above, all pests constitute public nuisances, so landowners are unlikely to succeed in judicial actions seeking compensation.[54]

All treatments required by DCFA or a Commissioner are undertaken at the risk and expense of the landowner.[55] As a result, where a Commissioner is required to undertake a response action, the owner remains responsible for the costs of abatement.[56] In addition, landowners who violate a host-free period necessitating destruction of cotton by a Commissioner must pay 150 percent of the cost of eradication.[57]

Tree Cutting

In addition to the regulatory authorities discussed above, CDPR is responsible for managing forestry and timber cutting in California. A variety of statutes govern the timber industry, including but not limited to the Z'Berg-Nejedly Forest Practice Act of 1973[58] and the Urban Forestry Act.[59] These provisions require licensing and management plans, for example, prior to the initiation of timber harvesting.[60] These requirements do not apply in emergencies, however, and insect or disease infestation is one such emergency.[61]

State lands provide another potential limitation on tree cutting. CDPR has jurisdiction over state lands including state forests and parks.[62] Both state forest lands and lands within the state parks system are governed by management plans, which may influence the amount and type of timber cutting permitted on those lands.[63] While different elements of the state park system are more restrictive than others in terms of permitted management activities, none, including wilderness units, outlaws tree cutting entirely, and the requirement to protect endangered and threatened species similarly applies in all units.[64] Indeed, insect and disease control is specifically exempted from the restrictive provisions applicable in wilderness areas.[65] Thus, tree cutting is allowed in such areas where necessary to protect ecological or natural values and is permitted where required to eradicate pests affecting endangered species.

Pesticides

California law includes both typical FIFRA-like pesticide provisions and more specialized regulations. First, pesticide dealers and applicators must be licensed and must deal only in registered pesticides.[66] Emergency registration exemptions pursuant to FIFRA are permitted, as are SLN registrations.[67] Pesticides must be applied in compliance with their labeling and must be accomplished so as to avoid substantial drift away from the target area.[68] The law also includes notice provisions, notably on public lands such as school grounds and parks, where 24 hours' posted notice is required.[69]

In addition to the above FIFRA analogue provisions, other California laws include unique pesticide provisions. The Property Owners' Roadside Vegetation Control Information Act of 1991[70] imposes no explicit restrictions on the use of pesticides, but it does require CDFA to notify and meet with landowners requesting such notice and meeting prior to roadside pesticide applications. Thus, no roadside pesticide application can occur on any portion of a roadway where an adjacent landowner has requested notification of applications until that notice has been provided and the meeting held.[71] While this appears to impose little delay on the agency, it is important to note that landowners have thirty days to request a meeting after provision of the notice.[72] As a result, the agency is barred from applying pesticides during that period.

Specific pesticide notice provisions also apply in urban eradication areas. Where CDFA proclaims an eradication project that will involve aerial pesticide application, the Department must notify residents, physicians, and the media at least 72 hours prior to the application.[73]

Notes

1. Cal. Food & Agric. Code § 403; 3 Cal. Code Regs. CDFA's statute is intended to "occupy the field." Cal. Food & Agric. Code § 5323.

2. Cal. Pub. Res. Code §§ 713-714, 4750-4750.7.

3. Cal. Food & Agric. Code § 5006.

4. "Agriculture" includes tree growing and horticulture. *See* Cal. Food & Agric. Code § 22-24.5.

5. Cal. Pub. Res. Code § 4713.

6. *See* Cal. Food & Agric. Code § 2281.

7. Cal. Food & Agric. Code § 5323.

8. Cal. Food & Agric. Code § 5026.

9. Cal. Food & Agric. Code § 12500. *See also* Cal. Food & Agric. Code § 11401 *et seq*.

10. Cal. Food & Agric. Code §§ 11403, 12753.

11. Cal. Food & Agric. Code § 11501.1.

12. Cal. Food & Agric. Code § 12754.5.

13. Cal. Food & Agric. Code § 5307.

14. Cal. Food & Agric. Code § 5321.

15. Cal. Food & Agric. Code § 408.

16. Cal. Food & Agric. Code § 5023.

17. Cal. Food & Agric. Code § 461.

18. *Id*.; Cal. Food & Agric. Code § 2283.

19. Cal. Food & Agric. Code § 5024.

20. *Id*.

21. Cal. Food & Agric. Code § 5205.

22. Cal. Food & Agric. Code §§ 5341-5341.5; 5350.

23. Cal. Food & Agric. Code §§ 5852, 6301 *et seq*.

24. Cal. Food & Agric. Code §§ 5901 *et seq*.

25. Cal. Food & Agric. Code § 5821.

26. Cal. Pub. Res. Code § 4717.

27. Cal. Food & Agric. Code § 5401.

28. Cal. Food & Agric. Code §§ 5551-5552.

29. Cal. Food & Agric. Code §§ 5402, 5553-5554. This provision applies to infestations with any organism meeting the definition of pest.

30. Cal. Food & Agric. Code §§ 5251-5252.

31. Cal. Food & Agric. Code § 5253.

32. Cal. Food & Agric. Code §§ 5421, 5491, 5493, 5561-5562. The response authority applies in public parks and right-of-ways subject to city or county control and any property subject to the control of irrigation, drainage, flood control, reclamation, and levee districts. *Id*. Pests on similar state lands are the agency's responsibility. Cal. Food & Agric. Code § 5492.

33. If no Commissioner is present in a county or the Commissioner fails to respond, CDFA can itself assume the powers otherwise vested in the Commissioner. Cal. Food & Agric. Code § 5254. Similarly, CDFA can act in concert with a Commissioner, and when it does so it shares all of the Commissioner's powers. Cal. Food & Agric. Code § 2280. CDFA may also be authorized to promulgate response regulations under its general authority. Cal. Food & Agric. Code § 407.

34. Cal. Food & Agric. Code §§ 5103 - 5104.

35. Cal. Food & Agric. Code § 5105.

36. Cal. Food & Agric. Code §§ 5403, 5555. The statute establishes a sixty day limit for the removal or destruction of neglected or abandoned crops. Cal. Food & Agric. Code § 5563. After that time, the Commissioner is required to notify the District Attorney of the nuisance and request an order for abatement in court. Id. §§ 5563-64. The court is then required to order removal or destruction of the plant. Cal. Food & Agric. Code § 5602.

37. Cal. Food & Agric. Code § 5404.

38. Cal. Pub. Res. Code §§ 4713-4714. The reach of this provision is unclear, but presumably all applicable diseases, including sudden oak death, are included.

39. Cal. Pub. Res. Code § 4716.

40. Cal. Food & Agric. Code § 5301.

41. Cal. Food & Agric. Code § 5301. CDNR is required to cooperate with CDFA in setting quarantine boundaries and enforcing quarantine regulations with regard to Dutch Elm Disease and Sudden Oak Death Syndrome. Cal. Pub. Res. Code §§ 4799.10, 4750.4.

42. Cal. Food & Agric. Code § 5303.

43. Cal. Food & Agric. Code § 5302.

44. Cal. Food & Agric. Code § 5024.

45. Cal. Food & Agric. Code § 5305.

46. Cal. Food & Agric. Code § 5762.

47. Cal. Food & Agric. Code § 5701.

48. Cal. Food & Agric. Code § 5704.

49. Cal. Food & Agric. Code §§ 5702, 5705.

50. Cal. Food & Agric. Code § 5781.

51. Cal. Food & Agric. Code §§ 5782-5783.

52. Cal. Pub. Res. Code § 4716.

53. Cal. Pub. Res. Code § 4718.

54. Cal. Food & Agric. Code § 5401.

55. Cal. Food & Agric. Code § 5021.

56. Cal. Food & Agric. Code §§ 5428, 5562. 5631.

57. Cal. Food & Agric. Code §5404.

58. Cal. Pub. Res. Code §§ 4511-4628.

59. Cal. Pub. Res. Code §§ 4799.06-4799.12.

60. Cal. Pub. Res. Code §§ 4571, 4581.

61. Cal. Pub. Res. Code § 4592.

62. Cal. Pub. Res. Code §§ 4631 *et seq*., 5001 *et seq*.

63. Cal. Pub. Res. Code §§ 5002.2.

64. *See* Cal. Pub. Res. Code § 5093.33.

65. Cal. Pub. Res. Code § 5093.36.

66. Cal. Food & Agric. Code §§ 12101, 12201.1, 12811.

67. Cal. Food & Agric. Code § 12803, 12833.

68. Cal. Food & Agric. Code § 12972-12973.

69. Cal. Food & Agric. Code § 12978.

70. Cal. Food & Agric. Code § 5501 *et seq*.

71. Cal. Food & Agric. Code § 5505.

72. Cal. Food & Agric. Code § 5506.

73. Cal. Food & Agric. Code §§ 5771-5772.

Georgia

Jurisdiction and Definitions

Most terrestrial plant pest and pathogen authority in Georgia resides in the Commissioner of the Division of Plant Industry of the Department of Agriculture (GDA).[1] GDA has jurisdiction over all plants and plant parts, including all nursery trees (including forest trees in nurseries) and trees not produced in the horticulture or agriculture industries, except for naturally occurring forest trees, which are regulated by the Georgia Forestry Commission (GFC).[2]

GDA's plant pest response authority derives from the Georgia Entomology Act, which governs inspection, response, quarantine, and compensation. The Entomology Act defines "plant pest" to include organisms that harm the agricultural, horticultural, or "other interests" of the state. Pests include, but are not limited to, insects, bacteria, fungi, viruses, or weeds.[3] GDA has broad rulemaking power to research, prevent, and control infestations by these pests.[4] It can also enter into cooperative arrangements with individuals and agencies for inspection, control, and eradication of plant pests.[5]

GFC, by contrast, has independent authority over all forest trees and is required to respond to pest infestations on forest lands. As a result, the responsibility for regulating plant pests depends on the location and type of the host plant. GFC has jurisdiction over all naturally- occurring forest trees under the state forestry law, which provides inspection, response, quarantine, and compensation authority.[6] The forestry statute permits GFC to respond only to infestations of "forest insect pests" or infections of "forest tree diseases."[7] Neither of these terms is defined in the statute, and no other authority is available to enhance the apparently limited scope of the pests within GFC's jurisdiction. GFC has not promulgated regulations pertaining to its forest pest authority.

Although the jurisdictional split between GDA and GFC appears to be clearly delineated based on species of plant and the natural or horticultural occurrence of that plant, jurisdictional complications may still complicate pest responses. Forest insect pests and diseases, for example, may infest both naturally-occurring and horticultural plants, necessitating coordination and ongoing communication between GFC and GDA. This layer of complexity may hinder the effectiveness and rapidity of pest response in the state, at least where forest pests are at issue.

Definitional issues also pose a potential issue for pest management. GDA's discretion to respond to a wide variety of pests is appropriately broad, particularly with respect to its ability to list pests based on non-economic interests, but GFC's definition is both ambiguous and limited in scope. It may be difficult to determine whether a specific tree species is a forest tree or a non- forest tree[8] without any statutory definition to fall back on; because jurisdiction turns on the outcome of this question, the ambiguity of the definition could force the agencies to wrangle over responsibility for pest response and thereby slow the development of a coordinated response to infestation by the agencies.

Even where the definition does not create jurisdictional uncertainty, it limits GFC jurisdiction to insect and disease pests. While this mandate is broad enough to cover the vast majority of potential pest infestations, a more general or widespread authority would provide the agency with more discretion to respond to emerging pests from other phyles, including non- insect arthropods and mollusks. More fundamentally, the absence of any explicit definition of "pest" creates a layer of ambiguity that may hinder the listing of all potential pest organisms, handcuffing GFC's attempts to enforce its statute.

GDA also implements the Georgia Pesticide Control Act of 1976 (GPCA)[9] and the Georgia Pesticide Use and Application Act of 1976 (GPUAA), which together constitute the state's FIFRA analogue.[10] It can cooperate with federal, state and local, and other state agencies as part of its pesticide regulatory authority.[11]

The pesticide acts have a somewhat complex relationship with other state laws. The GPCA explicitly does not override any law or regulation issued by the Department of Natural Resources or by the Coastal Marshland Protection Committee.[12] On the other hand, the GPUAA expressly prohibits independent local regulation relating to pesticide use, registration, or other matters.[13] County and municipality governing authorities may petition for a variance, however, and their petitions must be answered within 60 days after receipt.[14]

The GPCA and GPUAA both mirror FIFRA's definition of pest. GDA may declare any organism meeting this definition to be a pest after notice and an opportunity for a hearing.[15] Under these definitions, "pest" includes all organisms that the EPA declares to be a pest under section 25(c)(1) of FIFRA, plus other organisms that exist under conditions injurious to man or the environment, including vertebrate and invertebrate animals, any "plants and plant parts growing where not wanted," and viruses and microorganisms including, but not limited to, algae, fungi, and bacteria, so long as those organisms are not living on or in man, animals, or processed food.[16] This definition is comprehensive and is likely to require the regulation of most potential chemical pest responses.

Uniquely, the GPCA regulations also explicitly define and regulate biological control agents, which are "living organism[s] applied to or introduced into the environment that [are] intended to function as a pesticide against another organism declared to be a pest."[17] This definition does not appear to include non-lethal biological materials such as pheromones, but does appear to limit the use of whole organisms in pest control.

Inspection

GDA

GDA has general authority to inspect plants, plant products, and other objects that can disseminate pests. Its agents can enter "any place" to inspect for pests, including conveyances (such as vessels and trucks), facilities (such as buildings, docks, nurseries, and orchards), and "other premises" where plants are grown, produced, stored, or handled.[18] It is unclear, however, whether this authority includes the ability to enter dwellings or other private, non-commercial areas. GDA can also intercept and inspect plants or objects while being moved within or into the state.[19] It may demand of any person moving the plants or objects to provide information about the origin and source of the cargo; refusal to comply is a misdemeanor.[20] GDA can open containers found there as part of its inspections.[21]

In addition to the agency's authority to act without prompting, the statute permits two or more citizens to petition for an inspection, which must be carried out by the division as "speedily as possible."[22] If the inspection reveals an infestation, the Commissioner must control or eradicate the pest as in a normal case.[23]

As noted above, GDA also has specific authority to regulate and inspect nurseries.[24] The regulations require live plant dealers and growers to obtain a license.[25] Each dealer or grower location must be inspected for pests prior to issuance or renewal of a license.[26] Nurseries can also request special inspection and phytosanitary certification in support of their plant sales.[27]

This analysis shows GDA's investigation authority to be potentially problematic for ED/RR efforts. GDA is not explicitly authorized to enter non-commercial private establishments, so it may be unable to do so without a court order. Without entry authority, the agency may have difficulty detecting nascent infestations. Georgia's unique petition provision, however, allows the public to participate directly in the detection effort and requires the agency to act.

GFC

GFC can appoint investigators who may enter any land to enforce the state's "fire and other forestry laws and regulations."[28] GFC also has more specific authority to enter lands on which the Commission believes the trees are suffering from an infestation or infection to determine whether an infestation exists, and if so, to determine its location, extent, and cause.[29]

In addition to the authority relevant to specific parcels of land, GFC is also empowered to investigate and respond to infestations across larger geographical areas, and can enter "any lands" to investigate or "otherwise carry[] out" this authority.[30]

Response

GDA

When it finds an infestation, GDA can respond in several ways. GDA can "visit" any section of the state to determine whether an infestation of a pest warrants treatment or destruction of infested plants, trees, or other objects. It may then undertake or supervise the treatment or destruction to eradicate or control the pests.[31] If it discovers infested plants or objects in transit in the state, GDA can treat and release the cargo, return it to the sender, or destroy it.[32]

GDA cannot, however, mandate a response to a pest infestation on private lands unless it first declares the pest, or anything infected with or likely to spread the pest, to be a public nuisance.[33] If an inspection discloses infestation with a nuisance pest, GDA must notify the property owner of the required control, eradication, or prevention methods to be undertaken, and the time period during which the control measures must be completed.[34] GDA can require the owner to remove, cut, or destroy infested plants and objects.[35] The owner has the right to appeal the notice.[36] If the owner fails to act in the designated time period, GDA can carry out the prescribed treatment itself.[37] Should the owner both refuse to undertake controls and also stop GDA agents from entering the land to perform the controls, GDA can file a court complaint seeking an injunction.[38] The hearing in such cases must occur within three days after notice of the suit is served on the owner.[39] The court must order the treatment executed upon "satisfactory evidence" of infestation.

Georgia nursery laws require control of pests prior to license approval and outlaw the sale of infected plants by nurseries.[40] The Commissioner may quarantine or issue a stop sale on any regulated article found to be infested with plant pests. If the problem is not corrected, the Commissioner may require treatment or destruction and assess costs to the owner.[41]

GDA's response authority may be effective when an infestation is discovered because the agency can require owners to undertake particular control actions in a certain time period. The imposition of a deadline on the scheduling of court hearings on pest responses is important to ED/RR efforts; without such a limitation, court backlogs could delay appeals enough so that a rapid response could be rendered untenable. The required declaration of pests as a public nuisance may slow rapid response actions, however, particularly for newly-discovered pest species.

GFC

If a GFC inspection reveals an infestation, GFC must notify the landowner of the nature of the infestation and recommend a course of action to prevent the infestation from spreading.[42] GFC cannot mandate a particular control method but may itself chemically treat standing infested trees or fell and remove or treat those trees. The Commission may also use other effective control methods if a landowner fails to prevent the spread of the infestation.[43]

When GFC determines that an infestation of forest insect pests or tree diseases is injurious to timber or forest trees and poses a menace to the timber or forest growth of the state, it must declare a zone of infestation or infection.[44] GFC must then notify affected forest landowners of the problem, recommend control measures, and offer technical advice to assist in controlling or eradicating the pest or disease. GFC cannot, however, require affected landowners to take certain corrective action under its "zone of infestation" authority.

GFC's limited authority to require specific control actions may hinder effective ED/RR action because the agency is only permitted to enter private land to address infestation after the infestation has spread, when by definition the infestation will be much more difficult to control. On the other hand, GFC's authority to treat infestations is specific and permits a range of potential responses to infestation, including destruction of trees. Similarly, GFC's entry authority is specified, eliminating uncertainty as to the property owner's rights.

Quarantine

GDA

GDA can quarantine any area, inside or outside the state, which is infested with dangerous plant pests if necessary to protect the agricultural, horticultural, or other interests of the state.[45] Once a quarantine area is established, GDA can prohibit the introduction into or movement within the state of any materials likely to carry the pest.[46] The limitations on movement are not limited to movement between quarantined and non-quarantined areas, and the restrictions on movement may be either absolute or limited.[47]

These quarantine movement provisions provide broad authority to tailor the quarantine to the infestation both in terms of geography and with respect to vectors. In addition, quarantines may have negative economic impacts, providing regulators with a disincentive to their imposition. In Georgia, however, the authority to declare *limited* quarantines should shield the agency from the some of these negative economic implications

of declaring quarantines by permitting most economic activity to continue despite the quarantine. The minimization of the disincentive to quarantine declaration is unique and may encourage the use of this regulatory tool at the outset of an ED/RR action.

GFC

In addition to its "zone of infestation" authority, GFC can declare quarantines under § 12-6-16 of the forestry law. GFC's quarantine authority includes the mandate to prescribe rules and regulations needed to combat the pest and to seek injunctions against violations of those regulations, regardless of whether those practices would normally be considered nuisances.[48] Thus, only by instituting a quarantine can the agency mandate specific response actions on private land. Because agencies often seek to avoid quarantining areas where possible, this is almost certain to be a little-used authority and will likely decrease the effectiveness of overall pest response in the state.

Compensation

GDA

If GDA is forced to carry out a prescribed treatment on private lands, it may charge the owner for the expenses incurred.[49] No compensation is permitted for any plants, plant products, or other things or substances destroyed during the control effort.[50] If GDA is forced by the property owner to seek an injunction to carry out its response authority, it may recover court costs from the recalcitrant owner.[51]

GFC

If any profit is derived from trees that are felled in the course of a response action, that profit must be remitted to the landowner.[52] GFC does not incur liability for trespass by investigating or "otherwise carrying out" the quarantine or zone of infestation authority granted to it under §12-6-16.[53] This liability shield, while less thorough than GDA's protections, is also sufficient to protect GFC from compensation and thus encourages pest responses.

Tree Cutting

Georgia laws do not explicitly restrict tree cutting on state park or other lands. Georgia clean water standards, however, mandate that all waters remain free of turbidity interfering with a legitimate use of water and of turbidity due to a manmade activity resulting in substantial visual contrast.[54] This restriction, while limiting the manner in which trees may be cut, treated, and processed, does not interfere with GFC's authority to cut. As a result, the agency's broad authority to address infestation through a range of destructive treatments is not excessively complicated by generally applicable laws, and tree cutting is available to the agency on all state lands.

Pesticides

Georgia law does not alter the standard FIFRA formula, requiring pesticide registration and classification.[55] A few specific provisions bear notice, however. State agencies and other governmental entities are subject to the licensing requirement, although federal and state public officials are not subject to these restrictions "while engaged in the performance of their official duties in administering state or federal pesticide laws or regulations."[56] Georgia law authorizes emergency and SLN registration of pesticides pursuant to FIFRA §§ 18 and 25b, and authorizes off-label use in these cases.[57] Finally, state law requires applicators to post notice of pesticide applications.[58]

As with tree cutting, water pollution laws restrict the application of pesticides. The Department of Natural Resources regulations require that waters be free of toxic, corrosive, acidic and caustic substances discharged from sources, including nonpoint sources, in amounts harmful to humans, animals, or aquatic life.[59] In addition, certain pesticides, including 2, 4-D, Methoxychlor, and TP-5 Silvex, cannot be present in any waters in concentrations greater than those listed, except in established mixing zones.[60] Application of a pesticide in such a dosage or location that would violate this requirement would violate Georgia water pollution control law.

Notes

1. Ga. Code § 2-7-3.

2. Ga. Code § 2-7-2(9).

3. Ga. Code § 2-7-2(8.1), GR 40-4-9-.01(o).

4. Ga. Code § 2-7-9; Ga. Code § 2-7-23; Ga. Code § 2-7-6.

5. Ga. Code § 2-7-7.

6. Ga. Code § 12-6-1 *et seq*.

7. Ga. Code § 12-6-16.

8. The definition is susceptible to at least two readings. First, it could subdivide trees by species into those commonly occurring in forests and those not occurring in forests. Alternatively, it could be based on land management designations, such that all trees, regardless of species, that occur in a given forested area fall within GFC jurisdiction. While the latter is perhaps more sensible, it is still problematic because it excludes all plants in the forested area that are not "trees."

9. Ga. Code §§ 2-7-50 -73, Ga. Comp. R. & Regs. r. 40-21-1 *et seq*.; 40-11-1 *et seq*. (registration and labeling).

10. Ga. Code §§ 2-7-90 - -170; Ga. Comp. R. & Regs. r. 40-21-2-.01 *et seq*. (certification/licensing/use).

11. Ga. Code §§ 2-7-65, 2-7-96.

12. Ga. Code § 2-7-72.

13. Ga. Code § 2-7-113.1(a).

14. Ga. Code § 2-7-113.1(b).

15. Ga. Code § 2-7-63(a)(1); Ga Code § 2-7-97(f).

16. Ga. Comp. R. & Regs. r. 40-11-7-.01.

17. Ga. Comp. R. & Regs. r. 40-11-2-.02(6).

18. Ga. Code § 2-7-2(8.1).

19. Ga. Code § 2-7-13.

20. Ga. Code § 2-7-14.

21. Ga. Code § 2-7-10.

22. Ga. Code § 2-7-19.

23. *Id*.

24. Ga. Code § 2-7-11.

25. Ga. Comp. R. & Regs. r. 40-4-9-.02.

26. *Id*.

27. Ga. Comp. R. & Regs. r. 40-4-9-.09.

28. Ga. Code § 12-6-20.

29. Ga. Code § 12-6-22.

30. Ga. Code § 12-6-16.

31. Ga. Code § 2-7-12.

32. *Id*.

33. Ga. Code § 2-7-15, 2-7-16. This declaration must be made in compliance with Georgia's administrative regulations.

34. Ga. Code § 2-7-16.

35. Ga. Code § 2-7-12.

36. Ga. Code § 2-7-16 (citing Ga. Code § 2-7-24).

37. Ga. Code § 2-7-17.

38. Ga. Code § 2-7-18.

39. *Id*.

40. Ga. Code § 2-7-12; Ga. Comp. R. & Regs. r. 40-4-9-.10(a).

41. Ga. Comp. R. & Regs. r. 40-4-9-.11.

42. Ga. Code § 12-6-22.

43. Ga. Code § 12-6-22.

44. Ga. Code §12-6-16.

45. Ga. Code § 2-7-20.

46. *Id*.

47. *Id*., *see also* Ga. Comp. R. & Regs. r. 40-4-9-.11(1).

48. Ga. Code §12-6-16.

49. Ga. Code § 2-7-17.

50. Ga. Code § 2-7-17.

51. *Id*.

52. Ga. Code § 12-6-22.

53. *Id*.

54. Ga. Comp. R. & Regs. r. 391-3-6-.03(5)(c)-(d).

55. Ga. Code § 2-7-55, Ga. Comp. R. & Regs. r. 40-11-4-.01(1); *see also* Ga. Code § 2-7-62(a)(1), Ga. Comp. R. & Regs. r. 40-11-10-.01(1)(a).

56. Ga. Code § 2-7-111(a); Ga. Code § 2-7-62(c)(2); Ga. Comp. R. & Regs. r. 40-11-10-.02(2).

57. Ga. Code § 2-7-55(i); Ga. Comp. R. & Regs. r. 40-11-2-.02(43).

58. Ga. Comp. R. & Regs. r. 40-21-9-.02.

59. Ga. Comp. R. & Regs. r. 391-3-6-.03(5)(e).

60. Ga. Comp. R. & Regs. r. 391-3-6-.03(5)(e)(i).

Hawai'i

Jurisdiction and Definitions

Almost all plant pest authorities in Hawai'i are controlled by the Hawai'i Department of Agriculture (HDA), which governs the inspection, response, and quarantine of pests in both agriculture and forests through the Hawai'i Plant Quarantine Law, the state's primary state pest control statute.[1] The Plant Quarantine Law also governs compensation related to pest control actions. In addition to this pest-specific authority, HDA administers the Hawai'i Pesticide Law.[2] In addition to HDA, the Hawai'i Department of Land and Natural Resources (HDLNR) restricts some pest control actions, most notably tree cutting. HDLNR participates in some invasive species programs, but has not enacted any of its own regulations for this purpose. As a result, its regulations are mainly of incidental impact on pest control in Hawai'i, and it is not considered further in any sections other than tree cutting and compensation.

The Plant Quarantine Law includes animals, insects, diseases, and other organisms in its definition of pest. To qualify as pests, the organism must be actually or potentially detrimental to "agriculture, [ ]horticulture, [ ]animal or public health, or natural resources including native biota or [have] an adverse effect on the environment."[3] HDA is responsible for listing pests and has developed listing criteria for that purpose.[4] For designated pests, HDA is required to develop a detailed plan for pest control or eradication.[5]

HDA must designate pests before it can investigate or respond to infestations. Designation of a pest thus expands HDA powers, but it also requires the agency to develop a control or eradication program for the pest.[6] The statute contemplates designation and development of control plans to occur primarily through administrative rulemaking, but HDA is also authorized to respond to incipient pests demanding an immediate response. In such cases, HDA may proceed with minimal or no prior notice to adopt an emergency rule for the eradication of the pest. Emergency rules remain in effect for 180 days but may be renewed.[7]

Hawai'i pesticide law defines "pest" as any organism that *EPA* determines to be a pest, within the constraints imposed by FIFRA.[8] Thus, HDA is not required to define pests. Hawai'i's definition of pesticide, however, is fuller than that in FIFRA, as it excludes certain chemicals from the definition.[9] It also exempts state and federal agencies doing experimental or research work "directed toward obtaining knowledge of the characteristics and proper usage of unspecified or experimental pesticides" from any regulation under Hawai'i law.[10] Finally, pesticides that EPA determines are exempt from FIFRA are also exempt from regulation under Hawai'i pesticide law, unless HDA determines that they have unreasonable adverse effects on the environment.[11]

Unlike in many states, Hawai'i law contains no special reference to the application of the regulations to state agencies or other governmental bodies.

Inspection

HDA's inspection authority is heavily influenced by the state's island status and unique endemic flora and fauna. These factors have led to the development of relatively robust importation and transportation inspection authority in comparison with its largely nonexistent authority to inspect lands within the state.[12]

First, importers must obtain a permit from HDA prior to importing any plants, soil, and other containers. Individuals entering state must also declare any such items upon entry to the state. The Plant Quarantine Law authorizes HDA inspectors to inspect conveyances and personal items when they have "good cause" to suspect a violation of the law. Plants and plant parts must also be inspected prior to transportation between islands.[13] This mandatory inspection, however, does not apply to cut or harvested flowers, foliage, fruits, vegetables, and other non-propagative plant parts.[14]

HDA also has specific import inspection authority governing the importation of soil, plant, and microorganisms.[15] Importation of microorganisms requires listing and a permit, the latter of which takes 90 to 180 days.[16] Emergency permitting available to state and federal agencies and the state university, however, when the microorganism is intended to remediate an emergency or disaster affecting agriculture, horticulture, the environment, or public health.[17] Periodic post-entry inspection of microorganism importers is specifically authorized.[18]

Finally, HDA can implement emergency interim rules, which are not subject to the state administrative procedure act, to stop the importation or movement of flora or fauna where immediately needed to safeguard public health or ecological health. It cannot do so, however, absent a finding by the "advisory committee on plants and animals" that an emergency exists.[19]

Despite these extensive import inspection authorities, neither the Plant Quarantine law nor the HDA regulations explicitly authorize the agency to enter private property for inspection purposes. Section 141-2 of the statute permits the agency to adopt rules for the "quarantine, inspection, fumigation, disinfection, destruction, or exclusion, [] upon introduction into the State, or at any time or place within the State," of any plant or tree. HDA, however, has not used this authority, with the exception of nursery inspections. HDA inspects, treats, and certifies individual shipments of plants for export, and is also permitted to certify whole nurseries as pest- free.[20] Nurseries operating under a pest-free certification must pass a semi-annual inspection.[21]

Response

Importation of any article or organism contrary to law or without a permit is illegal and any attempt to do so subjects the imported article to immediate seizure, treatment, destruction, or exclusion, at HDA's discretion.[22] Further, if imported articles or articles shipped inter-island are found to be infested during an inspection, the infested item must be treated to eradicate the pest unless the pest is already widely established on the destination island.[23] Alternatively, HDA may destroy or send the infested item out of the state if eradication is impossible, the pest is potentially destructive and not widely distributed, or the owner refuses treatment.[24]

HDA has the additional discretion to refuse entry to, seize, quarantine, disinfect, chemically or manually treat, or destroy imported microorganisms, if the Department finds a microorganism shipment to be infested.[25] It can also seize, quarantine, remediate, condemn, or destroy microorganisms and associated contaminated items if release of the microorganisms presents a threat to public health, agriculture, horticulture, or the environment.[26]

In addition to the above import response authorities, HDA can respond to infestations of listed pests already existing on any lands in the state.[27] The Department is required to give the landowner at least five days' notice of its intention to enter the lands to carry out a pest control or eradication action.[28] After notice, HDA can enter private lands, except dwelling places, at reasonable times.[29] If the property owner refuses to allow HDA agents to enter the property, the agents can get a warrant. HDA can also apply for search warrants permitting its agents to enter private lands, buildings, vessels, and aircraft for enforcement actions to carry out enforcement actions as to listed pests.[30] Relevant enforcement actions include seizure, capture, confiscation, and removal of pests when entry is necessary to protect public health, or agricultural or environmental interests.

Finally, HDA is directed to assist individuals in their voluntary pest response actions. The Department must provide free assistance to the extent "reasonably practicable" and must distribute biological control agents and "other antidotes" for pest control upon request.[31]

Quarantine

HDA is authorized to enact rules requiring quarantine of plants and trees.[32] It requires several classes of plants to be quarantined upon importation.[33] In addition, any infested article found moving between islands in intrastate commerce must be quarantined after treatment so that HDA can determine that the treatment was effective in eradicating the pest.[34] As for inspection, HDA has not used its rulemaking authority to authorize the use of quarantines except in the context of inter-island transport and imports from out of state.

Compensation

State law provides that losses suffered as a result of the seizure of an illegally imported article must be borne by the owner.[35] In addition, response actions on private lands and in nurseries, including treatment and destruction of infested items, are performed at the owner's expense.[36]

HDA is also shielded from liability for entering private lands to carry out pest response actions, except for liability for negligent or intentional acts.[37] HDLNR liabil-

ity is also limited where the agency interferes with tree harvesting on certain tree farming lands in the interest of state health, safety, or welfare.[38]

Landowners have no duty to keep their land and structures safe for entry or use to control or eradicate invasive species or to warn the agents of dangers that might exist on the property.[39] Landowners are therefore not liable for any injuries to HDA agents except those caused by willful or malicious actions.[40] The liability shield only operates when HDA enters on its own authority; landowners are liable for harm that occurs when an owner requests that the Department assist with control measures.[41]

Tree Cutting

HDLNR has jurisdiction over tree farming and public lands in Hawai'i and may limit tree cutting on some public lands on tree farms.

Some trees on public lands are protected. Killing or removing any plant life in a Natural Area Reserve, wildlife sanctuary, or forest reserve is prohibited without a special-use permit issued by HDLNR.[42] These permits are available for land management purposes.[43] Similarly, trees and plants may only be removed or destroyed in state parks or other unencumbered state lands if authorized by HDLNR.[44]

Tree farms are within HDLNR jurisdiction.[45] To be classified as a tree farm, HDLNR must determine that the land is properly zoned and suitable for a tree farm and that this use will not have a "significant negative effect" on the "native forest ecosystem." After this determination, the land is designated as a tree farm and the owner must comply with a management plan.[46] Tree farms can only harvest trees in compliance with the applicable management plan.[47]

Pesticides

HDA administers pesticide law in Hawai'i. As in other states, pesticides cannot be sold or used without first being registered in the state, and they must be used by certified applicators as directed by their labels.[48] State and federal officials engaged in the administration of pesticide laws are exempt from these requirements. Emergency exemptions under FIFRA section 18 and SLN registration are available.[49]

To receive SLN registration, the applicant must show that the pesticide will not have unreasonable adverse effects on the environment. HDA must submit petitions for SLN registration to EPA within 10 working days after receipt, and in most cases must respond to any request from EPA within 15 working days.[50] SLN registration is not available for situations including, but not limited to, use of an unregistered pesticide to control a pest problem that is present on a nationwide basis and use of a pesticide product registered by other states on an interregional or national basis.[51]

In addition to its specialized SLN registration, Hawai'i also has some unique provisions governing state restricted use pesticides. As in other states, HDA can designate restricted use pesticides if those pesticides meet the standards in Administrative Rule 4-66-32.[52] Thus, pesticides or pesticide uses that "can reasonably be anticipated to result in contamination of groundwater or significant [population] reductions in nontarget organisms, or fatality to members of endangered species."[53] HDA has also proposed a rule requiring pesticides and pesticide uses authorized under section 18 of FIFRA to be listed as restricted use pesticides. If HDA finds that the restrictions required of certain restricted use pesticides are insufficient, it can require applicators to obtain a special annual use permit for those pesticides.[54]

In no case may a pesticide be used contrary to its label. "Use" does not include, however: (i) application at lower dosage, concentration, or frequency than specified as long as efficacy of the pesticide is maintained; (ii) application against a non-specified target pest so long as the application is made to a site that is specified and the label does not specifically prohibit such application; (iii) application by a method neither specified nor prohibited by the label; (iv) mixture with fertilizer; or (v) use in any other manners specified by rule. Hawai'i law also prohibits application of restricted use pesticides by aircraft without a special permit and three days' notice. In emergencies, however, the notice may be limited to 24 hours.[55]

Notes

1. Haw. Rev. Stat. Ch. 141-150A.
2. Haw. Rev. Stat. § 149A-1 *et seq*.
3. Haw. Rev. Stat. § 150A-2.
4. Haw. Rev. Stat. § 141-3; *see* Haw. Admin. R. §§ 4-69A-3, 4-69A-4.
5. Haw. Rev. Stat. § 141-3(a).
6. Haw. Rev. Stat. § 141-3.5(b).
7. Haw. Rev. Stat. § 141-3(c).
8. Haw. Rev. Stat. § 149A-2.
9. Haw. Rev. Stat. § 149A-2; Haw. Admin. R. § 4-66-2.
10. Haw. Rev. Stat. § 149A-37(a).
11. Haw. Rev. Stat. § 149A-37(b).
12. *See* Haw. Rev. Stat. §§ 150A-5 *et seq*.
13. Haw. Admin. R. § 4-72-3.
14. *Id*.
15. *See* Haw. Rev. Stat. §§ 150A-6 - 6.3.
16. Haw. Admin. R. § 4-71A-18.
17. Haw. Admin. R. § 4-71A-12.
18. Haw. Rev. Stat. § 150A-46; Haw. Admin. R. § 4-71A-16.
19. Haw. Rev. Stat. §§ 150A-9.5 – 150A-10.
20. Haw. Admin. R. § 4-73-3.
21. Haw. Admin. R. § 4-73-7.
22. Haw. Rev. Stat. § 150A-7.
23. Haw. Admin. R. § 4-72-4.
24. *Id*.
25. Haw. Admin. R. § 4-71A-9.
26. Haw. Rev. Stat. § 150A-45.
27. Haw. Rev. Stat. § 141-3.6(b).
28. Haw. Rev. Stat. § 141-3.6(a).
29. *Id*.; Haw. Admin. R. § 4-69A-5.
30. Haw. Rev. Stat. § 150A-11.5.
31. Haw. Rev. Stat. § 141-3(b).
32. Haw. Rev. Stat. § 141-2.
33. *See* Haw. Admin. R. Ch. 4-70.
34. Haw. Admin. R. § 4-72-4.
35. Haw. Rev. Stat. § 150A-7.
36. Haw. Rev. Stat. § 150A-22; Haw. Admin. R. § 4-72-4; 4-71A-9.
37. Haw. Rev. Stat. § 141-3.6(b); Haw. Rev. Stat. § 520A-6.
38. Haw. Rev. Stat. § 186-5.5.
39. Haw. Rev. Stat. § 520A-3. Landowners are not required to resist the use of this authority to obtain liability protection.
40. Haw. Rev. Stat. § 520A-5.
41. Haw. Rev. Stat. § 520A-5.
42. Haw. Admin. R. §§ 13-209-4, 13-125-4; 13-104-4.
43. *Id*.
44. Haw. Admin. R. §§ 13-146-32, 13-221-28.
45. Haw. Rev. Stat. § 186-1.
46. Haw. Rev. Stat. § 186-3.
47. Haw. Rev. Stat. § 186-2.
48. Haw. Rev. Stat. Ch. 149A.
49. Haw. Admin. R. § 4-66-33(b)(5, Haw. Rev. Stat. § 149A-22; Haw. Admin. R. § 4-66-37.
50. Haw. Admin. R. § 4-66-38.
51. Haw. Admin. R. § 4-66-37(b).
52. Haw. Rev. Stat. § 149A-19.
53. Haw. Admin. R. § 4-66-32.
54. Haw. Admin. R. § 4-66-63.
55. Haw. Admin. R. § 4-66-64.

Illinois

Jurisdiction and Definitions

The Illinois Department of Agriculture (IDA) is the primary plant pest control agency, drawing its authority from the state Insect Pest and Plant Disease Act.[1] IDA is also authorized, to enter reciprocal agreements for pest control.[2]

The Illinois Department of Natural Resources (IDNR), meanwhile, has control, supervision, and management authority over all state forests, which are to be managed for the continuous production of timber.[3] IDNR also implements the Illinois Forestry Development Act, which oversees the private forest industry,[4] and the Natural Preserve Act, which requires the Department to manage private- and state-owned natural preserves.[5] Although pest control is within the scope of these acts and the management plans for these lands must include procedures for responding to insect, disease, and environmental problems,[6] "pest" is not defined in either the acts or the regulations, nor is the Department given more authority than to protect lands from infestation.

The Illinois pest disease law separately defines insect pests and plant diseases.[7] "Insect pest" includes insects, crustaceans, arachnids, and vermes (all non-arthropod invertebrates), while "plant disease" includes fungi, bacteria, nematodes, protozoans, and viruses and the pathological conditions they cause. The law also defines a "devastating insect or plant disease" to be one of the foregoing for which a quarantine exists and which could have a "serious and devastating effect on the nursery industry or the environment."

All plants, products, and places in the state that are infested or infected and are liable to infect or cause the infection of other plants or to injure man or animals, as well as all other plants susceptible to infestation by the pests that are not essential to the welfare of the state are declared in the statute to be a public nuisance.[8]

Though inferior to a more generalized definition, the plant pest control definition is fairly robust, covering a wide variety of invertebrates in addition to insects. Similarly, the definition of plant diseases covers a wide array of potential disease agents. The statutory declaration of these pests as public nuisances provides an excellent layer of protection against landowner actions seeking compensation and as a positive backdrop to a response action.

IDA also has primary authority to regulate pesticides in Illinois. The state Department of Public Health, however, has structural pest regulation authority, and the Department of Environmental Protection has authority to enforce provisions of the pesticide law that are intended to protect the environment.[9] No other political subdivisions can regulate pesticides, however, with the exception of counties and municipalities with more than 2,000,000 residents.[10] IDA can cooperate with other jurisdictions for pesticide regulations. This jurisdictional structure is complex, and may lead to confusion and concomitant delay in implementation of rapid response actions, especially where a pesticide application cuts across the spectrum of jurisdictional authorities.

The Illinois pesticide law defines pest and pesticide as defined in FIFRA; IDA is authorized to declare any such organism as a pest if it is injurious to health or the environment.[11] These are standard terms.

Inspection

IDA has the authority to inspect "any place which might become infested or infected" and can inspect any nursery stock imported or exported.[12] It has additional authority to enter and inspect "any property or place" where IDA suspects infestation, including both specific locations such as fields, buildings, conveyances, and other "place[s] where it may be necessary or desirable for [the agency] to inspect."[13] Private dwellings are not included specifically, and it is unclear whether the statute could be construed to cover such dwellings.

Private individuals who suspect infestation also have the power to request that IDA inspect public grounds, forest preserves, and private premises for pests.[14] In such cases, IDA must inspect the premises unless it can diagnose the presence of infestation and prescribe an appropriate treatment without performing an on-site inspection.[15]

As in other states, nurseries must be inspected annually and certified as pest-free in order to sell plants.[16]

Response

IDA has both general and specific authority to require responses to pest infestations. First, any inspection that reveals the presence of a nuisance pest on private land requires IDA to notify the property owner of the infestation in writing and mandate a deadline for abatement of the nuisance. If the owner cannot be found or fails to abate the nuisance, IDA itself can treat, remove, or destroy any infested plants, susceptible host plants, products, or objects used with those infested plants.[17] Similarly, in the event that an owner fails to carry out the requirements of a quarantine notice, IDA may itself enforce the measures. The affected owner may appeal, however.[18]

This authority is limited in that it requires IDA to wait for the property owner to fail in abating the nuisance before acting directly. The scope of potential treatment options is broad, however, as it provides authority to destroy both infested and host plants. This authority stems from the broad public nuisance provision, which is a positive, as noted above, but which requires IDA rulemaking before requiring a response. The delays involved in the declaration of species or host plants as nuisances may thus unduly delay response actions.

IDA's second response authority allows the agency to order the eradication of any nuisance pest by all landowners within a declared eradication zone.[19] The agency cannot use this authority without issuing a public notice and hosting a hearing, however.[20] Because of the time restraints imposed by the public process, this authority is likely to be of lesser utility in the rapid response context.

Finally, if IDA determines that a nursery is infested or will become infested before its next scheduled inspection, IDA can prescribe conditions to certification designed to prevent this infestation, and it can withhold certification until the nursery agrees to comply with the conditions.[21]

Quarantine

When IDA finds that a pest should be controlled or eradicated, it can quarantine the affected area after providing a notice and hearing on the issue.[22] IDA can also promulgate regulations associated with the quarantine area for controlling the pest, including but not limited to prohibition of transport within or through any part of the state.[23] This movement restriction authority is not limited to transport across quarantine boundaries. IDA regulations further define the extent of the Department's authority to regulate pests under quarantine. It requires that quarantine notices be geographically bounded, contain movement restrictions, explicitly state the articles regulated, and state the effective dates.[24] Finally, the Department can also prohibit any farm practice that encourages the pest in the quarantine area and require the adoption of certain operations or procedures as needed.[25] These quarantine provisions are broad, as they contain more than simple movement restriction authority. In particular, the regulatory authority to mandate protective farming practices may prove an extremely effective rapid response tool to limit the spread of infection.

IDA also has limited authority to regulate importation. If the Department determines that a pest exists in another state, it can notify the governor, who can prohibit the import of the pest or its host, except as subject to IDA regulations.[26] IDA can permit importation of pests for research purposes notwithstanding the existence of an import ban.[27] This authority is somewhat limited, as IDA cannot itself limit imports. This regulatory structure is in contrast to those in most states, where the responsible agency is authorized to declare quarantine against pests that exist in other states. Illinois's limited authority significantly increases the complexity of such actions and will lengthen the time needed for IDA to regulate out-of-state pests.

Compensation

Property owners are explicitly responsible for IDA's expenses incurred in responding to pest infestations on private land.[28] Illinois law is silent, however, on whether property owners are entitled to compensation when their property is destroyed. Notwithstanding this ambiguity, it is unlikely that compensation is required because IDA cannot act without declaring pests and their hosts to constitute public nuisances.

Tree Cutting

Neither the forestry laws nor IDNR regulations establish explicit limits on tree cutting. Nature preserves, state forests, and private forests in compliance with

the Forestry Development Act must be managed under a master plan corresponding to the goals of the lands at issue.[29] None of these lands outlaw tree cutting, and nature preserve and state forest legislation expressly permit it. In addition, even prohibited management activities can be undertaken in nature preserves with the approval of the IDNR.[30] Exceptions are also available in emergency situations.[31]

The lack of restrictions on tree cutting is probably a net positive for rapid response to pest infestations. There is no doubt that IDNR is authorized to control pests on lands under its management, so it is not restricted from requiring destruction, treatment, or removal of trees under its jurisdiction. IDNR, however, is not explicitly required to consider pest detection or response in developing the management plans for its own or for private lands, so the regulatory safeguards leading to effective ED/RR actions are unlikely to be present in every management plan. It is thus likely that the IDNR's pest control authority could be strengthened through the addition of explicit legislative mandates to require plant pest control in forest management plans and to explicitly permit tree cutting in response to infestation.

Pesticides

Every pesticide distributed in Illinois must be registered, labeled, classified, and used in accordance with FIFRA and with the pesticide labeling.[32] SLN registration is available under the FIFRA standards, but such registration cannot exceed five years in length.[33]

Restricted pesticides cannot be applied except by certified applicators; public applicators are subject to this requirement.[34] In addition to state regulation of restricted use pesticides, state law imposes further restrictions on several pesticides, providing that the use of these pesticides is prohibited without a permit from IDA. Pesticides so regulated include DDT, Compound 1080, and Compound 1081.[35]

Illinois pesticide law also allows any person to petition for declaration of a "pest emergency," which, if granted, allows an emergency exemption from registration under FIFRA § 18.[36] An emergency exists when: an outbreak occurs or is *expected* to occur and: (i) there is no registered pesticide for that use *or* no alternative is available; (ii) significant economic losses or health effects will occur without the use of the pesticide; and (iii) there is insufficient time from the discovery of the problem to pursue normal registration.[37] This provision requires that an economic or health problem exist; it is thus more limited than section 18 because it does not allow exemptions for environmental or ecological reasons. It does, however, allow for specific, quarantine, and public health exemption types.[38] Crisis exemptions are also allowed when the outbreak is unexpected and unpredictable and time is critical.[39] Petitions for crisis exemptions require no supporting data or information, though this data must be provided within 10 days after the exemption is granted.

Illinois pesticide law is minimally different from FIFRA, so the use of pesticides for pest response is unlikely to present serious difficulties. The restriction on the availability of emergency exemptions, however, is potentially significant, as it may limit the pests for which quick response is available to those with established economic impacts.

Notes

1. 505 Ill. Comp. Stat. 90 *et seq*.
2. 505 Ill. Comp. Stat. 90/28.
3. 525 Ill. Comp. Stat. 40/1, 40/4.
4. 525 Ill. Comp. Stat. 15.
5. 525 Ill. Comp. Stat. 30.
6. Ill. Admin. Code tit. 17, § 1537.55.
7. 505 Ill. Comp. Stat. 90/2.
8. 505 Ill. Comp. Stat. 90/14.
9. 505 Ill. Comp. Stat. 60/3.
10. 505 Ill. Comp. Stat. 60/3.
11. 505 Ill. Comp. Stat. 60/8.
12. 505 Ill. Comp. Stat. 90/3.
13. 505 Ill. Comp. Stat. 90/15.
14. Ill. Admin. Code tit. 8, § 240.30.
15. *Id*.
16. 505 Ill. Comp. Stat. 90/4, 90/5, 90/7.
17. 505 Ill. Comp. Stat. 90/15.
18. 505 Ill. Comp. Stat. 90/20.
19. 505 Ill. Comp. Stat. 90/15.
20. *Id*.
21. 505 Ill. Comp. Stat. 90/6.
22. 505 Ill. Comp. Stat. 90/20.
23. *Id*.
24. Ill. Admin. Code tit. 8, § 240.270 - 240.320.
25. *Id*.

26. 505 Ill. Comp. Stat. 90/19.

27. 505 Ill. Comp. Stat. 90/3.02.

28. 505 Ill. Comp. Stat. 90/15.

29. Ill. Admin. Code tit. 17, § 4000.150; Ill. Admin. Code tit. 17, § 1537.2.

30. Ill. Admin. Code tit. 17, § 4000.160.

31. Ill. Admin. Code tit. 17, § 4000.180. Nature preserve lands can also be managed to control plant succession and to prevent the spread of "noxious" and "exotic" plant and animal species. 17 Ill. Admin. Code tit. 17, § 4000.425. Unfortunately, this provision does not apply to plant pests or pathogens.

32. Illinois Pesticide Act, 415 Ill. Comp. Stat. 60/1 *et seq*.; 60/6; Ill. Admin. Code tit. 8, § 250.30.

33. Ill. Admin. Code tit. 8, § 250.50.

34. 505 Ill. Comp. Stat. 60/11; Ill. Admin. Code tit. 8, § 250.120.

35. Ill. Admin. Code tit. 8, § 250.160.

36. Ill. Admin. Code tit. 8, § 250.60.

37. Ill. Admin. Code tit. 8, § 250.60(b).

38. Ill. Admin. Code tit. 8, § 250.60(c)-(e).

39. Ill. Admin. Code tit. 8, § 250.60(g).

Indiana

Jurisdiction and Definitions

Indiana plant pest law is administered by the state Department of Natural Resources (IDNR).[1] The agency is authorized to cooperate with other agencies and with private individuals to "locate, check, or eradicate a pest or pathogen."[2] IDNR also implements the state forestry law.[3] The Indiana Department of Agriculture (IDA), however, implements the state pesticide control statutes.

The Indiana plant pest statute refers to "pests and pathogens." These are defined to include arthropods, nematodes, micro-organisms, mollusks, fungi, parasitic plants, plant diseases, and parasitic weeds.[4] IDNR is authorized to declare qualifying organisms to be pests or pathogens. The agency has further defined "pest or pathogen" in its regulations. Unfortunately, its definition includes only arthropods, nematodes, micro-organisms, and plant diseases that are "injurious to nursery stock, agricultural crops, other vegetation, or bees."[5] This definition is troubling because it destroys the agency's jurisdiction over some pests, including mollusks and other non-arthropod invertebrates. The inclusion of harm to "other vegetation" is a positive, however, as it appears to permit regulation of organisms that may not have an economic impact.

In addition to its authority under the plant pest law, IDNR may draw additional pest management authority from state forestry laws.[6] Those laws, however, do not directly address plant pest and pathogen issues, instead providing only general jurisdictional authority. Nonetheless, they govern the management of forest lands and could therefore serve as the basis for restrictions on the pest control actions undertaken on those lands.

The Indiana pesticide laws are administered by the IDA,[7] but IDA can cooperate with other jurisdictions to implement those laws.[8] Political subdivisions are barred from pesticide regulation, but they are permitted to apply for variances from applicable laws and IDA regulations due to "special circumstances." Such petitions can be approved after an informal public hearing.[9]

Indiana law defines "pest" to include any organism within the FIFRA definition that is declared to be a pest by EPA or by IDA.[10] The board can declare pests only after notice and public hearing.[11] "Pesticide" also follows the FIFRA definition.[12]

With the exception of the jurisdictional difference between the plant pest regulatory authority and pesticide regulatory authority, both the jurisdictional structure of Indiana pesticide law and its definitions are standard, and present no threat to effective ED/RR programs.

Inspection

IDNR has limited survey and inspection authority, as the statute contains no provision for the inspection of non-commercial private lands for pests. The Department may, however, inspect any site "where agricultural, horticultural, or sylvan products are being grown, shipped, sold, or stored."[13] The lack of authority to inspect non-commercial lands is particularly problematic from a pest detection and control standpoint, as it will hinder the Department's ability to determine the scope of newfound infestations and its ability to detect invasions of pests that do not primarily occur in commercial settings. As non-commercial invasion pathways are relatively common, this flaw fundamentally threatens the efficacy of Indiana's ED/RR program.

IDNR is also required to inspect nurseries annually and to certify them if the nursery stock is pest-free.[14] Nurseries cannot receive licenses without such a certificate.[15] The nursery provisions of the entomology statute also give IDNR authority to enter and examine plants upon "any premises."[16] Though entry on non-nursery land is not excluded from this provision, its context strongly suggests that the Department lacks similar authority on non-commercial private lands. These nursery provisions are standard and adequately protective for such lands.

Response

IDNR has the power to require private owners of agricultural, horticultural, or sylvan products to undertake pest control actions on their lands. Upon receipt of a notice from the Department stating the action to be taken and the date by which the action must be completed, the owner must destroy or treat all products capable of producing or disseminating the pest or pathogen.[17] IDNR can require an affidavit that the

required remediation has been satisfied and was effective.[18] If the owner of such a product does not comply with a pest control order as directed, the Department can then undertake the pest control action itself.[19]

If an inspection discloses the existence of a pest or pathogen that is newly introduced or not widely established in the state, IDNR must also survey and monitor the surrounding area to confirm the presence of the pest.[20] It can then order treatment as described above. After the completion of the remedial action, the director must continue to monitor the area for two consecutive growing seasons or until the biological threat is eliminated. If the pest persists, then the director can then declare an infested area and quarantine as described below.[21]

The limitations on inspections to commercial plant production thus carry over in the response context as well. IDNR has no authority to require private landowners other than commercial plant producers to eradicate or otherwise control pests on their lands. In addition, the lack of any public nuisance provision in the Indiana statute potentially eliminates actions for abatement of such pests through the courts. For those private owners who are within IDNR's regulatory sphere, the response authority is fairly robust. Both treatment and disposal of infested products is permitted, and though IDNR cannot directly act to eradicate or control pests, it can require landowners to act within a specified time limit and can intervene upon the landowner's failure to comply.

While the scope of IDNR's response authority is limited, the requirement that IDNR delimit and monitor infestations is unique and generally positive. This requirement will promote effective detection and response and ensure that ongoing attention is paid to infestation sites.

IDNR has broader response authority in nurseries. If it discovers a pest or pathogen in connection with a nursery inspection, IDNR must issue a written notice to the nursery stating the required response action and the date by which the response action must be completed.[22] The nursery can request review and temporary relief from the notice. If the nursery appeals in this way, the hearing must be held within five days.[23]

Finally, IDNR is required to initiate emergency actions. These actions include the promulgation of orders for treatment or destruction of pests and host plants infestations that present an environmental, health, or economic threat and for preventing the movement of those items.[24] The agency has not issued any regulations pertaining to this statutory mandate, however, nor does the statute define what constitutes an emergency. The presence of this section, however, is still a promising expansion of the Department's emergency response authority.

Quarantine

If an inspection reveals an infestation that is likely to spread to an adjoining township, the director can declare all or part of the township to be an "infested area."[25] Declaration of an infested area triggers a duty to formulate a quarantine.[26] In addition, IDNR must declare standards in accordance with which all "farms and premises" inside the infested area must be managed, and all owners in the area must eradicate the pest on their lands.[27]

Quarantines established after the declaration of an infested area must comply with several rules.[28] Such quarantines must be biologically sound and geographically delineated. They must be intended to counteract a pest that presents an "actual or reasonably anticipated environmental, health, or economic hazard" that cannot be remediated as effectively by any less obtrusive action. The Department must also believe that the restrictions are essential to the attainment of the objectives of the quarantine and that the economic benefits of the quarantine exceed the losses caused by IDNR's interference in commerce. Finally, quarantines are effective for 90 days, but can be extended as necessary.[29]

This quarantine authority is extremely limited. Whereas in most states the agency is left to determine whether the economic disadvantages of imposing a quarantine outweigh the need for that quarantine, IDNR must explicitly consider this factor and are barred from acting where the economic impact is likely to be great or the benefits are not economically large. This provision may present particular problems for pests with purely environmental rather than economic impacts. As a result, it is unlikely that quaran-

tines will play a major role in ED/RR actions in Indiana.

In addition to its general quarantine power, IDNR controls the movement of pests into the state. Pests generally cannot be moved within the state, but IDNR can permit such movement for research or other purposes if the pest does not present a threat to the plant production industry in either Indiana or a surrounding state.[30] Pests posing a serious likelihood of harm, including foreign pests new to the United States, pests of limited occurrence in the United States, pests regulated in Indiana, and exotic strains of domestic pests, are ineligible for permits.

Compensation

Any expenses incurred by IDNR in undertaking a pest control action are chargeable to the taxpayer.[31] Neither the statute nor the regulations, however, explicitly determine whether the state is liable for destruction of infested plants or of potential hosts. This issue is thus ripe for judicial determination.

Tree Cutting

IDNR's primary forestry responsibility is to manage state forest lands,[32] although it also participates in the management of other state and private lands, including "native forest lands," "forest plantation lands," and nature preserves.[33] State forests are to be managed to promote sustainable silviculture, including the provision of leases and permits for harvesting.[34] As a result, tree removal is encouraged on these lands. All types of lands under IDNR jurisdiction must be managed in accordance with a management plan tailored to their intended use. While these management plans might restrict tree cutting or other response actions, such a provision would only be included if it were contrary to the goal for which the lands were intended.

Pesticides

Every pesticide distributed in Indiana must be registered, labeled, classified, and used in accordance with FIFRA and with the pesticide labeling.[35] The state law is silent, however, on SLN registration or emergency waivers under FIFRA.

Restricted use pesticides include pesticides so designated by EPA or by IDA as "unduly hazardous to persons, animals, plants, wildlife, waters, or lands."[36] IDA limits the timing and conditions of sale and use of these pesticides; for example, they may be distributed only to certified applicators.[37] This applicator certification provision applies to all state agencies, municipal corporations, and other governmental agencies.[38]

In addition to restricted use pesticides, Indiana law creates a category of pesticides that are labeled "pesticides for use by prescription only." These pesticides include those that IDA determines to be so hazardous that each specific use and application must be approved by a "qualified pest management specialist."[39] There are, however, no pesticides so designated.[40] Similarly, "highly volatile herbicides" require the permission of state chemist before application.[41]

There are several non-standard restrictions on the use of pesticides. First, certain safeguards must be taken when applying pesticides in areas that are within the "isolation area" surrounding a community public water supply system well.[42] In addition, application of a pesticide in a way that will allow the chemical to drift from the target site "in sufficient quantity to cause harm to a nontarget site" is forbidden.[43]

Notes

1. Ind. Code § 14-24-1-1; Ind. Admin. Code tit. 312, r. 1-1-10.
2. Ind. Code § 14-24-2-1.
3. *See* Ind. Code § 14-23-1 *et seq*.
4. Ind. Code § 14-8-2-203.
5. Ind. Admin. Code tit. 312, r. 18-1-13.
6. Ind. Code § 14-11-1-1(G). In addition, "forest plantation land" and "native forest land" are to be managed to maintain a "healthy forest environment." Ind. Admin. Code tit. 312, r. 15-2-1.
7. Ind. Code §§ 15-3-3.5-1, 15-3-3.6-1.
8. Ind. Code §§ 15-3-3.5-36, 15-3-3.6-21.
9. Ind. Code § 15-3-3.6-27.
10. Ind. Code § 15-3-3.6-2(22); Ind. Code § 15-3-3.5-2(36); Ind. Admin. Code tit. 357, r. 1-1-1.
11. Ind. Code § 15-3-3.5-9.
12. Ind. Code §§ 15-3-3.5-2(23), 15-3-3.6-2(23).
13. Ind. Code § 14-24-4-1, Ind. Admin. Code tit. 312, r. 18-2-2.
14. Ind. Code §§ 14-24-5-2, 14-24-5-3, Ind. Admin. Code tit. 312, r. 18-4-2.
15. Ind. Code § 14-24-7-1. Ind. Admin. Code tit. 312, r. 18-4-3.
16. Ind. Code § 14-24-5-6.
17. Ind. Code §§ 14-24-4-3 – 14-24-4-4.
18. Ind. Code § 14-24-9-1.
19. Ind. Code § 14-24-4-5.

20. Ind. Admin. Code tit. 312, r. 18-3-2(b)(1).
21. Ind. Admin. Code tit. 312, r. 18-3-2(b)(5).
22. Ind. Code § 14-24-5-7.
23. Ind. Code § 14-24-5-7.
24. Ind. Code § 14-24-2-5.
25. Ind. Code § 14-27-4-2, Ind. Admin. Code tit. 312, r. 18-2-2.
26. Ind. Admin. Code tit. 312, r. 18-2-2(b).
27. *Id*.
28. Ind. Admin. Code tit. 312, r. 18-2-3.
29. Ind. Admin. Code tit. 312, r. 18-2-4.
30. Ind. Admin. Code tit. 312, r. 18-3-3 – 18-3-4.
31. Ind. Code § 14-24-4-5.
32. Ind. Code § 14-23-1-1.
33. Ind. Admin. Code tit. 312, r. 15-1-1, Ind. Code § 14-31-1-15.
34. Ind. Code § 14-23-4-3.
35. Ind. Code §§ 15-3-3.5-1 *et seq*; 15-3-3.6-1 *et seq*.
36. Ind. Code §§ 15-3-3.5-2(27), 15-3-3.5-10, 15-3-3.6-4.
37. Ind. Code § 15-3-3.5-10. 357 IAC 1-3-2.
38. Ind. Code § 15-3-3.6-8.
39. Ind. Code §§ 15-3-3.5-2(24), 15-3-3.5-10.
40. Ind. Admin. Code tit. 357, r. 1-2-1 (expired).
41. Ind. Code §§ 15-3-3.5-3(8).
42. Ind. Admin. Code tit. 357, r. 1-10-2(b).
43. Ind. Admin. Code tit. 357, r. 1-12-2.

Michigan

Jurisdiction and Definitions

The Michigan Department of Agriculture (MDA) implements general state plant pest laws in nurseries and other lands.[1] The Michigan Department of Natural Resources (MDNR) has the additional mandate as part of its lands management responsibilities to protect forests from pests, diseases, and other "damaging agents."[2]

MDA's pest acts do not directly define "pest," instead defining the subcategories of "insect pest" (including insects and other invertebrates, including those harmful to plants) and "plant diseases" (including fungi, bacteria, nematodes, and viruses).[3] The law declares all such insect pests and plant diseases that are liable to spread to other plants to be a public nuisance.[4] Infested plants and non-infested potential hosts that are "not essential to the welfare of the state" are also declared nuisances.[5] The law requires both public and private actors to keep the state free of such nuisances.[6]

These definitions are commendable, as they include all invertebrates and pathogens; these categories contain most potential plant pests. The law also encourages action because it does not require listing by the agency as a prerequisite to control actions. Similarly, the automatic declaration of all pests and pest hosts as a public nuisance provides a solid base for both avoiding compensation for control actions and for requiring abatement.

Though MDNR is required to undertake pest control on state lands, this authority does not include explicit standards for this action. Rather, the Department is required to develop a management plan for state and municipal forest lands that fulfills this and other management goals.[7] As a result, "pest" is left undefined, as is the ability of MDNR to cooperate with other agencies for pest control. MDNR's regulatory authority over pests is thus not explicit and includes no entry, response, or quarantine provisions.

Michigan's regulatory regime thus gives MDA primacy over active plant pest and disease regulation while also giving MDNR the authority to consider pests in developing its management plan. This system minimizes the amount of coordination needed for the development and implementation of pest response actions, while still maintaining the possibility of joint responses, funding streams, and management expertise.

In addition to its pest control jurisdiction, MDA implements Michigan pesticide law and has the authority to declare pests and allowable pesticide quantities under the act.[8] Both "pest" and "pesticide" are defined as in FIFRA.[9] Independent local regulation is prohibited by the Michigan pesticide law, although MDA is authorized to cooperate with other jurisdictions by reciprocal agreement.[10] This regulatory structure is common to many states and permits centralized control over pesticide regulation.

Inspection

When MDA suspects the existence of pests in the state, it has a duty to investigate both plants suspected of infestation and other plants as necessary.[11] This investigative mandate is matched with explicit authority to enter "any premises in the state for the purpose of examining" plants.[12]

MDA, however, has a broad-based entry authority under a separate section. Section 286.203 grants the agency the right to inspect "any nursery, orchard, fruit or garden plantation, field, park, cemetery, private premises or public place, and any place which might become infested or infected with insect pests or diseases." This includes the right to inspect and treat nursery stock at any time and to stop and search vehicles carrying nursery stock.[13] Similarly, if MDA believes that a nuisance "article" *other* than a host plant exists "on any premises or area", he may inspect that area.[14] These authorities allow agents to enter any location necessary for the inspection during daylight hours with the exception of "cellar [*sic*] and rooms of private houses," which are explicitly excluded.[15]

Together, these authorities are sufficient to permit MDA agents to enter most locations to determine whether a pest infestation may exist. The exclusion of dwellings is a potential issue as pests move into increasingly urban and residential areas. Luckily, however, the limitation applies only to the interior of houses, leaving MDA free to inspect the exterior of those dwellings. Where potential hosts primarily exist outside of houses, MDA's authority may be sufficient to permit effective early detection, although access may remain problematic in urban areas.

Nurseries must be annually inspected as a condition of certification.[16] MDA can condition certification on the remediation of any infestation or on the acceptance of conditions required to avoid future infestations.[17] Imported nursery stock must also be inspected or certified.[18] These conditions are standard with the exception of the Department's unique ability to condition certification on preventative measures. This condition is positive and, though more obviously relevant to prevention than early detection, it could conceivably lead to enhanced detection of pests by the nurseries by increasing the robustness of monitoring by the nurseries.

Response

As is the case for inspections, MDA has a variety of potential response authorities. Most generally, MDA is authorized to enter property as described above and to "take such steps as necessary to exterminate" pest infestations that it discovers pursuant to an inspection.[19] The Department can act immediately and can destroy or treat potential hosts in addition to infested articles.[20] MDA can also respond to infestations discovered during surveys under code section 286.251, but must serve a report on the owner that specifies the response actions to be taken.[21] The owner has 10 days to appeal, and the Commissioner of MDA has the final say regarding the propriety of the required response action.[22]

MDA also has response authority under code section 286.220. If an inspection results in the discovery of a nuisance article, MDA must notify its owner of that fact. Ten days after providing notice, MDA can "seize, quarantine, treat or otherwise dispose of" the nuisance article as necessary. MDA is also authorized to order the owner to treat or dispose of the article.[23]

These provisions are extremely confusing and their intent and application is poorly delineated. The variety of potential response authorities, however, is more likely a boon than a shortcoming in the statute, as MDA has discretion to adopt the appropriate authority in each situation. The authorizing language is also beneficial because it is extremely broad: it permits both treatment and destruction of infested plants and any associated articles. In addition, in contrast to most other states, the agency itself can respond rather than being forced to act primarily through owners, who may have less motivation for, fewer resources for, or less expertise in pest control than do agency staff. As a result, this aspect of Michigan authority must surely be seen as a model for other states.

Quarantine

MDA has both two quarantine authorities. First, if MDA determines that a species or plant is a "host plant nuisance" as defined in code section 286.218, it can establish an eradication zone wherein potential hosts must be eradicated. Such declarations require notice and a public hearing and must clearly delineate the boundaries of the eradication area and the effective date that eradication is to begin.[24] The owner of the nuisance property is required to eradicate the host plant. If the owner fails to act within the specified time, the agency can then act directly.[25] MDA may also limit these eradication zones to exempt plants not actually infested.

Second, MDA can quarantine any part of another state or other territory that is infested with a plant pest. As part of these quarantines, the agency is permitted to prohibit or restrict the movement of plants or other articles capable of disseminating the pest.[26] While this language is general, it does not appear to allow MDA to quarantine any part of Michigan that might be infested, or to allow the agency to restrict intrastate movement of potential pest vectors. This authority could be significantly strengthened by adding these authorities.

Compensation

Property owners are not eligible for damages suffered as a result of the destruction of any infested plants by MDA that is necessary to suppress the infestation.[27] However, if MDA destroys plants or articles that are not actually infested by a new and dangerous insect or disease, the owner must be compensated for the value of the destroyed property. The funds for the compensation are drawn from the state's general fund.[28] In addition, as in other states, MDA can charge the owner for expenses that it incurs in controlling a pest infestation.[29]

Michigan's compensation provisions are admirably specific, eliminating any ambiguity that might lead to costly and time-consuming negotiation. The require-

ment that the state pay compensation for prophylactic treatments, however, is troubling because it could result in pressure not to take effective control measures before an infestation is allowed to spread.

Tree Cutting

As mentioned above, MDNR governs management actions on state lands. Though MDA's jurisdiction may be coextensive with MDNR's with respect to pest control, it is likely that destructive pest response actions would be governed by the management plan for the lands at issue. Because state forest lands are required to be managed in part to support timber harvesting, tree cutting is probably not banned on those lands, though the written permission from DNR may be required before trees are removed from state lands by any person.[30] It is regulated, however, and the applicable management plan should be consulted to determine limitations on cutting.

State forest laws also explicitly prohibit the cutting of Christmas trees on private lands.[31] The law, however, does not interfere with MDA's pest control law due to the presence of a savings clause in the statute.[32]

Pesticides

Every distributed pesticide must be registered, labeled, classified, and used in accordance with its label.[33] Violation of any pesticide provision results in civil and criminal penalties, but those penalties do not apply to violations by public officials that occur during the performance of their official duties.

SLN registration is available, and requires the applicant to show need, comply with general FIFRA requirements, and show that the pesticide will not have unreasonable adverse effects on the environment.[34] MDA can also request information on the pesticide's mobility and potential for groundwater contamination before granting registration.[35]

Michigan law is generally more concerned with groundwater issues than most states. Its groundwater protective provisions include, for example, stewardship programs and monitoring. In addition, pesticides in groundwater above the "groundwater resource response level" determined by the Department of Public Health are automatically classified as restricted pesticides.[36] If groundwater contamination occurs, the contaminator must develop an activity plan and discontinue the use of that pesticide.[37]

Restricted pesticides can only be sold by licensed dealers, and can only be used by or under the supervision of a certified applicator.[38] Federal and state agencies, municipalities, and other governmental entities are subject to this requirement.[39] Uncertified and unregistered individuals can, however, apply general-use pesticides if the applicant does not regularly apply the pesticides, application is integral to "another operation" and pesticide application is not the applicant's primary work assignment.[40]

The Michigan statute establishes several restrictions on the use of pesticides, including the requirement that they be used consistent with the label.[41] "Use" does not include application at a lower dosage than specified on the label, unless the label declares otherwise; applying the pesticide against a non-specified pest, if the application is to a specified crop, animal, or site; applying using a non-listed but not disallowed method; or use in compliance with sections 5, 18, and 24 of FIFRA.[42] Thus, use under a FIFRA emergency exemption need not comply with the labeling, a particularly liberal provision. Regardless of labeling, however, pesticides must be applied so as to prevent direct discharge of the pesticide off of the target area and to minimize the pesticide exposure of humans and nontarget domestic animals and wildlife.[43] If off-site pesticide drift is expected, the applicator must create and follow a drift management plan.[44]

Michigan's pesticide laws also prohibit application of pesticides at a school or day care center without an integrated pest management plan; annual notification and advance notice of each application is also required.[45] Other similar "sensitive areas", as defined at code section 285.637.2(h), must also be identified before application, and applicators must take precautionary measures to prevent discharge of pesticides in these areas. Finally, the state maintains a registry of hypersensitive persons who must be notified of application on adjacent property either by telephone no later than the previous business day or by writing not less than 24 hours prior to application.[46]

Michigan pesticide regulations contain several provisions that could conceivably interfere with immediate plant pest response actions, including limitations

beyond the labeling to protect groundwater, non-target areas, and organisms, and to limit pesticide applications at schools. The exceptions for emergencies, however, shield MDA from the most stringent of these requirements, since pesticides need not be applied as directed by the label, so can be used in the most effective manner.

Notes

1. Michigan Insect Pest and Plant Disease Act, Mich. Comp. Laws §§ 286.201 *et seq.* (Act 189 of 1931), 286.241 *et seq.* (Act 72 of 1945). The latter act may be subject to revision by Mich. S.B. 1043 (2006). The provisions of these acts appear to overlap. The latter act, however, provides more general authority while the MIPPDA is aimed more at nurseries.
2. Mich. Comp. Laws § 324.52502.
3. Mich. Comp. Laws § 286.201.
4. Mich. Comp. Laws § 286.218.
5. *Id*. All neglected or abandoned plants that are infected with or hosts of pests that "constitute a menace" to horticulture or agriculture are also nuisances. 286.253.
6. Mich. Comp. Laws § 286.218.
7. Mich. Comp. Laws § 324.52503; *see also* Mich. Comp. Laws § 324.52704 (detailing authority of forest commissions managing municipal lands).
8. Mich. Comp. Laws § 324.8322.
9. Mich. Comp. Laws § 324.8305.
10. Mich. Comp. Laws §§ 324.8320, 324.8328.
11. Mich. Comp. Laws § 286.251.
12. Mich. Comp. Laws § 286.255.
13. *Id*.
14. Mich. Comp. Laws § 286.220(2).
15. Mich. Comp. Laws § 286.203.
16. Mich. Comp. Laws §§ 286.204, 286.206.
17. Mich. Comp. Laws § 286.207.
18. Mich. Comp. Laws § 286.205.
19. Mich. Comp. Laws § 286.255.
20. *Id*.
21. Mich. Comp. Laws §§ 286.251, 286.254.
22. *Id.*
23. *Id*.
24. Mich. Comp. Laws § 286.220(1).
25. Mich. Comp. Laws § 286.220(1).
26. Mich. Comp. Laws § 286.223; Mich. Admin. Code r. 285.620.1.
27. Mich. Comp. Laws § 286.255
28. *Id*.
29. Mich. Comp. Laws § 286.220(c).
30. *See* Mich. Comp. Laws §§ 324.52501, 324.2156.
31. Mich. Comp. Laws § 324.52901.
32. Mich. Comp. Laws § 324.52906.
33. Mich. Comp. Laws § 324.8301 *et seq*.
34. Mich. Comp. Laws § 324.8307e.
35. Mich. Comp. Laws § 324.8307f(1).
36. Mich. Comp. Laws § 834.8711(1).
37. Mich. Comp. Laws § 324.8323.
38. Mich. Comp. Laws §§ 324.8310 - 324.8313; Mich. Comp. Laws § 285.636.3.
39. Mich. Comp. Laws § 324.8312.
40. Mich. Comp. Laws § 285.636.17.
41. Mich. Comp. Laws § 285.637.4(a).
42. Mich. Comp. Laws § 285.637.2(m).
43. Mich. Comp. Laws § 285.637.4.
44. Mich. Comp. Laws § 285.637.10.
45. Mich. Comp. Laws § 285.637.15.
46. Mich. Comp. Laws § 285.637.5.

New Jersey

Jurisdiction and Definitions

The New Jersey Department of Agriculture (NJDA) has implementation and enforcement authority over plant pests and pathogens.[1] NJDA is also specifically authorized to control pests in forests, although the statute does not provide specific authorities through which the Department can carry out this mandate.

NJDA is authorized to declare insects and diseases to be "dangerous plant diseases" and "dangerously injurious insects."[2] The pest statute does not define these terms, however, nor do the NJDA regulations. Instead, New Jersey pest control law is implemented through species- specific limitations in either the statute or the regulations.[3] NJDA can expand the species that are covered by determining the existence of a dangerous pest, declaring it epidemic, and instituting a quarantine to regulate it.

The New Jersey Pesticide Control Act of 1971 is administered by the New Jersey Department of Environmental Protection (NJDEP).[4] Unlike in many states, however, NJDEP is not the sole pesticide regulator in the state; local governments are expressly permitted to promulgate pesticide regulations that are more stringent than those found in state law.[5]

NJDEP does retain the authority to declare pests.[6] The state definition of pest is the same as that found in FIFRA.[7] Similarly, the New Jersey act defines "pesticide" as any substance that can be used in "preventing, destroying, repelling, sterilizing or mitigating" any organism declared to be a pest under FIFRA.[8]

Inspection

New Jersey law does not contain general authority for NJDA to enter private, non- commercial lands to survey or inspect for pests. Where specific authority exists, however, the Department has the right to enter private lands and buildings, including storehouses for nursery stock, to carry out authorized pest inspections.[9]

Nurseries are responsible for keeping plants free of insects that might spread, but NJDA must examine all nurseries regardless for certification of those nurseries. These inspections require no advance notice and must be carried out annually or as often as necessary at the Department's discretion.[10]

NJDA is also authorized to inspect nursery stock and other plant material that is shipped into the state.[11] If the Department suspects the presence of a disease in a shipment, it may prohibit delivery of the shipment pending inspection. The inspection must occur, however, as promptly as possible.[12] Importation of nuisance plants requires the importer to notify the Department prior to arrival of the infested shipment (vegetable plants) or within 24 hours after its arrival (tomatoes and peppers). Nuisance plants include diseased or infested vegetable plants, tomato plants, and pepper plants.[13]

Private individuals can also initiate inspections. In addition to normal nursery inspections, NJDA is required to investigate when any person complains to the Department that a nuisance exists at a nursery due to the existence of a pest or disease. Growers of fruit-bearing trees may also request inspection of their own lands for insects that threaten the life of the infested trees.[14]

Finally, NJDA has the right to inspect private lands for specific pests that have been declared a nuisance.[15] For example, it can enter upon any lands or premises, public or private, to inspect trees for Dutch elm disease or inspect any vegetation for gipsy (*sic*) moths.[16]

Although New Jersey law contains a variety of specific authorities for inspection for plant pests and pathogens, these authorities are unfortunately lacking due to the absence of any general authority to inspect non-commercial lands. The laws are also weakened by the need for the 'dirty list' approach to pest management. The Department cannot act without listing each pest species and developing species-specific regulations, such as for Dutch elm disease. The requirement to promulgate regulations before initiating actions is a significant limitation on the speed with which detection and response can proceed, although the ability to tailor pest regulations may ultimately permit those actions to be managed effectively.

Response

The statute declares all plants infested with insect pests to be a public nuisance.[17] If an inspection reveals the presence of a nuisance pest, NJDA must require the landowner on which the pest was discovered to undertake appropriate abatement measures within a

specified time period.[18] Keeping or maintaining any plant material after receipt of a notice of infestation constitutes a nuisance subject to abatement.[19] When a landowner fails to comply with an NJDA abatement order, the Department must go to court to seek abatement of the nuisance. If the order at issue specified destruction of the plant, the court can order the plant destroyed by a police officer.[20]

Similarly, if a nursery examination reveals infestation by a disease dangerous to plants commonly grown in the state, NJDA must notify the owner of the infection and require her to treat or destroy the infected plant.[21] The Department must allow the owner at least three days to comply with the order.[22] Insect infestations follow the same pattern; NJDA must require owners of infested nurseries to destroy or treat nursery stock that is infested or was exposed to infestation as necessary to eliminate the infestation. Re-inspection is required after the response action is completed.[23] Finally, if imported nursery stock is found to be infested, the Department can order it destroyed, returned to its origin, or submitted to treatment as appropriate.[24]

As for inspection, some specific pest regulations address response actions for specific pests. Where the Department observes gypsy moth infestation, for example, it can require any measures deemed advisable for pest abatement or suppression.[25] NJDA can also condemn and remove and dispose of the wood from trees in response to a Dutch elm infestation and can enter any premises to do so after providing notice.[26] Finally, in political subdivisions infested with the European corn borer, NJDA may order cornfields plowed under to bury stubble or order that the stubble be pulled up to prevent spread of the pest.[27] These and other similar pests are thus subject to broad state response authority.

The general authority to require landowners to respond to pest infestations is a typical regulatory structure. It is positive in that it permits NJDA to specify the required response and timeline, but weak in that the Department must seek judicial approval to enforce its orders. Rapid response authority would be significantly strengthened by making NJDA pest control orders self-executing. Given the requirement that the Department seek judicial approval, however, the statutory provision declaring the maintenance of a pest to constitute a nuisance should ease and speed the enforcement process.

In addition, as is the case for inspection authorities, the development of species-specific response authorities is of mixed utility in the ED/RR context. While these response authorities can presumably be tailored to the biology and ecology of the pest at issue, such regulations require a significant investment of time and expertise that may hinder the initiation of rapid response actions.

Quarantine

NJDA is authorized to establish and enforce general or local quarantines to combat plant diseases, injurious insects, and other plant pests, and to make rules and regulations to control pests in quarantined areas.[28] The statute does not limit the manner in which the state may limit movement under such quarantines.

This general authority is extremely broad, permitting NJDA to limit the scope of a quarantine to the smallest effective area and thus avoid unnecessary negative economic impacts. In addition, the quarantine allows NJDA to regulate in whatever way it deems most necessary for pest control – including regulating movement both within and across quarantine areas.

Compensation

New Jersey law does not state whether landowners are generally eligible for compensation due to the treatment or destruction of plants on their property. The statutory provision declaring infested plants to be a nuisance, however, suggests that no compensation need be awarded, however, at least for infested plants. The statute also contains a specific limitation declaring that no compensation may be awarded for the destruction of trees or wood that is infected or condemned due to Dutch elm disease. Finally, if NJDR is forced to resort to a court action to enforce an abatement order, the landowner is liable for the costs of abatement.[29]

While New Jersey is not alone in failing to delineate the need for state agencies to compensate landowners for losses due to pest control in general, it is unique in that it does so for a single pest. While this provision is positive because it provides cost certainty for Dutch elm response actions, its relevance to other pests is

difficult to establish. This question could be avoided and New Jersey's ED/RR provisions strengthened by establishing the Dutch elm provision as a general statement of law.

Tree Cutting

NJDA, through the Division of Parks and Forestry, is mandated to protect all forests, brush lands and marshes from damage by insects and disease.[30] These provisions are not implemented with specific regulations by the Department.

Pesticides

As in other states, all pesticides that are distributed or used in the state must be registered with the state, labeled and classified, used in accordance with the label, and used only be a certified applicator.[31]

Several limitations apply to this registration requirement. First, it does not apply to state and federal officials engaged in the performance of their official duties in administering state or federal pesticide laws.[32] SLN registration is also available.[33] Finally, NJDEP is also authorized to issue emergency exemptions pursuant to section 18 of FIFRA; such exemptions, however, must comply with FIFRA in all other respects.[34] New Jersey has defined the conditions under which an emergency can be deemed to exist. "Emergency" is defined as "an occurrence which can impair the public health or safety or can cause harm, injury or damage to the environment or which presents a significant risk of harm, injury, or damage."[35] An "environmental emergency" is further specifically defined as "an occurrence of any pest which presents a significant risk of harm or injury to the environment, including, but not limited to, exotic or foreign pests which may need preventative quarantine measures to avert or prevent that risk…"[36] Finally, a "significant risk of harm, injury or damage" means a "potential for harm which is not purely remote or highly speculative, but capable of being perceived or recognized based on the location, type and amount of pesticide involved, and available scientific information about the pesticide and its effects on persons, property, and the environment."[37]

New Jersey law also contains limitations on pesticide use beyond those in FIFRA. First, use does not include: (i) application at a dosage, concentration, or frequency less than that specified on the label; (ii) application to combat a pest not specified on the label where the pesticide is applied to a plant or site that is specified on the label; (iii) application by any method, except aerial application and chemigation, that is not prohibited by the label; and (iv) use in conformance with sections 5 or 18 of FIFRA. NJDEP may also authorize distribution, sale, or use by NJDA, upon request, when NJDEP determines that such action serves the public health, safety, or welfare.[38]

Although it is necessary, use in accordance with the label may not be sufficient to ensure compliance with New Jersey law. For example, all applicators must take reasonable precautions to minimize exposure of and ensure the safety of both the environment and any individuals that are necessarily exposed to the chemical.[39] Applicators also cannot permit drift to any nontarget site.[40] In addition to this general limitation, pesticide-specific limitations may apply. NJDEP can impose restrictions on the use of pesticides that are more stringent than those listed on the label.[41] Applicators are also barred from using herbicides on roads or public utility rights-of-way within the Pinelands unless they are used to protect adjacent agricultural activity.[42] Third, aerial applications are subject to additional restrictions regarding the equipment required, manner of application, pesticides permitted to be used, and notice required.[43] Emergency waivers from these restrictions are available, however, and aerial applicators under contract with a public agency are exempt from some limitations on application.[44] Finally, restrictions apply to the use of pesticides other than "low-impact" pesticides on school grounds.[45] Like aerial applications, emergency use is permitted, but notification is required within 24 hours after the application.[46] In addition, community and areawide application of pesticides for gypsy moth control is prohibited in school areas during school hours.[47]

Additional notification requirements apply to some applications. Publicly sponsored aerial pesticide applications that target residential areas and adjacent areas, including but not limited to mosquito and gypsy moth control, are subject to notice restrictions including annual notification of affected municipalities.[48] In addition, if a pesticide is toxic to bees, apiarists within

three miles of the application site must be notified at least 24 hours prior to any outside application.[49]

Finally, New Jersey has exempted pest control actions by the agencies from state water quality limitations. Generally speaking, New Jersey law prohibits the use of pesticides and other deleterious substances in such a way that they wash into any fresh or tidal waters. State, county, and municipal government agencies are not subject to this requirement, however, as it applies to their use of any chemical in any program of pest control.[50] Such use by individuals is also exempted when connected to pest control on agricultural, horticultural, or forestry crops.[51]

New Jersey's pesticide regulations are more complete than is typical in other states. This specificity is undoubtedly beneficial for environmental protection but could present a problem for rapid response actions. Notably, the limitation on emergency exemptions to those that are not "purely remote or highly speculative" could force agencies to delay pesticide action rather than aggressively treating at the first sign of pests. This danger is somewhat, but not completely, mitigated by the specific invocation of foreign pests as a relevant subject for emergency action.

Limitations on use, especially as to aerial application and notice, are a second type of provision that can profoundly affect response. These limitations prohibit immediate application and the use of certain techniques in many urban or suburban areas. While such authority may be needed only rarely, these provisions will present difficulties in such cases.

Notes

1. N.J. Stat. Ann. § 4:7-1.
2. N.J. Stat. Ann. § 4:7-2.
3. N.J. Stat. Ann. § 4:7-2.
4. N.J. Stat. Ann. § 13:1F-3. *See also* N.J. Admin. Code tit. 7, § 30-1.1 *et seq* (NJDEP regulations).
5. N.J. Stat. Ann. § 13:1F-13.
6. N.J. Stat. Ann. § 13:1F-9.
7. N.J. Stat. Ann. § 7:30-1.2.
8. N.J. Stat. Ann. § 13:1F-3.
9. N.J. Stat. Ann. §§ 4:7-13, 4:7-35.
10. N.J. Stat. Ann. §§ 4:7-31, 4:7-7, 4:7-21.
11. N.J. Stat. Ann. §§ 4:7-10; 4:7-31.
12. N.J. Stat. Ann. § 4:7-11.
13. *See* N.J. Admin. Code tit. 2, §§ 17-3.1, 17-4.6, 17-5.5.
14. N.J. Stat. Ann. § 4:7-34.
15. *See, e.g.*, N.J. Stat. Ann. §§ 4:7-14.1, 4:7-36.
16. N.J. Stat. Ann. § 4:7-37.
17. N.J. Stat. Ann. § 4:7-16.
18. N.J. Stat. Ann. § 4:7-17.
19. N.J. Stat. Ann. § 4:7-6.
20. N.J. Stat. Ann. § 4:7-19.
21. N.J. Stat. Ann. § 4:7-8.
22. N.J. Stat. Ann. § 4:7-9.
23. N.J. Stat. Ann. § 4:7-23.
24. N.J. Stat. Ann. § 4:7-31.
25. N.J. Stat. Ann. § 4:7-38.
26. N.J. Stat. Ann. §§ 4:7-39-4:7-40.
27. N.J. Stat. Ann. § 4:7-43.
28. N.J. Stat. Ann. §§ 4:1-21.5, 4:7-1.
29. N.J. Stat. Ann. § 4:7-18.
30. N.J. Stat. Ann. § 13:1B-15.101.
31. N.J. Stat. Ann. §§ 13:1F-15; 7:30-2.1; N.J. Admin. Code tit. 7, §§ 30-2.10, 30-10.2.
32. N.J. Admin. Code tit. 7, § 30-2.1(m)(3).
33. N.J. Admin. Code tit. 7, § 30-2.2.
34. N.J. Admin. Code tit. 7, § 30-2.2.
35. N.J. Admin. Code tit. 7, § 30-1.2, *citing* N.J. Admin. Code tit. 7, § 30-12.4(d)(1).
36. N.J. Admin. Code tit. 7, § 30-1.2.
37. N.J. Admin. Code tit. 7, § 30-1.2.
38. N.J. Admin. Code tit. 7, § 30-2.7.
39. N.J. Admin. Code tit. 7, § 30-10.2(e).
40. N.J. Admin. Code tit. 7, § 30-10.2(f).
41. N.J. Admin. Code tit. 7, § 30-10.1.
42. N.J. Admin. Code tit. 7, § 30-10.2(p), *citing* N.J. Admin. Code tit. 7, § 50-6.87(c).
43. N.J. Admin. Code tit. 7, §§ 30-10.6, 30-9.10.
44. *Id*.
45. N.J. Stat. Ann. § 13:1F-18 *et seq*.
46. N.J. Stat. Ann. § 13:1F-28.
47. N.J. Admin. Code tit. 7, § 30-10.2(k).
48. N.J. Admin. Code tit. 7, § 30-9.10.
49. N.J. Admin. Code tit. 7, § 30-9.11.
50. N.J. Stat. Ann. § 23:5-28.
51. *Id*.

New York

Jurisdiction and Definitions

The state Department of Agriculture & Markets (DAM) has general Authority over inspect pests and plant diseases, although its jurisdiction is directed mainly at nurseries.[1] Authority over forest pest and tree management, meanwhile, is vested in the Department of Environmental Conservation (DEC). This jurisdictional split echoes that found in many states. Unlike in most states, however, DEC, rather than DAM, has pesticide regulatory authority.

DAM is required to control or eradicate pests,[2] which are defined as either insect pests or plant diseases, including all forms of microorganisms.[3] All material, including soil, that is: (i) a host of; (ii) infested with; or (iii) exposed to any of these pests automatically qualifies as a public nuisance, granting DAM power to act for control of the pest in the public interest.[4] It is the sole source of control authority in most cases, except that any municipality may combat Dutch elm disease independently, though only with the Commissioner's approval and under her direction.[5]

DEC has the power to care for all state lands, including the power to manage forest insects and forest tree diseases.[6] DEC has jurisdiction over all "forest land," which includes both lands covered with tree growth and lands "best adapted to forests."[7] It also has special jurisdiction over "forest preserves," which are state lands outside any city limits in several counties. Forest preserve lands cannot be "wild lands" or contained in either Adirondack or Catskill Park or used for parks, silvicultural research, or reforestation.[8]

Inspection

DAM

DAM's access to private property is broad, as it has "full access" to all premises, places, farms, buildings, vehicles, airplanes, vessels, and cars to enforce pest law.[9] Though placed in the nursery section of the code, this authority probably includes access to non-nursery property because of its broad wording. Once on a property, DAM may examine trees, shrubs, plants and vines, soil, host plants, or other material that are infested or susceptible to infestation. It is also authorized to open packages.[10]

DAM is required to inspect nurseries at least every two years and to certify them as "apparently free" of pests if the inspection is successful.[11] If the inspection shows infestation, however, the nursery must undertake the response action prescribed by DAM to eradicate the pest.[12] Nurseries cannot operate without a phytosanitary certificate.[13]

DEC

DEC has a similarly broad authority to inspect private premises for pests. DEC agents may enter upon any lands to determine if the property is infested with forest insects and forest tree diseases and to determine the extent of any infestation.[14] Its agents can also enter private lands as part of DEC's authority to prevent the spread of forest pests by establishing barrier or protective zones, and no action for trespass is permitted against agents who act in the course of their duty (see *Quarantine*).[15]

New York law also contains inspection, response, and quarantine authority that is specific to white pine blister rust and currant rust. To avoid infestations of these diseases, black currant cultivation is unlawful except for variants that are immune or resistant to rust. DEC agents are permitted to enter private property if doing so as a precaution to prevent the spread of these diseases.[16]

Response

DAM

As is the case in most states, DAM lacks immediate authority to respond to pest infestations directly. Instead, DAM can order the owner of the infested plant, material, conveyance, or farm to take specified measures to control or eradicate the pest, as appropriate. DAM may itself act should the owner refuse or neglect to take the control or eradication measures.[17]

DEC

DEC has broad discretion to cut, spray, destroy, or otherwise treat trees and vegetation when necessary.[18] It is also permitted to poison forest areas in or near sections infested by pests.[19] Finally, as part of its authority to establish barrier or protective zones to prevent the spread of pests, it is permitted to modify the composition of the forest.[20]

DEC also has specific authority to respond to white pine blister rust and currant rust. It can destroy unauthorized currant or gooseberry bushes, roots, cuttings, or plants in any location other than a fruiting or potential fruiting district or a certified nursery.[21] Private property owners are required to remove currant plants within 900 feet of a white pine on an adjacent property that has been protected by its owner against rust. If an owner fails to remove a currant plant after 30 days written notice, DEC can itself remove these plants.[22]

Quarantine

DAM

DAM has the broadest possible quarantine power, as it has been given the authority to make and enforce any quarantine as it deems necessary.[23]

DEC

DEC's quarantine authority is more circumscribed. It can "prohibit the movement" of materials which may harbor pests.[24] It can also establish barrier or protective zones to prevent spread of forest pests.[25]

As for inspection and response, DEC has specific authority to establish white pine blister rust and currant rust quarantine districts. Once established, the Department can prohibit possession of any currant or gooseberry and transport of either plant to or from a quarantine area, or into the state from a diseased area outside the state.[26]

Compensation

DAM

If DAM is required to undertake a pest response action on private property, the property owner is liable for the expense of the action.[27] Owners are also prohibited from recovering damages for the destruction of infested trees, plants, or other material by or under the order from DAM.[28] Aggrieved persons, however, may file a grievance with the Department seeking damages for a loss; the Department's determination can then be reviewed in court.[29]

DEC

While owners are not entitled to compensation for the destruction of infested trees, they are entitled to just compensation for damage done to non-infested trees, as when DEC destroys those trees as a preventative measure. The amount of the award is determined by appraisal, and appeal is available.[30]

Diseased plants can be destroyed without compensation under DEC's white pine blister rust and currant rust program, but the Department must pay fair compensation for the destruction of non-diseased plants. Compensation is not permitted, however, for unlawful (that is, non-disease-resistant) strains that occur outside a fruiting district. Finally, a nursery owner (but not DEC) must pay for the destruction of plants in order to establish a currant-free zone around a nursery.

When a property owner refuses to remove any currant within 900 feet of a protected white pine and DEC exercises its power to remove that plant, the property owner is liable for DEC's costs.[31]

Tree Cutting

DEC has authority over tree cutting on state and private lands. It is unlawful to "cut, remove, injure, destroy or cause to be cut, removed, injured, or destroyed" any tree on state lands except designated silvicultural research and reforestation lands.[32] Tree removal is also illegal on private land without the owner's consent.[33]

New York is unique in that, in addition to tree cutting, it considers the use of fire as a pest control technique. DEC is authorized to use prescribed burns for insect and disease control, although it must develop an approved management plan prior to setting a prescribed burn.[34] Prescribed burns are prohibited on forest preserve land and in Adirondack and Catskill State Parks.[35]

DEC's prescribed burn authority is not limited to state lands. Prescribed burns on public or private forest lands still require DEC approval and a management plan and, like those on DEC lands, can be used for purposes including pest control.[36] Unlike on DEC lands, however, the management plan must be submitted to DEC for approval 60 days in advance of the burn.[37] These fires also generally require permits under Article 19 of the Environmental Conservation Code (regarding air pollution), but management-ignited prescribed fires are not subject to this requirement.[38]

Pesticides

As noted above, DEC has jurisdiction over pesticide distribution, sale, use, and transportation.[39] It has expressly adopted the FIFRA standards, except where state regulations differ.[40] As a result, its definitions of pest and pesticide echo those in FIFRA.[41] DEP is authorized to list pests, "highly toxic" pesticides, and restricted use pesticides.

As required by FIFRA, all pesticides used or distributed in the state must be registered.[42] SLN registration is permitted upon a showing that a local need exists for which registered pesticides are inadequate.[43] The Commissioner of DEC can also apply for an emergency exemption under FIFRA section 18. Anyone can request that the exercise of the Commissioner's emergency authority by filing an application at least 105 days prior to the proposed use.[44] The Commissioner must determine within 30 days after receipt whether the request contains adequate information to support an application to EPA; if so, the Commissioner must file an application for the exemption at least 60 days prior to proposed use date.[45] If an emergency is too urgent for compliance with the 105-day timeline, however, DEC will consider granting a crisis exemption as under FIFRA. A request for a crisis exemption must be accompanied, in addition to the normal application materials, by justification that a crisis exists and an explanation of why the emergency was not predictable.[46]

As in other states, restricted-use pesticides cannot be sold to, purchased by, or applied by anyone without a commercial permit.[47] Before purchasing, possessing, or using a pesticide, the purchaser must present a specific purchase permit issued by DEC. Permits are unavailable where there is a "reasonably less dangerous alternative available capable of performing the task required."[48] Particular applications must also be performed by applicators licensed in the applicable subcategory of pest control.[49] Though public applicators are not explicitly mentioned in the statute, it is likely that they too must comply with these requirements.

Though pesticides must be used in accordance with their labeling, this does not include agricultural use in a dosage, concentration, or frequency less than that specified on the label, unless specifically prohibited by the label.[50] In all cases, pesticides must be used in such a manner and under such conditions, including wind conditions, to prevent contamination of adjacent areas.[51] Other specific restrictions, such as prohibited pesticides in cities and grape- growing regions, apply as well.[52] Finally, it is unlawful to apply pesticides to state land under DEC jurisdiction without prior authorization.[53] Despite these limits, however, any restricted-use pesticide may be used to cope with a public health emergency (declared by the Department of Health) or quarantine (declared by DAM or USDA).[54]

Notes

1. N.Y. Agric. & Mkts. Law § 161.
2. N.Y. Agric. & Mkts. Law § 164.
3. N.Y. Agric. & Mkts. Law § 161.
4. N.Y. Agric. & Mkts. Law § 164.
5. N.Y. Agric. & Mkts. Law § 169.
6. N.Y. Envtl. Conserv. Law § 9-0105. *See also generally* N.Y. Envtl. Conserv. Law § 9-0101 *et seq*.
7. N.Y. Envtl. Conserv. Law § 9-0101(5).
8. *Id*., citing N.Y. Envtl. Conserv. Law §§ 9-0107, 9-0501.
9. N.Y. Agric. & Mkts. Law § 167.
10. N.Y. Agric. & Mkts. Law § 167.
11. N.Y. Agric. & Mkts. Law § 166.
12. N.Y. Agric. & Mkts. Law § 166.
13. N.Y. Agric. & Mkts. Law § 166.
14. N.Y. Envtl. Conserv. Law § 9-1303.
15. N.Y. Envtl. Conserv. Law § 9-1303.
16. N.Y. Envtl. Conserv. Law § 9-1301.
17. N.Y. Agric. & Mkts. Law § 164.
18. N.Y. Envtl. Conserv. Law § 9-1303.
19. *Id*.
20. N.Y. Envtl. Conserv. Law § 9-1303.
21. N.Y. Envtl. Conserv. Law § 9-1301.
22. *Id*.
23. N.Y. Agric. & Mkts. Law § 167.
24. N.Y. Envtl. Conserv. Law § 9-1303.
25. N.Y. Envtl. Conserv. Law § 9-1303.
26. N.Y. Envtl. Conserv. Law § 9-1301.
27. N.Y. Agric. & Mkts. Law § 164.
28. N.Y. Agric. & Mkts. Law § 165.
29. *Id*.
30. N.Y. Envtl. Conserv. Law § 9-1303.
31. N.Y. Envtl. Conserv. Law § 9-1301.

32. N.Y. Envtl. Conserv. Law § 9-0303; *see also* N.Y. Envtl. Conserv. Law § 9-0107(2); N.Y. Envtl. Conserv. Law § 9-0501 - 9-0507.

33. N.Y. Envtl. Conserv. Law § 9-1501.

34. N.Y. Comp. R. & Regs., tit. 6 § 194.2; *see also id*. § 194.3.

35. *Id*. at 194.2(b).

36. *Id*. §§ 194.4 - 194.5.

37. *Id*. § 194.6.

38. *Id*. § 194.9.

39. N.Y. Envtl. Conserv. Law § 33-0303.

40. N.Y. Comp. R. & Regs., tit. 6, § 320.1.

41. N.Y. Envtl. Conserv. Law §§ 33-0101(34); 33-0101(35); N.Y. Comp. R. & Regs., tit. 6, § 325.1.

42. N.Y. Envtl. Conserv. Law §§ 33-0703, 33-1301, N.Y. Comp. R. & Regs., tit. 6, § 326.14.

43. N.Y. Envtl. Conserv. Law § 33-0704(3). N.Y. Comp. R. & Regs., tit. 6, § 326.21.

44. N.Y. Comp. R. & Regs., tit. 6, § 326.26.

45. N.Y. Envtl. Conserv. Law § 33-0704(7).

46. N.Y. Comp. R. & Regs., tit. 6, § 326.26.

47. N.Y. Envtl. Conserv. Law § 33-1301, N.Y. Comp. R. & Regs., tit. 6, § 326.3-326.8.

48. N.Y. Envtl. Conserv. Law § 33-0903.

49. N.Y. Envtl. Conserv. Law § 33-0905, N.Y. Comp. R. & Regs., tit. 6, §§ 325.7-325.8, 325.16, 325.19.

50. N.Y. Envtl. Conserv. Law § 33-0725, N.Y. Comp. R. & Regs., tit. 6, § 325.2.

51. N.Y. Comp. R. & Regs., tit. 6, § 325.2

52. *See* N.Y. Envtl. Conserv. Law §§ 33-1101, 33-1105; N.Y. Comp. R. & Regs., tit. 6, §§ 321.0 – 324.4.

53. N.Y. Comp. Codes R. & Regs., tit. 6, § 190.9.

54. N.Y. Comp. R. & Regs., tit. 6, § 326.2(e).

Ohio

Jurisdiction and Definitions

General authority over plant pest and pathogen ED/RR actions in Ohio is vested in the Ohio Department of Agriculture (ODA).[1] Ohio law, however, also gives local governments special powers through its unique "home rule" system. As a result, local governmental subdivisions are authorized to combat pest infestations, either independently or through joint action with the state agency.[2] Political subdivisions can also obtain special help from the state or federal agriculture departments to combat Dutch elm disease or phloem necrosis.[3]

Ohio plant pest law defines as a pest any "insect, mite, nematode, bacteria, fungus, virus, parasitic plant, or any other organism or any stage of any such organism which… is capable of causing damage to any plant, plant part, or plant product."[4] Although the enumerated list of potential pest organisms is incomplete, the general "savings clause" language provides regulators with broad authority to address any actual or potential pest threats, including mollusks and vertebrates. Ohio law does not include a public nuisance provision.

In addition to its plant pest management authority, ODA also administers Ohio pesticide law, which defines "pest" as a "harmful, destructive, or nuisance insect, fungus, rodent, nematode, bacterium, bird, snail, weed, or parasitic plant or a harmful or destructive form of plant or animal life or virus, or any plant or animal species that is declared a pest, except . . . [those] living on or in living animals . . ."[5] It is thus subtly different than the FIFRA definition but complete in its coverage due to the savings clause, which covers animals and other life forms not contained in the explicit list. The statutory definition of "pesticide" tracks that found in FIFRA, but also includes pest monitoring systems as pesticides.[6]

Finally, several divisions of the state Department of Natural Resources (ODNR), including the Division of Forestry (ODF), the Division of Natural Areas and Preserves (ODNAP), and the Ohio Division of Parks and Recreation (ODPR), are also active in invasive species management. ODF has acquisition and custody responsibilities for state forest lands, and can cooperate with other agencies and local authorities as necessary to ensure a profitable growth of lumber on those lands.[7] Similarly, ODNAP participates in the Ohio Invasive Plant Council. Despite these invasive species management activities, however, ODNR lacks regulatory authority with respect to pest management. As a result, it is not considered in the following except in the *Tree Cutting* section, where ODNR's management authority in nature preserves and other public lands is considered.

Inspection

Ohio's plant pest law is divided into two subchapters, one pertaining to the control of pests under quarantine and the other to "plants and nursery stock." The latter contains general inspection authority, which permits ODA to reasonably inspect any premises and any property on a premises in the state to effect the purpose of any section in the subchapter.[8] The same provision authorizes the Department to stop and inspect any conveyance if it has probable cause to believe that the conveyance contains a pest or host.

The "plants and nursery stock" subchapter, unfortunately, primarily regulates only nurseries, and thus the ODA inspection authority is significantly less powerful than its generality would otherwise suggest. The subchapter does, however, contain two sections that could permit general inspections. First, ODA is empowered to declare quarantines, so it must be permitted to inspect lands when deciding whether to issue a quarantine order.[9] The effectiveness of this inspection authority thus depends on the aggressiveness with which ODA pursues potential quarantine opportunities. This arrangement requires ODA to rapidly identify potential invaders and restricts the Department's authority to survey for previously undetected pests, so it is not as strong as a broader authority. Once the Department does decide to act on a pest, however, it should not be hindered in delineating the extent of the invasion or otherwise in developing a response strategy.

The second provision potentially giving rise to inspection authority is code section 927.70, which makes harboring of a declared plant pest illegal and authorizes the Department to undertake certain response actions when it discovers a pest or has reason to believe a site to be infested. Although this authority would not seem to permit entry on land where the Department has no

reason to believe that a pest exists, it is reasonable to presume that the Department would be authorized to enter with a reasonable suspicion of infestation to determine whether its suspicion is justified.[10] Thus, while the inspection authority granted in connection with response actions is far from a general authorization, it does expand the applicable authority to some degree.

Nurseries and nursery shippers are also specifically regulated, and must be licensed by the state.[11] Nurseries are subject to mandatory annual pest surveys. These surveys require the nursery to grant the inspector free access to any field, orchard, garden, greenhouse, or other place on the premises within reasonable hours.[12] If the inspection reveals a pest infestation, the Department must notify the nursery, and can withhold certification of the nursery until the infestation is contained to the director's satisfaction. Nurseries are prohibited from moving or selling infested plants.[13]

After a pest is quarantined, inspection authority is expanded. Specifically, the legislative authority of a political subdivision may then authorize entry on any quarantined lands in the subdivision "for the sole purpose of inspecting" for the quarantined pest. This power can be exercised only to "prepare a campaign within the subdivision against a pest."[14] Thus, the inspection issues that accompany pre-quarantine inspections do not apply in post-quarantine cases where local governments participate in the response action. This provides a potent incentive for ODA and the local governments to cooperate in the development of response actions.

Response

ODA's general response authority makes it unlawful for any landowner to knowingly permit any pest to exist on any premises.[15] As noted above, if the Department determines or has reason to believe that a property is infested, it must notify the landowner. It can then seize, quarantine, treat, or otherwise dispose of the infested article as necessary to control or eradicate the spread of the pest. Alternatively, it can order the owner to treat or otherwise dispose of infested or host articles. If the owner refuses or fails to treat the infestation within seven days, ODA is authorized to treat the "premises" or to apply "any other remedial or preventive measure" as necessary.[16] The Department's authority thus appears at first blush to be duplicative. The statute, however, does not grant the agency authority to enter lands to carry out the treatment. Thus, the statute distinguishes between treatment of infested articles and treatment of the premises. Although it is far from clear, this distinction appears to permit the agency to treat infestations immediately only when granted permission to enter private lands.[17]

If ODA discovers infested nursery plants that are not permanently planted, it can seize and hold those plants pending treatment and certification. If the plants are not brought into compliance, ODA can destroy them after 90 days.[18]

As is the case for inspections, political subdivisions have expanded powers after ODA establishes a quarantine area. Their powers remain limited in developing responses, however, as they must contact landowners in the quarantined area of the subdivision to obtain permission to enter lands to combat the pest. Agents may enter private land only after obtaining permission as from each landowner.[19] The subdivision can remove or completely destroy plants that are dead or dying from a pest.[20]

Thus, both ODA and local governments are permitted to undertake a broad array of specific response actions upon short notice. ODA, though not local governments, can enforce its orders by entering private lands when the landowner fails to act. Although clearer drafting of the response authority provisions to determine exactly when the Department can enter lands would be desirable, the potentially-duplicative portion of the provision is unlikely to cause a diminution in the agency's authority. As a result, this entry authority – and the response provision generally – is strong and an asset to Ohio's ED/RR program.

Quarantine

When ODA determines that quarantine is necessary to prevent the entry or retard the spread of a pest into, within, or from Ohio, it can declare a quarantine of all or any portion of Ohio or of another state.[21] It can limit the application of its quarantine regulations to a subset of the entire quarantine area and can thereafter

apply the regulations to other areas in quarantine area.[22]

ODA is limited in how it can specifically regulate movement of potentially-infected items after declaration of a quarantine area. Although the statute initially prohibits movement of pests "within, from, into, or through this state" contrary to the Department's regulations, it then continues to clarify that those regulations may prohibit movement only across state or quarantine area borders – not within the quarantine area itself.[23] While careful use of quarantine area delimitation could reduce the risk of within-area spread of the pest, that risk can never be eliminated under Ohio's regulatory regime.

Finally, although the quarantine provision does not explicitly contain this authority, investigation and declaration of a quarantine area expands the Department's regulatory authority in other ways, as well as activating local governments to assist in the pest control effort. Although we have stated that linkage of regulatory authority to quarantine declarations is generally a negative, Ohio has in this case sensibly defined the role of a secondary responder to assist where needed, without unnecessarily complicating jurisdiction over plant pests on a statewide basis. This grant of authority may smooth the political resistance to declaration of quarantines, as well as leveraging local resources and expertise for the pest response effort. As a result, this provision is a positive aspect of Ohio's state plant pest law.

Compensation

Unfortunately, Ohio law lacks a public nuisance provision, so state's authority in this area is unclear. Ohio law does, however, provide that if ODA undertakes a response action pursuant to code section 927.70, the landowner must compensate the Department for the expenses incurred. Similarly, when political subdivisions perform pest response services, including destruction of dead or dying plants, they can charge a fee for those services.[24] Thus, while Ohio could better constrain private landowner compensation, it is not utterly without authority on the subject.

Tree Cutting

No restrictions on tree cutting are delineated by Ohio law, perhaps because ODF lands are to be managed to enhance forestry production. Some restrictions may apply on other ODNR lands, such as state nature preserves, which are managed in accordance with a management plan that must preserve the natural or aesthetic conditions of the preserve.[25] Another division of ODNR, the Ohio Division of Parks and Recreation (ODPR), manages state park lands. It is also expressly permitted to dispose of standing timber that "may present a hazard to life or property" due to any "natural occurrence."[26] As a result, it is unlikely that any tree cutting action would be restricted on public lands in Ohio unless it was prohibited as part of a management plan.

Pesticides

All state agencies, municipal corporations, and other government agencies and political subdivisions are subject to Ohio pesticide law.[27] The penalties in the act, however, do not apply to the actions of public state and federal officials who are engaged in the performance of their official duties in administering pesticide laws.[28]

All pesticides must be registered in Ohio prior to their distribution or application.[29] This registration requirement applies to all pesticides, including those exempted from federal registration under section 25(b) of FIFRA.[30] The statute permits experimental use exemption and SLN registration.[31]

Pesticides registered for restricted use cannot be applied by any person other than a licensed applicator.[32] This requirement applies to both private applicators and employees of the federal, state, and local governments and authorities.[33] Application by aircraft requires an additional aerial application use and pesticide-type use license. Each aerial application of a rodenticide, avicide, or vertebrate repellent also requires a prior permit.[34]

All pesticides must be used consistent with their labels unless the applicator has obtained an exception pursuant to FIFRA sections 5, 18, or 24(c).[35] In addition to restrictions on use based on pesticide labels, applicators cannot apply any pesticide in such a manner or at

such a time that adjacent crops, pasturage, water, or other areas will be damaged or contaminated.[36] Application of pesticides hazardous to honey bees is prohibited during active pollination in the target area.[37]

Notes

1. Ohio Rev. Code Ann. § 927.39 *et seq.*

2. Ohio Rev. Code Ann. § 927.39(B).

3. Ohio Rev. Code Ann. § 927.42.

4. Ohio Rev. Code Ann. § 927.51(K).

5. Ohio Rev. Code Ann. §§ 921.16, 921.01(II).

6. Ohio Rev. Code Ann. § 921.01(JJ).

7. Ohio Rev. Code Ann. § 1503.3-1503.4.

8. Ohio Rev. Code Ann. § 927.69 (applying to Ohio Rev. Code Ann. § 927.51-927.74).

9. *See* Ohio Rev. Code Ann. § 927.71.

10. It would be hard to cast authority to enter without suspicion as "effecting the purpose" of the response section. Given a reasonable suspicion, however, entry to inspect would facilitate the issuance of a response order or serve other legitimate purposes of the response section.

11. Ohio Rev. Code Ann. §§ 927.53, 927.56.

12. Ohio Rev. Code Ann. § 927.59.

13. Ohio Rev. Code Ann. § 927.64.

14. Ohio Rev. Code Ann. § 927.40.

15. Ohio Rev. Code Ann. § 927.70.

16. *Id*.; *see also* Ohio Admin. Code § 901:5-42-01.

17. This permissive authority is also echoed in the state's voluntary Gypsy moth suppression program. Ohio Rev. Code Ann. § 927.701; *see also* Ohio Rev. Code Ann. § 901:5- (specific gypsy moth quarantines).

18. Ohio Rev. Code Ann. § 927.68.

19. Ohio Rev. Code Ann. § 927.41.

20. *Id*.

21. Ohio Rev. Code Ann. § 927.71.

22. Ohio Rev. Code Ann. § 927.71.

23. Ohio Rev. Code Ann. § 927.71(C)-(D).

24. Ohio Rev. Code Ann. § 927.41.

25. Ohio Rev. Code Ann. § 1517.05.

26. Ohio Rev. Code Ann. § 1541.05.

27. Ohio Rev. Code Ann. § 921.19.

28. Ohio Rev. Code Ann. § 921.26(A)(2).

29. Ohio Rev. Code Ann. § 921.02.

30. Ohio Admin. Code § 901:5-11-12.

31. Ohio Rev. Code Ann. § 921.03; Ohio Admin. Code § 901:5-11-02(B)(1).

32. Ohio Rev. Code Ann. §§ 921.11, 921.24(C); Ohio Admin. Code § 901:5-11-01(N) (pesticide types).

33. Ohio Rev. Code Ann. § 921.06(A)(1)(b).

34. Ohio Admin. Code § 901:5-11-02(B)(14).

35. Ohio Rev. Code Ann. § 921.24(A); Ohio Admin. Code § 901:5-11-02.

36. Ohio Admin. Code § 901:5-11-02(B)(8).

37. Ohio Admin. Code § 901:5-11-02(B)(16).

Oregon

Jurisdiction and Definitions

The Oregon Department of Agriculture (ODA) has primary responsibility for implementing the Oregon plant pest control laws. ODA is authorized to use such methods as necessary to prevent introduction and spread of "dangerous insect pests" and plant diseases and to control or eradicate those pests that seriously endanger agricultural and horticultural interests of the state, whether established or introduced, whenever eradication or control is possible and practicable.[1] Neither "insect pest" nor "plant disease" is specifically defined, so it is not clear whether the ODA statute regulates other invertebrate pests or non-bacterial agents such as nematodes or viruses. Local governments – particularly counties – are also authorized to implement and enforce plant pest laws, although they lack regulatory authority.

Local governments are also permitted to regulate pests under ODA's statute after receiving a citizen petition requesting action. On the petition of 25 or more resident fruit growers in a county, the county court is authorized to appoint a county horticultural inspector. The inspector's duties include inspection of orchards, nurseries, plants, and other places, enforcement of agricultural and horticultural regulations, and enforcement of regulations governing insect pests and plant diseases.[2] Affected individuals can appeal from the actions of these horticulture inspectors, but their decisions have the force of law until overturned.

ODA is not the sole state agency with pest control responsibilities. The Forestry Department (OFD) is also empowered to address all matters of forest policy and management in the state, including directing pest management activities on forest lands.[3] This authority is to be used cooperatively, and management plans for state forests must be developed cooperatively with, at a minimum, the Department of Fish and Wildlife, the Parks and Recreation Department, and the Department of State Lands.[4] OFD is also explicitly authorized to enter into agreements with federal authorities for the control of exotic species.[5] State law recognizes, however, that funds for such control are never likely to prove sufficient for species control, and therefore permits the agency to manage a market-based funding mechanism whereby forest lands are used to create funding for OFD programs.[6]

ODA administers the state Pesticide Control Act and has regulatory authority to implement the act.[7] The pesticide act does not define pest, instead subsuming the pest distinction within its expanded definition of "pesticide." "Pesticide" is thus broader in scope than FIFRA as it includes subcategories for defoliants, desiccants, fungicides, herbicides, insecticides, nematocides, plant regulators, and other substances or mixtures intended to prevent, destroy, or repel all "insects, plant fungi, weeds, rodents, predatory animals, or any other form of plant or animal life" that is declared a pest.[8] As a result, ODA can declare almost any living organism to be a pest, but its authority to do so originates in the definition of pesticide rather than the definition of pest.

Unlike plant pest law, local governments are prohibited from enforcing or adopting any rule regarding pesticide use or sale except as required to comply with fire or building codes state or federal pesticide laws.[9] They can also adopt policies on the use of pesticides on the local government's property.[10]

Inspection

ODA

ODA itself has broad inspection powers. It can inspect any orchard, nursery, plant, or "any other place or thing" in the state when it deems an inspection necessary. None of the enumerated locations, however, mentions a non-residential location, so full inspection powers may be more limited than they first appear. County horticultural inspectors, their deputies, and others authorized to enforce state horticulture and inspection laws can also enter premises, land, buildings, and other places to inspect any article that may be infested with an insect pest.[11]

Oregon also has special provisions for inspection of timber. State law establishes that imported, untreated timber increases the hazard of introducing and spreading injurious pests. As a result, the Department is authorized to inspect timber products at "any facility that receives, handles, transports, or processes" timber, to conduct testing and detection activities associated with the timber business, and to regulate the handling, transport, and processing of timber.[12] The regulations require importers to notify the Department at least seven days prior to importation

and to provide a bill of lading within 21 days after the import.

As noted, these regulations apply only to imported and untreated timber. The statute defines "imported" to include only timber originating from a source outside North America or from a Mexican state not adjacent to the United States. Timber in transit across Oregon is not governed by the law so long as that timber is present in the state for less than 120 hours and is not unloaded in the state.[13] "Untreated" is also narrowly defined. For the purposes of this provision, untreated timber is all timber that has not been fully treated to eliminate *all* potential pests – that is, partial treatment is insufficient to exempt the timber from the statute.[14]

Oregon's timber treatment provisions are specifically intended to prevent the introduction of deep boring pests such as the Asian longhorned beetle. While this provision is unique and extremely beneficial, it does have a significant loophole because it does not specifically apply to untreated wood products other than raw timber. Forest pests have been postulated to arrive in this country in untreated wood packing material in addition to raw timber, so a regulation that does not address both invasion pathways may not prevent future introductions. That being said, Oregon is unique in its approach to timber pests, and should be lauded for its creativity, especially because the governance of packing materials may raise legal problems (e.g., commerce clause and international trade issues) that are less applicable to the regulation of raw timber.

Finally, nurseries must be licensed to grow, deal, or transport nursery stock for sale.[15] ODA is required to inspect all nurseries annually as a prerequisite to licensing, and can conduct additional inspections as often as necessary to determine and control pest conditions or to issue phytosanitary certificates.[16] ODA is also required to inspect nurseries, orchards, and other places for fruit pests and injurious plant and tree diseases upon complaint.[17]

Oregon law also regulates nursery imports. Imported stock must carry a certificate of origin issued by the relevant exporting state authority.[18] Inspectors may enter any car, warehouse, depot, or ship in the state where nursery stock, fruit, or crops are received or conveyed to inspect the shipment for pests.[19] ODA is also required to inspect and certify outgoing shipments upon request.[20] County horticultural inspectors, their deputies, and others authorized to enforce state horticulture and inspection laws can also enter upon or into any premises, land, buildings, enclosures, or other places where plants are received as imports to inspect any article subject to infestation by a pest that is injurious to a plant.[21]

Christmas tree growers are subject to additional inspection authorities. All Christmas tree dealers and growers, other than those with one acre or less of stock for retail, must be licensed.[22] ODA is authorized to inspect, certify and provide other services to licensed Christmas tree growers.[23] The Department can inspect as often as it deems necessary to determine pest conditions and for phytosanitary certification.[24]

ODF

ODF has a more active investigation responsibility than does ODA. It is required to survey and evaluate "nonfederal forestlands" for the existence of exotic pests and forest health.[25] This section explicitly permits the forester to go upon privately held lands with permission of the landowner or with a warrant. Warrants are to be issued only in emergency situations.[26]

While the presence of the ODF survey responsibility is a definite strength that should greatly aid early detection efforts, the limitation on the Department's authority on private lands is a concern, especially where lands are fragmented between state and private ownership.

Response

ODA

Oregon has both general and specific procedures for seizing items and for enforcing the state plant pest laws. Where the specific requirements of the plant pest law do not conflict with the statutory procedures for seizure, those procedures must be followed.[27]

In order to seize an item that is held by an owner in violation of the law, the Department must first notify of owner that it will act to condemn or seize the infested article.[28] The owner can request a hearing by filing a request within ten days after seizure. If the owner fails to request a hearing, the Department can summarily

destroy the items. If a hearing is requested, it cannot be held less than ten days after the request for hearing is received, unless by request of the owner, for perishable goods, or for another good reason.[29] If the owner prevails at the hearing, the condemned items are released. If the hearing shows that the items violate the law, the items must be treated to assure compliance with the law where possible, at the owner's expense. If separation and treatment is possible but the owner fails to follow through within 30 days, the Department can summarily destroy the items or salvage them to the extent possible, the benefit to be remitted to the owner.[30] If separation and treatment is impossible, the condemned items must be destroyed unless the owner presents a bond to ensure that the product will not be disposed of or used contrary to law.[31]

The above procedures may slow an ED/RR response action, since they contain an extended hearing opportunity and apply to all property seizures by ODA, including seizures of infested plants. Where plant pest law authorizes such seizures and the Department acts on that authority, therefore, a trenchant owner may be able to derail an areawide ED/RR action. The following plant pest-specific laws governing plant pests, however, do address this concern to some extent.

Plant pest response authority is triggered when an inspection reveals an infestation that is likely to spread. This discovery results in the automatic declaration of the infested place or article as a public nuisance.[32] When the public nuisance is declared, ODA must notify the owner of the infestation and can require the owner to undertake a specific response action within a certain time. Once the owner is notified of an infestation, she must spray or destroy the affected trees in the manner directed.[33] If the owner fails or refuses to abate the nuisance as specified in the notice or the owner cannot be served with the notice, ODA must issue a report to the district attorney for each county in which the nuisance exists.[34] The report should provide the property description and the pest or condition creating the nuisance. The district attorney must then prepare a petition to the circuit court seeking a judicial determination that a nuisance exists and directing its abatement. If the court agrees that the property is a nuisance, it enters an order condemning the property and ordering the nuisance abated by the owner in the manner directed by the court.[35]

Alternatively, ODA may abate the public nuisance itself in a summary manner when an "urgent emergency" exists. When using its emergency response powers, the Department must do as little damage to the surrounding premises as possible and must provide notice to the owner subsequent to the abatement.[36] This emergency authority, however, does not apply to abatement of infestation discovered during an inspection of a nursery imports after a complaint.[37]

County horticultural inspectors, their deputies, and others authorized to enforce state horticulture and inspection laws are also permitted to enforce quarantine laws and to directly abate nuisances.[38] It is important to note that this authority arises only after the nuisance arises – but that once that occurs, the limits imposed by ODA seizure laws do not apply to the local governmental actors.

The response procedure is different for detection of infestation in plant shipments. If an inspector finds infestation in a shipment, she must notify the shipper.[39] If possible, the owner of the shipment can separate and isolate the infested articles in the shipment at her own expense within a set time and under the supervision of an inspector.[40] The owner can then treat the infested items under the guidance of and in the manner dictated by the inspector.[41] If neither separation nor treatment is an option, the shipment must be sent out of state within a specified time (not less than 48 hours nor more than ten days), under the direction of the inspector. If the owner fails to comply, the inspector can then destroy the shipment at the owner's expense. Further, if the shipment cannot be safely returned to its origin, it must be destroyed immediately.[42] Finally, if the shipment is from an out-of-state quarantine area but appears to be pest-free, it still must be fumigated, sterilized, otherwise treated, destroyed, or returned to its place of origin.[43]

Even if a nursery is licensed and inspected, it cannot knowingly sell infested nursery stock. If the nursery discovers an infestation, it is prohibited from transporting, storing, advertising, or displaying the infested stock unless it is separated and held for treatment by the Department. The Department can seize or treat the infested stock, and can order it treated or

destroyed.[44] Similarly, Christmas tree growers cannot sell infested trees unless they are held for separation and treatment under supervision of an ODA officer; infested trees can be seized.[45]

ODF

ODF has no authority to respond to forest pest invasions on private lands, although it can respond as determined by the applicable management plan on its own lands. State forestry law does, however, require landowners themselves to respond to infestations through "prevention and suppression strategies to meet their own forest management objectives."[46] Unfortunately, a given landowner's management objectives are unclear and may not include rapid response to or eradication of pests. The statute does define "strategies" to include physical and biological methods and pesticide application.[47] "Prevention" limits these activities, however, by requiring the use of integrated pest management strategies.[48]

Despite its lack of direct response authority on private lands, ODF is not powerless in the face of an infestation on those lands. To the contrary, if private landowners fail to control a pest, the forester is directed to declare a control district for the pest and itself implement the appropriate response strategy after notifying affected landowners.[49]

Quarantine

As is the case for response authority, Oregon law establishes both general and specific quarantine provisions.

Taking the general requirements first, ODA is authorized to declare quarantines when it determines that plants in an area are infested with a pest harmful to plant or animal life or health and that the pest is likely to spread.[50] Departmental quarantines can be issued for both in-state and out-of-state infestations. For in-state infestations, ODA can prohibit movement of vectors out of the infested area and within the state generally. For out-of-state infestations, the Department can prohibit the movement of infested plants or other susceptible host articles into the state.[51]

ODA has relatively broad authority in quarantine areas. It can promulgate such regulations "as necessary for the protection of the public welfare." Thus, movement restrictions are not necessarily total in quarantine areas; the Department can permit movement of some potential infestation vectors if, for example, an infested item carries out the regulations providing for eradication of the infestation.[52]

The normal quarantine declaration process is fairly complex in Oregon. Before declaring an in-state quarantine, ODA must publish the proposed quarantine order and regulations, hold hearings after a fifteen-day waiting period, and file the proposal in the county clerk's office of each county in the infested area.[53] ODA must also hold at least one hearing in each congressional district, although out-of-state quarantines require only one hearing. These provisions could delay quarantine implementation for lengthy periods, potentially allowing the infestation to spread unabated. As a result, in emergency situations where the normal notice and hearing process would result in serious prejudice to the public interest, the Department can enforce the quarantine while completing the notice and comment requirements.

The streamlined notice and hearing procedures are not the only emergency provision in Oregon pest law. Rather, when ODA discovers a dangerous plant pest or disease infestation that is new to or not widely distributed in the state such that normal quarantine procedures would result in a "serious danger" of the wide spread of the pest, the Department can declare an emergency quarantine against the movement into or within the state by order from area of infestation.[54] This authority makes it unlawful to transport any quarantined item from the quarantined area into or through any part of state except as provided. Emergency quarantines cannot last for more than 90 days unless a normal quarantine is established.

The plant pest-specific quarantine provisions also permit ODA to quarantine a locality, district, orchard or place when an inspector opines that that area is infested with fruit pests or infected with disease and that the infestation is liable to spread so as to be a public danger.[55] Quarantine power, however, can be exercised only when there is a "great and imminent danger to the fruit interests of the state" and with caution and regard for the rights of individuals affected.[56] After declaring a quarantine, the Department can issue special permits allowing movement of otherwise-quarantined articles into or within the state. This provision

takes precedence over conflicting provisions of the plant pest law.[57] Quarantine provisions, however, do not apply to USDA.[58]

The plant pest law also allows ODA to declare pest control areas.[59] Control area declarations operate in accordance with the provisions governing the establishment of quarantines and can be established when the Department determines that an area is needed for the "general protection" of the horticulture, agriculture, or forestry industries from disease, insects, animals, or weeds or if the control area is needed for the eradication or exclusion of certain pests. The Department must exercise its authority to declare the latter type of control areas – that is, eradication or exclusion areas for plants – "reasonably and justly," balancing exigency, the danger to the interests at risk, and the continuing effects of the declaration on property owners. Finally, determination of a control zone requires the Department to specify the boundary of the area, the character and kinds of organisms that are subject to eradication or exclusion, and the manner and means of accomplishing the eradication or exclusion.

Several specific pests are per se hazards to the interests of the state and thus subject to control area declaration. These include eastern filbert blight,[60] rapeseed,[61] and cherry fruit flies.[62]

As in other areas of plant pest regulation considered above, Oregon has a complete and useful set of quarantine declaration tools. While its general quarantine authority is typical of many states, Oregon's emergency authority and limited quarantines (by type, i.e., control areas, and by allowable restrictions in those quarantine areas) are both positive. Possible problematic provisions remain however, including limitation of certain provisions to control of "fruit pests" and the focus on damage to primarily agricultural and horticultural interests, to the exclusion of aesthetics or other forms of non-economic damage.

Compensation

ODA

Oregon law does not explicitly address whether compensation is owed to private landowners for the destruction of infested trees or those at risk of infestation. As noted above, however, Oregon law contains a provision declaring the presence of any pest on land to constitute a public nuisance. As a result, takings challenges are less likely to succeed in Oregon than they would otherwise be. The law also addresses who must pay for response actions, noting in several instances that owners are responsible for undertaking response actions and that if another party acts to abate a nuisance, it can recover costs from the owner.[63] In sum, ODA and local governments are unlikely to be liable for the destruction of infested plants, but their liability for the destruction of susceptible host plants is less clear.

Oregon also contains a unique pesticide compensation system. A person who suffers a loss due to the use or application of a pesticide by a state agency, county, or municipality may file a loss report with the Department within 60 days after the loss occurs or is discovered, or before 50 percent of the affected crop is harvested, if the damage is to a crop. The Department may investigate the extent and nature of the alleged loss, but not assign fault or financial burden. After issuance of the report, the parties can mediate a settlement, which does not constitute a waiver of the state's immunity from prosecution.[64]

OFD

If the OFD is forced to declare a control district and itself undertake a response strategy, the state must "assist" in the payment of the control costs from its existing pest control funds.[65] Any overages may be collected from landowners. This is a more generous policy than that in most states, and may discourage the declaration of control districts when funding is limited.

Tree Cutting

Although the ODA plant pest law authorizes inspection of timber facilities and response to infestations discovered during such inspections, the law contains no explicit authority addressing the destruction of trees. OFD's implementing statutes, however, discuss pest management and state land management more directly.

First, it is important to note that OFD is directed to enhance timber production on its lands, although it must also consider air and water quality, soil produc-

tivity, and fish and wildlife.[66] As a result, tree cutting is not expressly prohibited on state lands by statute.[67] Further, as noted above, management plans must be developed cooperatively, and they must include strategies to reduce infect and disease infestation.[68]

There are a few complications. First, the Oregon Forest Practices Act (OFPA) requires the consideration of more than mere increase in forestry.[69] One of these provisions requires forestry operators, among other things, to leave a certain number of snags and green trees per acre harvested.[70] These requirements are limited to harvests, however, and are likely inapplicable to pest response actions. Second, several state scenic highways are described by the OFPA for the purpose of maintaining roadside trees along those highways.[71] Were this provision to prohibit cutting of all roadside trees, ED/RR actions could be severely limited due to such highways being a common pest vector. Luckily, the provision is flexible and allows management consistent with "practical considerations."[72] As a result, it is likely that pest managers are able to cut these trees. Finally, the OFPA also requires the use of best management practices to prevent water pollution.[73] While these practices may in practice limit destruction of trees in riparian areas, they should not restrict emergency responses to infestation.

The law also recognizes the importance of urban trees, one of few states to separately consider these trees. The law, however, does not direct any specific management practices for these trees; instead, OFD must merely assist local governmental organizations in the care of these trees.[74] Local governments are, however, barred from regulating forests outside any urban growth boundary, except that counties can prohibit forest practices outside such a boundary.[75]

Pesticides

All pesticides manufactured, distributed, or sold in the state must be registered annually.[76] Restricted use pesticides can only be used by licensed applicators, and in no case may pesticides be used inconsistent with their labeling.[77] Restricted pesticides include both those listed by EPA and any others with approved labeling specifying restricted use.[78] In addition, several pesticides are subject to additional requirements.[79] As in other states, all pesticide applicators must be licensed in the appropriate category as specified in FIFRA.[80]

Local and state government applicators (including utility and irrigation district employees) must be certified as public applicators.[81] Governmental entities, however, do not need their own licenses for application pursuant to an order to control or eradicate pests or for application to property owned, possessed, or controlled by the public entity or to the property of an adjacent governmental entity when in conjunction with application to the entity's lands and so long as not applied for profit.[82] In addition, though agencies are required to follow integrated pest management (IPM) procedures when performing pest control, this requirement does not actually restrict the authority of the agencies to apply pesticides.[83]

Finally, Oregon law contains a unique local restriction on pesticide use that could limit ED/RR actions. Upon petition by 25 or more landowners comprising 70 or more acres of private land, ODA can, but is not required to, declare a protected area under the same procedures described for quarantine declarations. Protected areas are deemed governmental subdivisions and are governed by a committee.[84] The committee can restrict pesticide use in the protected area by type, time, method, or rate of application.[85] In addition, the committee can request that ODA declare areas outside the protected area – but presumably necessary to the protection of the area – to be "restricted areas." Like the original protected area declaration, the restricted area declaration is accomplished in accordance with the quarantine procedures.[86] Like protected areas, restricted areas permit limits on the time, method, and rate of pesticide application.[87] The restricted area cannot limit herbicide use, however, more than ten miles from the protected area boundary. While these areas are useful for leveraging local expertise and protecting important resources from contamination, it is possible that a plant pest response to infestation in such an area would be severely limited in pesticide use.

Notes

1. Or. Rev. Stat. § 570.305.
2. Or. Rev. Stat. § 570.010.
3. Or. Rev. Stat. §§ 526.016, 526.041, 526.455
4. Or. Rev. Stat. § 526.905.
5. Or. Rev. Stat. § 526.274.
6. Or. Rev. Stat. § 526.277.
7. Or. Rev. Stat. § 634.306.
8. Or. Rev. Stat. § 634.006(8).
9. Or. Rev. Stat. §§ 634.057, 634.063.
10. Or. Rev. Stat. § 634.060.
11. Or. Rev. Stat. § 570.020.
12. Or. Rev. Stat. § 570.705.
13. Or. Admin. R. 603-052-1110.
14. *Id*.
15. Or. Rev. Stat. § 571.055.
16. Or. Rev. Stat. § 571.145.
17. Or. Rev. Stat. § 570.110.
18. Or. Rev. Stat. § 571.220.
19. Or. Rev. Stat. § 270.135.
20. Or. Rev. Stat. §§ 270.125, 571.130.
21. Or. Rev. Stat. § 570.135.
22. Or. Rev. Stat. §§ 571.520, 571.525.
23. Or. Rev. Stat. § 571.510.
24. Or. Rev. Stat. § 571.560.
25. Or. Rev. Stat. § 527.335.
26. *Id.*
27. *See* Or. Rev. Stat. § 561.605-.620.
28. Or. Rev. Stat. § 561.605.
29. Or. Rev. Stat. § 561.610.
30. Or. Rev. Stat. § 651.620.
31. Or. Rev. Stat. § 561.615.
32. Or. Rev. Stat. § 570.170. Barberry plants are considered a per se nuisance unless ODA determines them to be resistant to black stem fungus. The department is therefore authorized to order an owner to destroy non-resistant plants. Or. Rev. Stat. §§ 570.196-570.200
33. Or. Rev. Stat. § 570.345. Owners who become aware of infestation also have an independent responsibility to treat or destroy the infested articles. Or. Rev. Stat. § 570.345.
34. *See* Or. Rev. Stat. § 570.190.
35. Or. Rev. Stat. § 570.175.
36. Or. Rev. Stat. § 570.180.
37. Or. Rev. Stat. § 570.185, *citing* Or. Rev. Stat. § 570.135.
38. Or. Rev. Stat. § 570.020.
39. Or. Rev. Stat. § 570.140.
40. Or. Rev. Stat. § 570.145.
41. Or. Rev. Stat. § 570.150.
42. Or. Rev. Stat. § 570.155.
43. Or. Rev. Stat. § 570.160.
44. Or. Rev. Stat. §§ 571.200, 570.345.
45. Or. Rev. Stat. § 571.575.
46. Or. Rev. Stat. § 527.341.
47. Or. Rev. Stat. § 527.310.
48. *Id*.
49. Or. Rev. Stat. § 527.346.
50. *See generally* Or. Rev. Stat. §§ 561.510-561.590.
51. Or. Rev. Stat. § 561.510.
52. Or. Rev. Stat. § 561.540.
53. Or. Rev. Stat. § 561.520.
54. Or. Rev. Stat. § 561.560.
55. Or. Rev. Stat. § 570.115.
56. Or. Rev. Stat. § 270.120.
57. Or. Admin. R. 603-052-0020.
58. Or. Admin. R. 603-052-0020.
59. Or. Rev. Stat. § 570.405.
60. Or. Rev. Stat. § 570.405. In addition to being a per se hazard, filbert blight control zones require no proof of the disease transmission mechanism. Further, in declared control areas, ODA may require removal of infected trees. Or. Rev. Stat. § 570.407.
61. Or. Rev. Stat. § 570.450.
62. Or. Rev. Stat. § 570.420. Counties can also appoint their own cherry fruit fly inspectors in counties with a declared fruit fly control area. These inspectors can enter all land in the county that is in the control zone to carry out the terms of the control zone declaration order if the owner fails or refuses to follow that order. To enforce an order, however, the inspector must notify the appointing authority and receive authorization to take action. Or. Rev. Stat. § 570.425.
63. *See* Or. Rev. Stat. § 570.175.
64. Or. Rev. Stat. § 634.172.
65. Or. Rev. Stat. § 527.360.
66. Or. Rev. Stat. §§ 526.460, 527.710.
67. Although their authority is not directly considered here, the state departments of Parks and Recreation and State Lands also have jurisdiction over certain state lands. *See* Or. Rev. Stat. § 526.905, Ch. 390. The departments' implementing statutes contain no limitations on ermitted management practices that would preclude tree cutting.
68. Or. Rev. Stat. § 526.905.
69. *See* Or. Rev. Stat. §§ 521.610 *et seq*.
70. Or. Rev. Stat. § 527.676.
71. Or. Rev. Stat. § 527.755.
72. *Id*.
73. Or. Rev. Stat. § 527.765.
74. Or. Rev. Stat. §§ 526.500-526.510.
75. Or. Rev. Stat. § 527.722.
76. Or. Rev. Stat. § 634.016.
77. Or. Rev. Stat. §§ 634.322, 634.372(1); Or. Admin. R. 603-057-0200.
78. Or. Admin. R. 603-057-0205.

79. *See* Or. Rev. Stat. §§ 634.410-525 (thiram, tributylin), Or. Admin. R. 603-057-0300-0384.

80. Or. Rev. Stat. § 634.372; Or. Admin. R. 603-057-0110, 603-057-0115.

81. Or. Rev. Stat. §§ 634.006, 634.372.

82. Or. Rev. Stat. § 634.116(12).

83. *See* Or. Rev. Stat. §§ 634.650-.660.

84. Or. Rev. Stat. § 634.216.

85. Or. Rev. Stat. § 634.212.

86. Or. Rev. Stat. § 634.232.

87. *Id*.

Pennsylvania

Jurisdiction and Definitions

The Pennsylvania Department of Agriculture (PDA) oversees plant pest and pathogen control in the state pursuant to the Plant Pest Act of 1992 (PAPPA).[1] The Plant Pest Act defines "pests" broadly to include any "organism[s], including other plants, causing or capable of causing injury or damage to plants or plant products."[2] This definition is unique in its focus on harm to plants – rather than the taxonomy of the pest – as its criterion for jurisdiction. This approach is extremely powerful, and permits the agency to control all potential invasive pests, including vertebrates and other "nontraditional" plant pest taxa.

Pests do not automatically qualify as public nuisances under Pennsylvania law. PDA, however, can declare a pest to be a nuisance if it is "dangerous or destructive to the agriculture, horticulture or forests."[3] This definition is slightly more restrictive than that of pests generally, but it nonetheless leaves ample room for agency discretion.[4]

The Department of Conservation and Natural Resources (PDCNR), through its Bureau of Forestry, is also required to protect all forest land in the state from "fungi, insects, and other enemies."[5] Despite this mandate, PDCNR lacks authority over private lands. As a result, it can inspect for and respond to infestations on state lands pursuant to the management plans for such lands. As a result, its authority is not considered in detail below. It is worth noting, however, that PDCNR's authority probably extends to include both pests and pathogens through the "other enemies" clause. In most infestations, therefore, PDCNR and PDA will be required to collaborate to create an effective ED/RR action.

PDA, in addition to its plant pest authority, also administers the state Pesticide Control Act of 1973 (PAPCA).[6] The definitions of "pest" and "pesticide" in the PCA track those in FIFRA.

Inspection

PDA has extremely broad general authority to carry out inspections and otherwise investigate potential infestations. This authority derives from the Department's statutory authorization to carry out surveys intended "to determine the existence, distribution and severity of damage caused by plant pests" and to make "other investigations" necessary to protect the state's agriculture or horticulture.[7] PDA inspectors also have extremely broad authority to enter private lands and buildings as part of this and other authorities. The statute grants inspectors "free access" to "any land, premises, building, vehicle, vessel, car or other place" for inspection during reasonable hours to enforce the provisions of the PAPPA.[8] It is thus illegal for a landowner to deny an inspector access when that access is sought for an authorized reason.

Read together, these two provisions permit inspectors to enter both private lands and private buildings to conduct surveys even if no infestation has been detected prior to the survey. There are two potential weaknesses in this authority: first, the agency may be limited to investigations of plant pests affecting the agricultural or horticultural industries. At the very least, the "other investigation" authority is so limited, but the limitation may also apply to surveys. The statutory survey language is not explicitly limited, but a landowner could potentially make a colorable challenge to the extent of the agency's authority based on the general focus of the statute on agricultural and horticultural pests. Second, the statute does not explicitly permit inspection of dwellings, and the use of the word "buildings" could also be read narrowly to exclude residences. Despite these uncertainties, PDA's inspection authority is the most complete among the states surveyed in this report.

In addition to its general inspection authority, PDA also inspects nurseries. Nurseries must be certified, and cannot receive certification without an annual inspection by the Department.[9] Nurseries can also request inspection by PDA.[10]

Response

As for inspection authority, Pennsylvania law provides extremely generous authority for the agency to deploy appropriate response actions.

First, section 19 of the PAPPA provides two distinct paths for responses to infestation. The correct option depends on PDA's determination regarding the seriousness of the pest outbreak. PDA is itself permitted to respond to pest infestations when it determines that a "serious pest situation" exists in any part of the state.

Such a determination enables the Department to undertake "any necessary eradication or control measures." The Department must notify affected property owners prior to beginning response actions, however. After providing this notice, PDA agents can enter private premises during reasonable hours.[11]

On the other hand, if PDA determines that an infestation is not serious, its agents are not granted unrestricted entry onto private property. Instead, the agency must issue an order prescribing the treatment to be undertaken and a deadline for its completion. Issuance of a control or eradication order automatically quarantines the property until the required control or eradication procedures have been completed to PDA's satisfaction.[12]

If a property owner fails to comply with a control order, the agency is then authorized to undertake the control action.[13] Although the right to enter the premises is not explicit in the response section, the general entry authority discussed in the previous section is likely to apply.

The above response options are the primary tools for responding to infestation, but response authority under several other sections of the PAPPA are also noteworthy. First, the statute is self-enforcing with respect to nuisance pests. That is, once PDA has declared an organism a nuisance pest, it is illegal for a landowner to allow any such pest to remain on its property.[14] Thus, the failure by landowners to respond to the presence of such pests on their lands is illegal. Although this provision does not provide for entry by PDA, the general entry authority would probably permit agents to enter property to check for the presence of nuisance pests – and therefore to check for compliance with the nuisance pest eradication provision.

Finally, two PAPPA provisions dealing with other matters permit response as part of their primary functions. First, the inspection section includes a clause authorizing PDA to "prescribe treatment for control of plant pests."[15] Although it is unclear how this provision interacts with section 19, it may permit PDA to require responses without forcing the agency to make a premature determination regarding the seriousness of the infestation. If so read, this provision could prove to be an extremely useful component of the agency's rapid response authority.

Second, the institution of a quarantine permits the agency to require the destruction of any crop within the quarantine area. This provision applies to only host or reservoir crops, and therefore cannot be used against non-crop forest pests and other non-agricultural pests.[16] Nonetheless, it is a useful supplemental tool for requiring complete response by private entities.

Quarantine

PDA is granted quarantine authority pursuant to section 21 of PAPPA. Quarantines are intended to prevent the dissemination of pests in the state or to prevent or delay the introduction of a pest into the state. Quarantines can thus be imposed on both out-of-state and in-state areas. In-state quarantines, where imposed, may include a larger area than that already infested.[17] Quarantines may be established either by regulation or simply through notice. Because the latter requires no comment period or other lengthy procedural elements, they are likely to be a useful element of rapid response actions in the state.

Unfortunately, PDA's authority is limited with respect to the consequences of a quarantine declaration. Establishment of the quarantine allows the agency to regulate movement only "from the area under quarantine." As a result, movement within the quarantine area – even in locations not yet infested – cannot be proscribed. This shortcoming is balanced against PDA's otherwise-broad regulatory authority. As noted above, the Department may "regulate the planting, growing or harvesting of any crop that serves as a host or reservoir for the pest," may prohibit of planting of specific crops in specific locations and at specific times, and may require the destruction of any tree or crop.[18] This allowance for "special provisions" is potentially a powerful tool for removing hosts in the agricultural setting. Its utility against non-crop pests is limited, however, rendering quarantines of little use against such pests. It is also worthwhile to note that the statute contains no provision for exceptions, permits, or other methods for instituting limited quarantines. The "all-or-nothing" nature of this provision may be a disincentive for PDA to institute quarantines at the outset of a rapid response action.

Finally, as noted above, property subject to a pest control or eradication order is automatically quarantined.

While such quarantines do not apply on an areawide basis and thus may be of limited utility as a response tool, they are a potent incentive for quick compliance with the response order and may enhance the prophylactic utility of that order pending compliance.

Compensation

PAPPA contains no explicit provision assigning responsibility for compensation for damage done as part of a response action. Nonetheless, there are several applicable provisions. First, as noted above, PDA can declare a pest to be a public nuisance. When it has exercised this power, it is likely that a landowner could receive no compensation for destruction of any infested plant or article. On the other hand, the existence of this power suggests that some declared pests are *not* a nuisance, making compensation for the destruction of articles infested with non-nuisance pests more likely. Second, the statute does provide that owners must compensate PDA where the owner fails to comply with a section 19 control or eradication order. As such, it is unlikely that an owner could recover the costs of the response action in any case.

Tree Cutting

PAPPA contains no limitations on tree cutting. Some PDCNR statutes, however, do limit tree cutting, and may therefore interfere with tree cutting on state forest lands. In areas within state parks designated "natural areas," for example, biological processes are not normally subject to human intervention if they would degrade the "inherent values" of those areas.[19] Insect and disease control in these areas are determined on a case-by-case basis.[20] Similarly, state forest natural areas and wild areas are managed without human interference in biological processes except as needed for health and safety.[21] Biological processes on other state lands, however, are managed in accordance with a management plan.

Other provisions require prior departmental approval, including the use of chain saws and tree destruction or removal.[22] Finally, other tree cutting is subject to regulation. Tree cutting on state forest lands, therefore, must be limited by stump height and tops and slash must be removed 25 feet or more from streams and state forest boundaries.[23]

The above restrictions on the management tools available on certain state lands are surprisingly formidable, and could limit the availability of tree cutting – or any response – in some areas. PDCNR, however, has discretion to manage such lands where necessary, and may choose to respond to nascent infestations in such areas to preclude the necessity of undertaking a much broader effort after an infestation becomes established. Ultimately, the manner in which PDCNR uses the flexibility offered by the state's case-by-case process will determine the outcome of ED/RR programs in natural areas.

Pesticides

As noted above, PDA governs the Pennsylvania pesticide law. Although that law contains many of the same elements as other pesticide laws, it also contains some unique provisions.

All pesticides must be registered with both EPA and PDA to be legally distributed or applied, and all pesticide applicators – including public applicators – must be licensed by the state.[24] Only one of the normal registration exemptions is present in Pennsylvania, as state law includes no provision for emergency or provisional use of pesticides pending registration. SLN registration, however, is available where the registrant can show that the pesticide otherwise conforms to FIFRA labeling requirements and will remedy the pest problem without causing "unreasonable adverse effects on the environment."[25]

PDA also maintains a list of restricted use only pesticides that is consistent with federal lists except where a "local need or imminent hazard" necessitates restricting the use of a pesticide that is registered for general use with EPA.[26] Although PDA generally does not alter the federal restricted use list, it can condition the use of restricted pesticides by time and place, and it can require a permit prior to the use of any such pesticide.[27]

There are several requirements for the use of pesticides. Most generally, pesticides cannot be handled, transported, stored, displayed or distributed as to endanger man or his environment.[28] Pesticides cannot be used contrary to their labeling,[29] except for: (i) application at a dosage, concentration, or frequency less than that specified on the label; (ii) application

against a non-specified pest on a specified host plant, unless contrary to specific label instructions; and (iii) application using a non-specified but non-prohibited method.[30]

In addition to these common provisions, Pennsylvania has adopted some unique limitations on use. First, advisory instructions on pesticide labels are binding.[31] Also, pesticides cannot be applied to the property of another except where the application is "done under the direction of a governmental entity to protect the health and welfare of the public."[32] The same allowance applies to application that may leave a residue on the property of another.[33] Thus, PDA itself is not bound by this restriction on pesticide use.

Some categories of restricted use pesticide applications require the applicator to notify either neighboring landowners or the community at large prior to the application. The required notification must occur no less than 14 days prior to application, and no more than 45 days prior to application.[34] Applicable categories of use include right-of-way applications, nonagricultural specific site applications, nonagricultural area-wide applications, and agricultural applications.

Special notification provisions also apply to hypersensitive individuals.[35] Any such individual living within 500 feet of an application site must be notified between 12 and 72 hours prior to the application, which must occur over a period lasting less than 24 hours.

Restricted use pesticides are also prohibited within 100 feet of certain publicly owned or designated lands without a waiver.[36] Lands affected by this provision include the designated "natural areas and wild areas" on state forest and state park lands and areas designated on the state Natural Diversity Inventory as containing "rare or endangered species or significant natural communities."[37] Waivers for use of pesticides on these lands are granted only if the pesticide application is necessary and will result in a "demonstrated public benefit," "will not cause adverse impact on the use of the area to be protected," and "will not result in the destruction or loss of any rare or endangered flora or fauna or significant natural community existing in the protected area."[38] In order to meet the no-adverse-impact standard, each request for a waiver must include a "[s]pecific evaluation of possible detrimental effects on water quality, air quality, groundwater, public health and safety, nontarget plants and animals, habitat diversity and interspersion and biological productivity."[39] Waiver requests must be made at least 90 days prior to the application.[40] In addition, aerial herbicide spraying is banned in the above natural and wild areas.[41]

Pennsylvania law thus contains several restrictions on pesticide use that could severely limit pesticide use as a pest control tool, especially on the state lands listed above and in suburban and residential areas. The two-week notification requirement could prove troubling for ED/RR programs, and at the very least requires a degree of advance planning regarding the pesticides to be used in the response.

Notes

1. P.L. 1228, No. 162 (1992). Pennsylvania is in the midst of consolidating its laws. Where a law has already been consolidated, it is cited to the "Pa. Cons. Stat." Unconsolidated statutes, including the PPA, are initially cited according to their public law number and thereafter in shortened form.

2. PAPPA § 2.

3. PAPPA § 20.

4. It is important to note that listing as a nuisance pest is not a prerequisite to agency response action.

5. Conservation and Natural Resources Act, Pub. L. 89, No. 18 (1995), Pa. Stat. Ann. tit. 71 § 1304.302.

6. P.L. 90, No. 24 (1974), *as amended by* P.L. 1542, No. 167 (Dec. 12, 1986).

7. PAPPA § 18.

8. PAPPA § 4(a).

9. PAPPA § 5.

10. PAPPA § 9.

11. PAPPA § 19(a).

12. PAPPA § 19(b).

13. PAPPA § 19(c).

14. PAPPA § 20.

15. PAPPA § 18.

16. PAPPA § 21.

17. PAPPA § 21.

18. PAPPA § 21.

19. 17 Pa. Cons. Stat. § 17.3.

20. *Id*. at § 17.4.

21. 17 Pa. Cons. Stat. § 27.2-27.4.

22. 17 Pa. Cons. Stat. §§ 11.209, 11.211, 21.31.

23. 17 Pa. Cons. Stat. § 21.33.

24. PAPCA §§ 5.1(a), 8(a)(1), 17.1, 8(m), 15.1(a); s*ee also* 7 Pa. Cons. Stat. §§ 128.103(h), 128.91, 128.41-128.45.

25. PAPCA §5.1(h), 7 Pa. Cons. Stat. § 128.92.
26. PAPCA § 7.
27. PAPCA § 7(b)(6).
28. PAPCA § 8(g), 7 Pa. Cons. Stat. §128.103(a).
29. PAPCA § 8(e), 7 Pa. Cons. Stat. § 128.193(b).
30. 7 Pa. Cons. Stat. § 128.2.
31. 7 Pa. Cons. Stat. § 128.103(b).
32. 7 Pa. Cons. Stat. § 128.103(f).
33. *Id*. § 128.103(g).
34. 7 Pa. Cons. Stat. § 128.2.
35. 7 Pa. Cons. Stat. § 128.111-12.
36. PAPCA § 25.1(a)(3).
37. §§ 25.1(b)(1)-(2). 7 Pa. Cons. Stat. § 128.102. Rare and endangered species are found at 17 Pa. Cons. Stat. Ch. 45 (rare plants) and 58 Pa. Cons. Stat. Ch. 75, 133 (endangered species and wildlife classification).
38. PAPCA §§ 25.1(a)(3)(i)-(iii).
39. 7 Pa. Cons. Stat. § 128.102(b)(2).
40. 7 Pa. Cons. Stat. § 128.102(c).
41. 17 Pa. Cons. Stat. § 17.4.

South Carolina

Jurisdiction and Definitions

The South Carolina Crop Pest Commission (SCCPC) is primarily responsible for the regulation and management of plant pests.[1] SCCPC is authorized to promulgate regulations as necessary to eradicate or prevent the spread of plant pests and can restrict plant imports and carry out pest control operations.[2] The state plant pest law also grants SCCPC police powers for the purpose of implementing the pest control regulations.[3]

The exception to SCCPC's authority occurs during forest pest outbreaks, when the state Commission of Forestry (SCCF), a division of the Department of Natural Resources, administers the response action.[4] Even in forest pest outbreaks, however, quarantine and other actions to prevent the introduction or spread of the forest pests remain SCCPC's responsibility.[5] Local plant pest ordinances are not permitted in any case.[6] South Carolina's jurisdictional structure is thus optimal, as one agency takes a lead position for regulatory purposes, while others participate in management activities in their areas of expertise.

SCCPC has jurisdiction over all pests, which include "[a]ny living stage of insects, mites, nematodes, slugs, animals, protozoa, snails or other invertebrate animals, bacteria, weeds, fungi, other parasitic plants or their reproductive parts, or viruses, or organisms similar to or allied with the foregoing, including genetically engineered organisms or infectious substances which directly or indirectly may injure or cause disease or damage in plants or their parts . . ., and which may be a serious agricultural threat to the State."[7] This definition is admirably broad, as it permits regulation of all invertebrates and contains a general savings clause that protects against accidental omissions. The definition of "forest pest" is more succinct and includes "any insect, disease or closely related organism" that is harmful to forests or timber.[8] "Timber" includes forest trees, whether alive, dead, standing, or down.[9] While this definition omits the lengthy list of potential pests, it is general enough to permit SCCF to address any potential pest, so long as "closely related organism" is read liberally. The reference to the broad term "timber" also has the great virtue of expressly presaging treatment of a variety of potential hosts.

In addition to its plant pest regulatory and management authority, SCCPC also administers the South Carolina Pesticide Control Act.[10] SCCPC's rulemaking powers, however, are delegated by law to the director of the Division of Regulatory and Public Service Programs at Clemson University.[11] The definitions of pest and pesticide under the pesticide control act track those found in FIFRA.[12]

Inspection

Unfortunately, while SCCPC's regulatory authority is broad, it is not explicitly authorized to carry out any inspections for plant pests on any lands. Instead, it must first declare a quarantine for a particular pest and thereafter promulgate regulations providing for inspection and response authority for that pest.[13] Although this is an unfavorable regulatory structure for early detection purposes, there are two positives that can be drawn from SCCPC's crop provisions. First, the statute imposes no limits on the Department's regulatory authority that might prevent it from enforcing a rule that permits entry onto private lands. Second, once the Department has inspection authority, it becomes illegal for any person to interfere with an inspection.[14] Notwithstanding these two positives, South Carolina's pest response law could be significantly strengthened by permitting SCCPC to develop a systematic pest inspection system.

SCCF's inspection authority, surprisingly, is broader than that enjoyed by SCCPC, and could potentially serve as a general model for early detection systems. When SCCF has reason to suspect an outbreak of forest pests, it is required to survey for those pests and consult with SCCPC.[15] An "outbreak" is defined in the statute as a pest infestation that is significant enough to threaten forests or timber, or the benefits derived from those resources.[16] SCCF is explicitly authorized to enter on "any land" to "investigate [and] take measures to control, suppress, or eradicate forest pests."[17] If access for any of these purposes is refused, SCCF can seek a warrant in court.[18] SCCF's inspection responsibility does not end with the determination of an infestation, but rather requires continued surveying of the area.[19] Although SCCF would ideally be permitted to inspect lands as part of a regular and ongoing survey effort (i.e., without requiring suspicion of infestation), funding and resource constraints make such authority

of limited value. As a result, SCCF's inspection authority should permit investigation in most cases where the agency seeks it.

The agencies are not the only entities with pest control responsibilities. Rather, all persons working in agriculture are required to report pests, diseases, and infections that might cause a serious agricultural threat to the state. While this individual requirement is beneficial, its limitation to agricultural workers (rather than all citizens) and its application only to "serious" threats to agriculture (rather than any threat to the interests of the state, including the environment) are potential impediments to the successful implementation of the provision.

Finally, it is important to note that, as in other states, South Carolina requires that nurseries be certified by SCCPC.[20] As is usual, a pest inspection is a prerequisite to certification.[21] Even after inspection, nurseries are prohibited from selling infested plants.[22] State law also regulates nursery shipments. South Carolina's provisions are relatively strict, requiring all nursery imports to be examined by SCCPC.[23] In sum, South Carolina's nursery provisions are similar to those found in other states.

Response

Although state law does not provide for inspection prior to discovery of a pest, it provides broader authority to respond to infestations that come to SCCPC's attention. Thus, if SCCPC discovers an infestation or reasonably believes one to exist, it may "seize, quarantine, treat, or otherwise dispose of" the pest, host, or article in the manner it determines is necessary to "suppress, control, or eradicate" the infestation. The Department can thus act on its own authority, and can enter on any lands to do so.[24] Alternatively, it is empowered to order the owner to treat or dispose of the infestation.[25] Thus, SCCPC has extremely broad authority to initiate response actions.

SCCF also has authority to initiate response actions once an investigation has revealed an infestation.[26] This authority is paired with the declaration of a control zone (see below), and requires the Department to order landowners in the control area to take specified prevention or suppression actions.[27] If the control zone landowners fail to control the outbreak, SCCF can then itself undertake the necessary measures to control the forest pest.[28] SCCF's authority is thus more limited than is SCCPC's, but is sufficiently general to permit a broad range of responses to infestation.

South Carolina law also includes provision for addressing infestations on certain abandoned property. Abandoned or neglected orchards that are infested with pests are a public nuisance.[29] When the SCCPC determines by inspection that a nuisance exists on such lands, it must report the property to the county circuit solicitor, naming the pests and providing the proper means of abatement.[30] The solicitor then has twenty days to prepare a petition to the county circuit court seeking removal or destruction of the orchard trees.[31] The court must issue a citation ordering the owner to appear and show cause.[32] If the court thereafter agrees that the trees must be destroyed or removed, it must order this step to be taken by the owner within 30 days.[33] If the owner fails to respond, the court can then authorize SCCPC to act.[34] It is unclear why SCCPC requires this additional response authority, as its normal response authority seems sufficient to address abandoned orchards. Nonetheless, since these provisions are more restrictive than the Department's general response authority, they may constrain the Department's ability to respond to infestation on such lands.

Quarantine

SCCPC is authorized to issue quarantine orders when it deems such orders necessary to prevent or retard the spread of a pest in the state.[35] Quarantines can be limited to the infested area or can be expanded as necessary beyond the infested area. The Department can also quarantine other states. Generally, both internal and external quarantines require the Department to act through a rulemaking process, although the quarantines are immediately effective.[36] SCCPC, however, can base external quarantines on quarantine regulations issued by the subject state or by the federal government. When SCCPC uses this method, its quarantine is not required to comply with the state rulemaking procedures. It can thus be significantly simpler and quicker for the state agency to adopt external quarantines than internal quarantines.

Quarantine declaration automatically prohibits movement of regulated articles "within, from, into, or through" the state contrary to SCCPC regulations. The statute, however, limits the scope of those regulations. SCCPC can regulate only movement of articles from an in-state quarantine area into or through non-quarantined areas and from an out-of-state quarantine area into or through South Carolina.[37] As a result, the Department is precluded from regulating transport of pests or host articles within the quarantine area. In addition to movement restrictions, however, the Department is required to impose inspection, treatment, certification, permitting, and other restrictions the Department deems necessary for controlling the pest. As a result, a quarantine declaration may not only significantly strengthen the Department's authority, but it also offers regulatory flexibility to minimize unnecessary economic impacts.

SCCF lacks quarantine authority, but it acts through a similar zoning process. If an SCCF pest survey determines that an infestation qualifies as an "outbreak" – that is, if the infestation threatens forest or timber resources – the Department must establish a clearly delineated control zone. A control zone is an "area of potential or actual forest pest outbreak."[38] Although a control zone declaration does not carry automatic limitations on movement as would a quarantine, all SCCF response and management activities will occur within the area, and the Department can impose necessary movement restrictions or other safeguards in its regulations. The statute contemplates the rapid development of response provisions: it requires SCCF to notify all forest landowners within the control zone of both the existence of the outbreak and of the actions to be taken in response.[39]

Compensation

The South Carolina statute offers little in the way of compensation provisions. There is no explicit statement on compensation for destroyed plants, nor does the statute contain a generalized statement identifying pests as public nuisances. Similarly, no explicit provision delineates responsibility for the costs of the response action. As a result, there is significant uncertainty regarding both cost allocation and liability.

South Carolina law does include one relevant compensation provision, however. Landowners can challenge response actions in court and, if successful, are entitled to compensation for losses. Thus, if an owner can show under the relevant standard of proof that the destroyed property was not a pest or was not infested, the owner will receive just compensation for her loss.[40]

Tree Cutting

The presence of specific management authority for both private and public forest lands, and the clear authorization by that authority for "disposal" of host trees probably precludes any limitation on the ability of the state to cut trees on either public or private lands. It is important to note, however, that in investigating and responding to forest pest infestations, SCCF may be required to cooperate with the Department of Parks and Recreation to ensure that the public lands laws are honored.[41]

Pesticides

South Carolina's pesticide control law is minimal at best, as it excludes several common provisions. It still follows the registration-labeling-certification paradigm identified in FIFRA, however. The most notable omission from the law is the lack of any mention of emergency exemptions pursuant to section 18 of FIFRA. Despite this lack of authority, the statute does contain a wholly different global exemption authority. SCCPC is summarily authorized to waive "*any* provisions" of the act "as necessary, to insure the availability of pesticides for minor uses."[42] "Minor uses" is not defined, however, so the application of this provision in an ED/RR context would presumably be determined through a case-by-case determination process.

All pesticides distributed in South Carolina must be registered with the SCCPC and categorized as restricted-use if applicable.[43] SLN registration is authorized, however.[44] SLN registration requires the existence of a special local need and a finding by the agency that the essential purpose of the filing is to fulfill the SLN rather than to circumvent the normal rules.[45] The law contains no provision for emergency exemptions pursuant to FIFRA section 18.

As in all the other states, use of a pesticide inconsistent with its label is unlawful.[46] No person, including

state employees, can use or supervise the use of restricted use pesticides without an applicator license.[47] State agencies providing pesticides for their own purposes, however, need not be licensed as pesticide dealers.[48] In addition to use in accordance with the label, applicators must provide information about each application prior to the application upon request, including via mass-media publication.[49]

Notes

1. S.C. Code Ann. § 46-9-10.
2. S.C. Code Ann. § 46-9-40.
3. S.C. Code Ann. § 46-9-70.
4. S.C. Code Ann. § 48-29-20.
5. *Id*.
6. S.C. Code Ann. § 46-9-110.
7. 27 S.C. Code Ann. Regs. 160(15).
8. S.C. Code Ann. § 48-29-10.
9. *Id*.
10. S.C. Code Ann. § 46-13-10
11. While it is important to recognize this jurisdictional distinction, the remainder of this section uses solely "SCCPC" to refer to both Clemson and the Crop Pest Commission. S.C. Code Ann. § 46-13-30.
12. S.C. Code Ann. § 46-13-20(CC), (DD).
13. S.C. Code Ann. § 46-9-60.
14. S.C. Code Ann. § 46-9-80.
15. S.C. Code Ann. § 48-29-20.
16. S.C. Code Ann. § 48-29-10.
17. S.C. Code Ann. § 48-29-50.
18. *Id*.
19. S.C. Code Ann. § 48-29-30.
20. 27 S.C. Code Ann. Regs. 160(B).
21. 27 S.C. Code Ann. Regs. 160(C).
22. S.C. Code Ann. § 46-33-70.
23. S.C. Code Ann. § 46-33-10.
24. S.C. Code Ann. § 46-9-80.
25. S.C. Code Ann. § 46-9-60.
26. S.C. Code Ann. § 48-29-50.
27. S.C. Code Ann. § 48-29-30.
28. S.C. Code Ann. § 48-29-40.
29. S.C. Code Ann. § 46-35-10.
30. S.C. Code Ann. § 46-35-10.
31. S.C. Code Ann. § 46-35-20.
32. S.C. Code Ann. § 46-35-30.
33. S.C. Code Ann. § 46-35-50.
34. S.C. Code Ann. § 46-35-60.
35. S.C. Code Ann. § 46-9-60. Quarantine and import regulations may be found at 27-40 *et seq*.; 46-10 (boll weevil).
36. S.C. Code Ann. § 46-9-60.
37. S.C. Code Ann. § 46-9-60.
38. S.C. Code Ann. § 48-29-10(d).
39. S.C. Code Ann. § 48-29-30.
40. *Id*.
41. In state parks, for example, destruction of trees by "any person" must be permitted by the parks department. S.C. Code Ann. § 51-3-145. In such cases, cooperation between SCCF and the parks department is essential for coordinated response.
42. S.C. Code Ann. § 46-13-175.
43. S.C. Code Ann. § 46-13-40. 27 S.C. Code Ann. Regs. 1071.
44. S.C. Code Ann. §§ 46-13-30(F), 46-13-40(A)(3), 27 S.C. Code Ann. Regs. 1071(B), 1072.
45. 27 S.C. Code Ann. Regs. 1072(C).
46. 27 S.C. Code Ann. Regs. 1084(A)(1).
47. S.C. Code Ann. §§ 46-13-60(3)(a), 46-13-20(G)(4).
48. S.C. Code Ann. § 46-13-50.
49. 27 S.C. Code Ann. Regs. 1083(A)(3)-(4).

Texas

Jurisdiction and Definitions

The Texas Department of Agriculture (TDA) and Texas Forest Service (TFS), an arm of Texas A&M University, each have authority to contend with plant pests and diseases in different areas. TDA is required to protect crops, including fruit trees, shrubs, and plants, from plant diseases and inspect pests[1] and has jurisdiction over horticultural and pesticide regulation. The Texas legislature, meanwhile, requires TFS to "assume direction of all forest interests and all matters pertaining to forestry within the jurisdiction of the state,"[2] including control of "forest pests" in or threatening forest resources.[3]

TDA

Neither the agriculture statutes nor the TDA regulations define a pest against which a quarantine or other measures may be taken. As a result, it is likely that the agency would be limited to control of insects and diseases. Once a quarantine is imposed, however, TDA has defined "pest" to include all living stages of the insect, disease, or other pest organism against which the quarantine was imposed.[4] The statutes do, however, clarify TDA's authority to inspect for infestations, respond to infestations, and implement quarantines, as well as defining the compensation provisions resulting from any TDA action.

TDA is exclusively responsible for pesticide regulation in Texas.[5] The statute prohibits political subdivisions from making regulations on pesticide sale or use, except those regulations that incidentally affect pesticide use and those that are required by and consistent with other state and federal laws.[6]

For pesticide purposes, the Department may declare as a pest any organism listed in statute.[7] The applicable list of permitted pest organisms tracks the FIFRA definition for the most part. Unlike FIFRA, however, the statute *permits* TDA to declare as a pest any microorganisms living on or in man or other living animals; FIFRA expressly prohibits such a declaration.[8]

Herbicides are separately regulated, and are subject to control only if needed to prevent harm to beneficial plants.[9] TDA can restrict herbicide use in certain areas, and unlike pesticides, counties may adopt these restrictions without TDA approval.[10]

TFS

Forest pests are more clearly defined in Texas, where the legislature has declared all forest pests a public nuisance.[11] "Forest pests" are defined as insects and diseases that are harmful, injurious, or destructive to forests and "whose damage, if uncontrolled, is of considerable economic importance."[12] TFS can enter into cooperative agreements with private landowners and forest owners, public or private agencies, or the federal government to control forest pests.[13]

Inspection

TDA

TDA has no inspection authority without the use of either of two methods. It has limited inspection authority pursuant to quarantines, and it can inspect upon request by a court of county commissioners.

If TDA declares a quarantine, it is permitted to inspect vehicles entering or moving within the state for quarantined articles.[14] TDA can also set up road station and interstate shipment checkpoints to inspect vehicles and other shipments.[15] Quarantines provide no authority for TDA agents to enter any lands to inspect for pests.

On request of a court of county commissioners, TDA must investigate to determine whether the county is infested. The extent of this inspection authority is unclear, so it is unlikely that TDA agents can enter private lands in the course of their inspections. TDA must deliver a written report specifying the results of the survey and, if an infestation is found, identifying the best available control method and the specific treatment method and application necessary to combat the infestation in the county.[16] After an optional hearing, the county court must then issue a report on its conclusions as to TDA's pest control recommendation.[17] If it agrees with TDA's recommendations, it must request that TDA establish a "control zone" or "eradication zone."[18] TDA is then authorized to adopt rules governing the control or eradication of the pest. The county petition and control zone inspection authority does not affect TDA's independent authority to inspect or respond to infestations in quarantine areas.

In addition to its general inspection authority, TDA inspects nurseries. Nurseries, florists, and dealers

must register with the Department,[19] and after an initial inspection, they are subject to inspection at TDA's discretion but at least every three years.[20] TDA can enter any premises to inspect, treat, or destroy a nursery plant.[21] TDA can also perform phytosanitary and growing season inspections upon request.[22] TDA is required to inspect out-of-state shipments that are not accompanied by a phytosanitary certificate and tag them as inspected. Untagged shipments are treated as infested.[23]

Finally, vegetable plants must be inspected for pests and certified for shipment prior to harvesting.[24] Different vegetable products require inspection for different pests.[25]

TFS

In fulfilling the mandate to control forest pests, the legislature ordered TFS to survey and investigate to determine the existence of infestations and the practical means of control that landowners of those infestations.[26] TFS investigators are authorized to enter public and private land, but may only do so with permission.[27]

Response

TDA

Texas law provides TDA with a variety of potential responses to infestations. The Department is authorized to respond to infestations found in the course of inspections under a quarantine, to make rules governing treatment of infested articles generally, to respond to nursery infestations, and to respond to vegetable infestations.

First, TDA can make rules for the proper treatment and handling of quarantined articles so as to prevent infestation and reduce pest incidence. Failure to comply with these rules permits TDA to seek an injunction or to seize and subsequently treat, destroy, or isolate the quarantined article.[28] It can seize any plant or object capable of disseminating a pest that is either transported over a quarantine border contrary to these regulations or actually infested with a pest.

When it seizes an item, TDA must notify its owner that the plant is a "public menace" and must be destroyed, treated, or returned to its place of origin. Items owned by unknown owners can be treated or destroyed ten days after the publication of a notice.[29] Citrus plants are subject to the same condemnation procedures as other plants, but TDA need wait only five days after publishing notice before treating or destroying them.[30] In all cases, an owner can appeal a treatment order within 10 days of its receipt.[31]

TDA can also condemn infested fruit and fruit trees, including citrus, even if not in transport. If the owner is unknown or fails or refuses to abate the infestation as described above, the Department must abate the nuisance by using the enforcement authority of the local sheriff.[32] TDA can also require the destruction of other types of trees or fruit, require cleaning or treatment of orchards, and institute host-free periods during which no host fruit in the regulated area is allowed to ripen.

Infected nursery plants are a public nuisance. TDA must abate the nuisance by notifying the owner of the infestation and of the steps required to remedy the infestation. If the owner fails or refuses to act as directed within 11 days, TDA can treat or destroy infected plants itself, and is authorized to enter the premises to do so.[33] The nursery owner, however, may appeal a notice requiring treatment or destruction of infested plants.[34]

Finally, if an inspection of vegetables under § 71.102 shows an infestation, TDA must delimit the infestation and order the plants to be disinfected. If disinfection is impossible, the grower may destroy the infected part of the field and ship the remainder.[35]

TFS

If a TFS survey or investigation reveals infestation, the agency is required to determine the timing, nature, and availability of control measures and the techniques for application of the control measures.[36] It then is required to provide notice and a hearing before promulgating procedures for control.[37]

If specific control measures are needed on a particular property, TFS must notify the person who owns or controls the land or forest ("owner") of the infestation, the owner's responsibility to control the infestation,[38] the recommended control measures, and TFS's authority in the event the owner fails to control the pest.[39] The land or forest owner must take measures to control

such infestations within ten days[40] and must report to and consult with TFS as to the progress and completion of the control, as well as notify TFS within ten days if any other person owns a present or future right of any part of the standing trees on the property.[41] The owner may appeal a control order, but must do so within ten days.[42] Such a challenge stays the control measures unless TFS can show probable harm due to the delay.[43]

Quarantine

TDA

TDA has the option to declare several forms of quarantine. First, it may quarantine out- of-state pests.[44] TDA is required to proclaim such a quarantine to protect the state from invasions by pests that are either new to or not widely established in Texas. Second, TDA may declare a quarantine against in-state pests.[45] It uses this authority where part of the state is infested but the pest is not otherwise widely distributed in the state. Third, TDA can declare a "pest-free area." That is, if a pest is widely distributed but absent from a particular area, the Department can declare that area pest-free and quarantine the rest of the state.[46] Each of these quarantines requires notice and a hearing prior to promulgation of the restriction.[47] In the case of a public emergency or where there is a likelihood of the introduction or dissemination of a pest or disease "dangerous to the interests of horticulture and agriculture," TDA can declare an emergency quarantine.[48] No notice or hearing is required for the declaration of an emergency quarantine, which may persist for only 30 days.[49]

The imposition of a quarantine requires TDA to promulgate regulations governing movement of plants and hosts, inspections, and responses to pest infestations.[50] In addition to the inspection and response authorities discussed above, TDA must prohibit the movement of infested plants or objects capable of disseminating the disease from a quarantine area into a non- quarantine area without safeguards to prevent infestation.[51] TDA can also promulgate other needed rules to prevent the movement of infested articles in the state or entry of potential pest disseminators into a pest-free zone.[52] Movement of quarantined articles is allowed, however, if the transporter has obtained a certification that the shipment was treated for pests, is pest free, and will not spread the pest.[53]

TFS

TFS has no quarantine authority to respond to infestations of forest pests.

Compensation

TDA

In cases arising under TDA's quarantine power, the owner is responsible for the agency's costs and for court costs spent recovering those costs.[54] The statute, however, is silent as to the owner's ability to recover the value of destroyed articles from the state in such cases. TDA is explicitly shielded from liability for any damages resulting from its response to a nursery's or florist's failure to comply with a notice of infestation. In addition, the owner is responsible for TDA's costs for treating or disinfecting such infestations.[55]

The only time compensation is explicitly provided for damage to private cropland caused by invasive species, or caused by methods of controlling invasive species, is in the case of cotton growers in boll weevil eradication zones who planted their cotton before implementation of an eradication zone.[56] Such growers may be compensated for any cotton destroyed as a result of the implementation of the eradication zone.

When damages arise from the application of pesticides, the owner or lessee of land is not responsible for damages resulting from the application of pesticide to that land if she was forced to apply that pesticide under a government program without control over the time and manner of the application.[57]

TFS

The cost of a pest control action taken by TFS is to be borne by the owner unless the landowner owns no more than 50 acres of forest land in the county, in which case TFS must bear the cost.[58] Costs borne by the landowner cannot exceed $10 per acre, and can only be recovered through a legal action; TFS does not acquire a lien on the property.[59]

Tree Cutting

The Texas Forest Service regulations provide for several zones of land management on public and private lands that restrict tree cutting. These zones include Aesthetic Management Zones (AMZ), Critical Wildlife Habitat Zones (CWHZ), and Streamside Management Zones (CMZ).[60] An AMZ is a zone where timber harvesting is restricted for aesthetic or conservation purposes, including maintaining standing timber adjacent to public rights-of-way and preserving an area of a forest that is designated as special or unique due to natural beauty, topography, or historical significance.[61] A CWHZ is a timbered area where timber harvesting is restricted to provide at least three of the listed benefits to a threatened or endangered species listed under either the federal Endangered Species Act or its state analogue.[62] Finally, an SMZ is a zone on which timber harvesting is restricted to protect water quality or a waterway.[63]

Each zone must be managed in accordance with a Management Plan, which is a written plan governing management and implemented by the landowner and which must use forestry best management practices consistent with state non-point source pollution regulations.[64] The Texas State Soil and Water Conservation Board implements the non-point source management program[65] and delegates responsibility for the development of specific management plans, upon application by a landowner, to local boards.[66] Insofar as possible, the practices authorized by non-point source management plans must be consistent with the state board's management program guidelines.[67]

In addition to the limits imposed by non-point source pollution restrictions, the timber Management Plan for each type of zone must address harvest restrictions that ensure the continuation of the value for which the zone was declared.[68] AMZ and SMZ zones must retain at least 50 square feet per acre of "residual basal area,"[69] while CWHZs must retain as much timber as required to provide the applicable benefits to the threatened or endangered species.[70]

The regulations include no exceptions for invasive species management needs or other exigencies, but individual management plans may do so.

Pesticides

As in other states, pesticides must be registered and labeled prior to distribution.[71] As permitted by FIFRA, Texas permits emergency and SLN registration so long as the pesticide meets the other general provisions in the Texas pesticide law.[72] TDA must, however, consult with the Natural Resources Conservation Commission (NRCC), the Department of Parks & Wildlife, the Department of Health, and the Agricultural Extension Service in reviewing applications for SLN and section 18 registrations.[73] In addition, the SLN registration requires TDA to find that a local need exists, that the applicant meets all federal registration requirements, that the particular use for which SLN registration is sought has not been previously denied, suspended, or cancelled by the EPA, and that the product's efficacy matches the claims made for it.[74]

Pesticides that require restrictions beyond those imposed by the federal label to avoid economic, social, or environmental harm may be subject to those restrictions if they are listed by TDA as state limited-use pesticides.[75] TDA cannot place pesticides on the limited-use list based solely on water quality damage or risk of damage, however, without prior consultation with the NRCC.[76]

The separate, state-created category of regulated herbicides also includes restrictions on use. For example, nurseries and certain other applicators obtain a spray permit prior to application; blanket permits are available.[77] Regulated herbicides also cannot be applied when the wind speed exceeds ten miles per hour.[78] Counties, however, can apply for special provisions, including either exemptions from normal restricted herbicide limits or further restrictions on use of regulated herbicides.[79]

Pesticides cannot be used contrary to applicable labeling or other use restrictions.[80] This rule does not, however, apply to public officials of the state or federal government engaged in the performance of their official duty in administering pesticide law or who are performing pesticide research.[81] It also does not include application at lower dosage, concentration, or frequency than that specified on label; application against non-labeled pest if applied to plant or site specified on label; and use of non-labeled application

method so long as the label does not prohibit such application. Application under emergency exemptions or SLN registration are similarly excluded.[82]

In addition to the use restriction mandated by FIFRA, no pesticide may be applied if any person not involved with the application is present in the area to be treated, and if any such person enters the area during application, the application must cease immediately.[83]

Finally, it is unlawful for any unlicensed person to purchase or use restricted-use or state limited-use pesticides.[84] Applicators must hold both a general license and a license for the particular method of application.[85] Public employees and governmental entities are subject to this limitation, and can be licensed as noncommercial applicators.[86]

Notes

1. Tex. Agric. Code § 12.007.
2. Tex. Educ. Code Ann. § 88.102.
3. Tex. Nat. Res. Code Ann. §§ 152.001, 152.011.
4. 4 Tex. Admin. Code § 19.1.
5. Tex. Agric. Code § 76.001 *et seq*.
6. Tex. Agric. Code § 76.101(d).
7. Tex. Agric. Code § 76.001(21).
8. 76.002. The wording of the Texas statute is likely a scrivener's error and because it contradicts FIFRA is probably preempted. As a result, this distinction is likely to be immaterial in practice.
9. Tex. Agric. Code §§ 76.141-.144; Tex. Agric. Code § 76.141.
10. Tex. Agric. Code § 76.144.
11. Tex. Nat. Res. Code Ann. § 152.002.
12. Tex. Nat. Res. Code Ann. § 152.003(2). The state has explicitly listed pine bark beetles (genera *Dendroctonus*, *Ips*, *Pissodes*, *Hylobius*), sawflies (genus *Neodiprion*), defoliators (genera *Datana*, *Malacosoma*, *Hyphantria*, *Diapheromera*, and *Galerucella*), pine shoot moths, oak wilt (genus *Chalora*), and two genera of fungi (genera *Fomes* and *Polyporus*) as pests. *Id*.
13. Tex. Nat. Res. Code Ann. § 152.026.
14. Tex. Agric. Code § 71.0081.
15. Tex. Agric. Code § 71.0082.
16. Tex. Agric. Code § 71.008.
17. *Id*.
18. *Id*.
19. Tex. Agric. Code §§ 71.043, 71.057.
20. Tex. Agric. Code § 71.044.
21. Tex. Agric. Code § 71.046.
22. 4 Tex. Admin. Code 19.5.
23. Tex. Agric. Code § 71.053.
24. Tex. Agric. Code §§ 71.102 - 71.103.
25. Tex. Agric. Code § 71.103(b), Tex. Agric. Code § 71.104-.109.
26. Tex. Nat. Res. Code Ann. § 152.012.
27. *Id*.
28. Tex. Agric. Code § 71.0092.
29. Tex. Agric. Code § 71.009.
30. Tex. Agric. Code § 71.0091. *See also* 4 Tex. Admin. Code § 21.1 *et seq*.
31. Tex. Agric. Code § 71.010.
32. Tex. Agric. Code § 71.009.
33. Tex. Agric. Code § 71.046.
34. Tex. Agric. Code § 71.048. See also 4 Tex. Admin. Code § 22.2.
35. Tex. Agric. Code § 71.110.
36. Tex. Nat. Res. Code Ann. § 152.013.
37. Tex. Nat. Res. Code Ann. §§ 152.014-.016.
38. *See* Tex. Nat. Res. Code Ann. § 152.061.
39. *See* Tex. Nat. Res. Code Ann. § 152.062. Tex. Nat. Res. Code Ann. §§ 152.017-.019.
40. Tex. Nat. Res. Code Ann. § 152.021
41. Tex. Nat. Res. Code Ann. §§ 152.063-.064.
42. Tex. Nat. Res. Code Ann. § 152.101.
43. Tex. Nat. Res. Code Ann. § 152.103.
44. Tex. Agric. Code § 71.001.
45. Tex. Agric. Code § 71.002.
46. Tex. Agric. Code § 71.003.
47. Tex. Agric. Code § 71.006.
48. Tex. Agric. Code § 71.004.
49. *Id*. Specific quarantines regulations are found at 4 Tex. Admin. Code § 19.20 *et seq*.
50. Tex. Agric. Code § 71.007.
51. Tex. Agric. Code § 71.005.
52. Tex. Agric. Code § 71.007.
53. 4 Tex. Admin. Code § 19.2.
54. Tex. Agric. Code §71.0092.
55. Tex. Agric. Code § 71.047.
56. Tex. Agric. Code § 74.119.
57. Tex. Agric. Code § 76.185.
58. Tex. Nat. Res. Code Ann. § 152.022.
59. Tex. Nat. Res. Code Ann. § 152.023-.024.
60. 4 Tex. Admin. Code § 215.1.
61. *Id*.
62. 4 Tex. Admin. Code § 215.1. *See also* 16 U.S.C. § 1531 *et seq*.; Tex. Parks & Wild. Code Ann. § 68.002.
63. *Id*.
64. 4 Tex. Admin. Code § 215.1. *See also* Tex. Agric. Code Ann. § 201.026. Note that the Forest Service regulations include a scrivener's error listing the applicable non-point source as § 201.126. The intent of the regulation is clearly to cite § 201.026, however, and would be so interpreted in court.
65. 31 Tex. Admin. Code § 523.1.
66. 31 Tex. Admin. Code § 523.3.

67. *Id.*

68. 4 Tex. Admin. Code § 215.5-.13.

69. Residual basal area is defined as the cross-sectional area of a tree measured 4.5 feet above the ground. 4 Tex. Admin. Code § 215.1.

70. *Id.*

71. Tex. Agric. Code § 76.021-.022, 4 TXAC 7.11 (labeling); Tex. Agric. Code § 76.041, 4 Tex. Admin. Code § 7.10 (registration).

72. Tex. Agric. Code § 76.045.

73. Tex. Agric. Code § 76.007.

74. 4 Tex. Admin. Code § 7.13.

75. Tex. Agric. Code § 76.003. *See also* 4 Tex. Admin. Code § 7.30 (listing state limited-use pesticides).

76. *Id.* Any amendment to the list requires formal request to NRCC for its opinion on water quality. *Id*.

77. 4 Tex. Admin. Code § 7.50.

78. *Id.*

79. 4 Tex. Admin. Code § 7.51- 7.53

80. Tex. Agric. Code § 76.201.

81. Tex. Agric. Code § 76.203.

82. 4 Tex. Admin. Code § 7.71.

83. 4 Tex. Admin. Code § 7.38.

84. Tex. Agric. Code § 76.105.

85. Tex. Agric. Code § 76.102.

86. Tex. Agric. Code § 76.109; 4 Tex. Admin. Code § 7.20 - 7.27.

Washington

Jurisdiction and Definitions

The Washington Department of Agriculture (WDA) has jurisdiction over both the state insect pest and plant disease law[1] and the horticultural pest and disease law.[2] The former is intended to protect forest, agricultural, horticultural, and other plant industries, as well as native plants and the environment.[3] The horticultural act, however, governs solely horticultural industries. While the provisions of each law are similar, each contains separate definitions.[4]

To implement its general plant pest authority, WDA may cooperate with other agencies and promulgate rules as necessary.[5] For this purpose, Washington law defines "plant pest" broadly to include parasitic plants, any living stage of an "insect, mite, nematode, slug, snail, or protozoa, or other invertebrate animal," and several categories of diseases, including bacteria, fungi, viruses, and "other infectious substance[s]" that can directly or indirectly harm plants.[6] This definition contains no general savings clause, but nonetheless will permit regulation of all potential pests other than vertebrates due to the extensive list and the general invertebrate and "infectious substance" savings provisions. The definition is also laudable because it applies to non-agricultural pests and expressly permits regulation of pests that may have no direct impact on plants. The latter provision allows the agency broad latitude to declare as pests organisms that deleteriously affect ecosystems or that have other indirect effects. In addition to defining pests, the general statute declares a nuisance all plants or property in commercial areas infested with pests or pathogens that are a source of infestation.[7]

The horticultural pest law separately defines "pests and diseases," but its definition is identical to that in the general law except that "weeds" are added.[8] To qualify under the horticultural law, however, the pests must be present in a "commercial area," which is a district where horticultural products are produced. In turn, "horticultural premises," are defined to include nurseries, orchards, vegetable and berry farms, vineyards, and other places where horticultural products are grown or stored.[9] Using these definitions, the horticultural pest law declares as a nuisance any plant infested with a pest in a commercial area so long as the infestation is capable of spreading.

Finally, the chapter of the horticulture law governing inspection and licensing of horticultural facilities also defines "plant pests." Its definition is nearly identical to the other provisions, but expressly includes, in addition to the categories previously listed, "other mollusk[s]," "viroid[s], phytoplasma," and weeds.[10]

WDA is not the sole regulator of plant pests in Washington under the horticulture pest law. State law provides for some local management of pest issues through county "horticulture pest and disease boards" (Local Boards).[11] These boards have authority solely under horticultural pest law, however.

Finally, in addition to its plant pest responsibilities, WDA also has administration, enforcement, and rulemaking authority over the state Pesticide Control Act and Pesticide Application Act.[12] These statutes both define "pest" in the manner found in FIFRA.[13] The definition of pesticide, however, includes "spray advutants" in addition to the categories described in FIFRA.[14]

WDA is not the sole agency engaged in plant pest control efforts in Washington. The Washington Department of Natural Resources (WDNR) manages state lands, including regulation of forest health, and also governs forestry practices in the state in a comprehensive but cooperative fashion under the state Forest Practices Act (WFPA).[15] Exotic forest pest control is explicitly addressed in the forest health section of WDNR's statutory authority.[16]

The Department's forest health authority is based on the definition of "forest insect or disease," which includes a living stage of an insect, other invertebrate, or "disease-causing organism or agent" that can harm trees or tree products.[17] This definition covers all potential invertebrate and disease pests, but does exclude other forest pests, including vertebrates. A more limiting phenomenon is the restriction to pests that affect trees. Some plant pests, for example, may affect shrubs or other forest plants that are excluded from this definition and thus cannot be regulated by WDNR. While some pests may thus be excluded from the definition, all pests within the statute automatically constitute a public nuisance if they threaten the "permanent timber production" of the state.[18] While this provision would be stronger if it declared pests to be a nuisance if they harmed the environment of Washington in addition to its timber industry, it is like-

ly that most forest tree insects and diseases covered by the definition are also injurious to timber production and therefore nuisance pests.

Forest pest control is also within the scope of the WFPA through the definition of "forest practices," which includes "prevention and suppression of diseases and insects."[19] WDNR regulations, however, do not explicitly regulate the conduct of forest pest suppression or control actions. Instead, they primarily focus on the preservation of aquatic resources and endangered and threatened species habitat. Not only are forest health actions unregulated under the WFPA, but WDNR regulations explicitly *exempt* forest pest control and suppression actions from departmental application and notification pursuant to the WFPA so long as there is a pest emergency or a "good likelihood" that the pest can be controlled.[20] This exemption applies to both WDA response actions and actions undertaken by the Commissioner of Public Lands.[21] Notwithstanding this exclusion, the WFPA does indirectly limit the practice of ED/RR actions on both state-owned and private forests through several WDNR regulations limiting the availability of otherwise-legal response techniques.[22] For this report, the relevant areas of WDNR jurisdiction include tree cutting and pesticide application.

The significant overlaps between WDA and WDNR jurisdiction over plant pests and pathogens have the potential to confuse the development and implementation of coordinated ED/RR programs. Washington law anticipates this issue by declaring WDNR the state's lead agency for all forest health issues.[23] Thus, all cooperative discussions with landowners and federal agencies are funneled through a single office – an efficient system. The WDNR forest health statute, however, also recognizes that its lead agency status does not mean that it should always be the lead agency for pest response actions. Thus, the statute exempts pest control actions from the WFPA (as noted above) and authorizes WDNR to *assist* WDA response efforts under the general pest law.[24] The statute thus contemplates that in some cases WDA will be the primary pest response agency. Where WDA fails to act, however, or where its authority is insufficient, WDNR is further authorized to act independently or supplement WDA authority through the use of emergency powers, as described below.[25] This complex interagency structure may be extremely effective, as it streamlines extra-governmental communication while allowing for interagency flexibility in implementation of responses. This careful structure could be a model for other states.

Inspection

General Pest Law

The state's general plant pest law permits WDA inspectors to enter upon "public and private premises at reasonable times" for any inspection authorized under the law.[26] If denied access, however, the agents must procure a search warrant.[27] This entry authority applies in two types of inspections.

First, WDA may undertake statewide surveys and control activity if it has "reason to believe" that a plant pest may harm the state's "forestry, agricultural, or related industries" or its environment, or if survey information is required for export of Washington products into out-of- state markets.[28] This general survey authority is quite broad and beneficial for the state's prospects for efficient early detection programs. Unfortunately, however, the law does not clarify what "private premises" include. As a result, it is possible that inspectors could be denied access to dwellings.

Second, WDA can stop and inspect all plants and other potential pest-bearing articles that transported into or within the state. The Department can carry out these inspections after intercepting and holding a shipment, while a shipment is in transit, or after a shipment has arrived at its destination.[29] WDA can also demand to know the origin of any such transported article.[30] Importers who receive items subject to inspection must notify WDA of their arrival and, if the shipment is infested, must isolate the pests.[31]

Finally, WDA is authorized to inspect agricultural, horticultural, and related products for pests for a fee.[32]

Horticultural Pest Law

Inspectors are authorized to enter horticultural premises at any time and to inspect them for infestation.[33] The horticultural pest law also permits Local Boards to enter any parcel of land in the county to inspect for or to control any horticultural pest or disease.[34] If denied access, Local Boards can procure search warrants.[35] While these provisions are extremely simple and broad

enough to satisfy most inspections, they are supplemented by WDA's nursery-specific provisions.

As in most other states, nursery dealers must be licensed, but there is no explicit statutory requirement that inspection precede issuance of a nursery license.[36] WDA agents, however, may enter any nursery dealer premises at any reasonable time to carry out any nursery provision, including inspections. If denied access, WDA agents may procure a warrant and may also summarily revoke the dealer's license.[37]

Nursery import regulations also include specific inspection provisions. WDA regulations require that nurseries report *all* out-of-state nursery stock imports.[38] Such shipments must be held for a minimum of one business day after this notification so that WDA can investigate if desired. If an inspection is desired, WDA can require the shipment held for a longer period, but the Department must carry out the inspection as soon as practicable.[39] In addition, some specific agricultural products require mandatory inspection.[40]

WDNR Authority

Although its response and quarantine authority is broad and clearly delineated, WDNR lacks any entry or inspection authority. Given the large amount of private timberland in the state, this gap in agency authority is potentially problematic.

The WFPA, on the other hand, does provide for right of entry and inspection by WDNR agents as necessary to ensure compliance with the WFPA and with associated WDNR rules. Unfortunately, however, these inspections allow agents to inspect for illegal forest practices – not for the simple presence of forest insects or diseases. Moreover, the authority applies only to the WFPA and thus does not extend to the chapter of the state law dealing with WDNR's forest health authority. As a result, WDNR's inspection authority is sorely lacking.

Response

General Pest Law

The general pest law outlaws the introduction, release, or sale of any plant pest or infested article in the state by any person.[41] The law, however, lacks a requirement that owners destroy or treat infestations on their lands absent any enforcement action by WDA. As a result, WDA inspections and consequent response activities are likely to be the primary means of response to infestation.

If a WDA inspection reveals infestation, the Department must notify the owner. WDA can then impound the article as necessary to prevent infestation. It can treat or release the impounded article, but it cannot destroy the article unless one of three conditions is met. First, if no effective treatment for the infestation is possible, the article can be destroyed.[42] Second, the Department can destroy the article if its possession by the owner constitutes an emergency.[43] "Emergency" is a defined term in the general pest law, and requires an "imminent danger of an infestation" that "seriously threatens" industry or the environment and "cannot be adequately addressed with normal procedures or existing resources."[44] Finally, WDA can destroy articles that were transported from a quarantine area but cannot be returned or shipped back to that area without risk of infestation.[45]

In addition to satisfying one of these conditions, the Department must also stay the destruction of the article for at least ten days so that the owner of the article can request a hearing, if desired.[46]

While emergencies permit WDA to destroy infested articles, they can also expand WDA's powers in other ways. WDA can ask the governor to order emergency measures.[47] If the governor agrees, WDA can create an advisory committee to recommend action to the governor.[48] Based on WDA's advice, the governor can order emergency measures to prevent or abate the infestation, including aerial pesticide application.[49] WDA must implement these orders and may enter agreements as desired to accomplish the abatement of the emergency. During the emergency, the Department must report to the governor every 10 days.[50]

These provisions are extremely general, but they lack several common and useful provisions that clarify the allowable pest control methods. First, there is no apparent provision for the Department to go on land and summarily destroy infested items. "Impoundment" of infested articles seems to be a poor method for controlling pests that are outside the nursery or other context, as it would be difficult to impound growing trees without destroying them. It is likely, however, that the

Department could simply condemn such trees and go on the land after waiting the required time period to destroy the trees.

Second, the limits on the Department's response options could be a severe constraint on the effectiveness of an ED/RR action. The use of a raw feasibility standard to determine whether destruction is an option obfuscates other considerations that could affect agency decision- making, such as the cost or availability of the treatment. It is likely that most responses will seek to destroy infested items using this authority given the political and definitional constraints on emergency declarations, so this shortcoming could seriously affect the outcome of a rapid response.

Finally, the ten-day minimum stay requirement could seriously limit the utility of a rapid response action. There is no provision – even under emergency conditions – for decreasing this time or otherwise expediting any potential appeal.

Horticulture Pest Law:

Unlike the general pest law, landowners subject to the horticultural pest law are required to prevent infestation on their lands.[51] Further, landowners must respond to infestations without any action by WDA. Owners must control or destroy pests on their lands by using listed response methods that vary by the type of infestation, including removal and destruction of infested plants, application of appropriate pesticides, and use of generally accepted horticultural methods.[52] If disinfection is impossible, infested items must be destroyed.[53]

If, on the other hand, a WDA inspection reveals infestation on private land, the property or premises is condemned and the inspector must issue a notice to the owner describing the property, ordering a specific disinfection or destruction action, and providing a time limit for completion of the response action.[54] Owners can limit these condemnation orders by partitioning the affected property into portions depending on whether they are non-infested, infested but capable of disinfection, or infested and requiring destruction. The owner can thereafter treat or destroy articles in each partition as appropriate.[55] If the owner fails to comply with the order, however, the agency can itself undertake the response.[56]

After issuing a compliance order, the WDA inspector must also report the infestation to the "inspector-at-large" for a determination as to whether it is likely to become a public nuisance. This report triggers the creation of a three-member board that includes the director of WDA and two agricultural growers, who must examine the infected premises.[57] If the board agrees that the premises constitute a nuisance, it must transmit its findings to the county prosecutor, who must, within five days, file a petition in court for the property to be declared a nuisance.[58] The board report is *prima facie* evidence at the resultant hearing that the property is infested and constitutes a nuisance, so the court must accept the board's conclusion unless it finds that conclusion arbitrary, capricious, or otherwise unfair.[59] The court must then order the inspector and county commissioners to abate the nuisance.[60]

WDA's authority expands if a pest cannot be eradicated without the destruction of uninfected plants. In such cases, the Department can order the creation of a "host-free district," where all host plants are prohibited and may be destroyed while the infestation menace is pending.[61] The agency has no explicit authority to destroy non-infested plants absent such a declaration.

In addition to the above authority, WDA has special response authority for nursery infestations. First, any sale or shipment of infested plants or articles by nurseries is prohibited, regardless of whether WDA has inspected or otherwise approved a shipment.[62] In addition to this self-enforcing provision, WDA is authorized to issue a hold order on the sale or transport of any nursery plant that it suspects of pest infestation.[63] If the held plant or article is actually infested, WDA may condemn and destroy it.[64]

In addition to the regulations governing response on private lands, the horticultural pest statute grants WDA much broader authority over infestations on public land. It can require other governmental entities to disinfect or destroy infested plants on public property under their jurisdiction, or it can carry out such response actions through its own authority. This is a unique and highly useful provision that clarifies WDA's primacy in managing and directing pest response

actions on various types of public lands. By giving WDA authority to require other agencies to take specified actions, the statute establishes WDA as the lead pest response agency and probably overcomes any limitations on response actions that might otherwise apply due to restrictions on the management plans for those public lands.[65]

Finally, in addition to the above WDA response authorities, the horticultural pest law also empowers Local Boards to order owners to control and prevent the spread of pests. To implement this authority, the Local Board must notify the landowner of the infestation and prescribe the timing and type of the response action to be taken. The Local Board can perform the response action itself if owner fails to do so unless no reasonable measure other than removal or destruction of the infestation is possible. Where destruction is required, the Local Board must go to court to seek a "show cause" order permitting removal.[66]

WDNR

Although the WFPA does not contain pest response authority, WDNR's forest health statute provides extensive authority that applies when the agency has determined that an infestation exists. First, the statute requires every forest land owner to make "every reasonable effort" to control, destroy, and eradicate forest pests that "threaten the existence of any stand of timber."[67] Failure to comply with this section allows the agency to step in and take such measures.[68]

In addition to this self-authorizing provision, WDNR has several independent removal authorities. When it creates an infestation control district (see below), WDNR must notify all timber landowners in the district that they must "control, destroy and eradicate" the pest without delay. The notice must list acceptable response methods.[69] If any owner refuses, fails, or otherwise is unable to comply with the notice within 30 days, WDNR is required to proceed with the specified response action. This may occur with or without the cooperation of the owner.[70] Compliance with the order, on the other hand, exempts the landowner from interference by the Department.[71]

Finally, when WDNR declares a forest health emergency (see below), it is itself authorized to act without waiting for landowners to neglect their duties. In emergencies, the Department is required to consult with other agencies and affected landowners and tribes to determine the most appropriate integrated pest management response action for control of the pest outbreak. It must then notify affected landowners of its intent to perform the pest response and must carry out the response on nonfederal and nontribal lands, with or without cooperation by landowners.[72]

These authorities provide WDNR with a suite of potential tools for initiating and enforcing response actions. Unfortunately, WDNR cannot immediately undertake response actions without declaring an emergency, but must wait thirty days before initiating its own response. Because some response methods must be undertaken at a specific time, this constraint on WDNR action may eliminate some forms of response on some lands. As a result, WDNR response authority could be strengthened.

Quarantine

WDA

The general pest law permits WDA to declare quarantines to protect the forest, agricultural, horticultural, and environmental interests of the state (among others).[73] The quarantine can apply to an "area" or county in the state as well as individual agricultural establishments. Quarantines of other states or foreign countries are also permitted.[74] This definition of allowable quarantine areas is fairly general and does not explicitly limit the area quarantined to that actually infested. As a result, WDA can tailor its quarantine area declarations to avoid unwanted economic dislocation while still retaining the ability to build in "buffer" zones, thus ensuring that the quarantines include the entire infested area.

Like the provisions governing the area quarantined, WDA's regulatory authority in quarantine areas is also generally strong. Declaration of a quarantine permits, but does not require, WDA to prohibit the movement of regulated articles (i.e., potential pest vectors) "from" the quarantine area. As a result, the Department is not authorized to restrict the movement of such articles *within* the quarantine zone – a useful tool, especially where the quarantine area is larger than the infested area. WDA, on the other hand, is permitted to limit the strength of those movement restrictions by regulation.

If the Department adopts rules rather than instituting an absolute quarantine, the rules should prescribe the conditions under which articles may be moved or sold.[75] While this provision is admittedly general, it should allow WDA to creatively define a variety of potential movement limitations.

WDNR

WDNR, as noted above, is authorized to use two provisions to geographically delimit infested areas for enhanced response authority. First, it can declare an infestation control district when it finds timber stands threatened with destruction due to infestation.[76] Such areas persist until control work in the area is no longer necessary or feasible.[77] In declaring a control district, the Department must geographically delineate the area to be controlled; the area can include both infested areas and areas threatened with infestation.[78] Unfortunately, infestation control district declarations authorize only expanded departmental response authority – the statute contains no provision for limiting movement of infested articles across or within the district. Such authority would vastly strengthen WDNR authority.

Second, WDNR may declare a forest health emergency when either WDA has failed to address an infestation under the general pest law or when additional efforts are required to prevent or control an outbreak of an exotic forest pest that is not habituated and may still be eradicated and that poses an "imminent" danger of damage to the "forest environment." Danger to the forest environment means threats to the "diversity, abundance, and survivability" of native tree species.[79] As for control district declarations, WDNR must delineate the geographic area subject to the emergency declaration.[80] Emergency declarations persist until the pest is controlled or eradicated such that the "imminence" criterion is no longer met, or that control is no longer a reasonable possibility.

This authority is directly intended to address the eradication of invasive species before they become established, and allows declaration of emergencies for reasons other than non- economic impacts. As such, this provision is directed specifically at ED/RR action and is not available to address infestations after the rapid response stage. Because it is likely that WDNR will implement this authority often in the ED/RR context, this provision presents a potential model for the development of emergency authorities in other states. On the other hand, the emergency declaration, like the control area declaration, is weakened by its lack of authorization for the limitation of the movement of infested or potentially-infested articles, either within the emergency area or across its borders. Addition of such authority could be useful for preventing the escape of the invader from the site of the discovery of the pest.

Compensation

WDA

Washington law provides limited explicit authority regarding compensation for the destruction of infested plants. Owners are not entitled to compensation for the destruction of any infested articles undertaken pursuant to the general pest law, and they must compensate WDA for the costs of impoundment, treatment and destruction.[81] Separate provisions apply to the destruction of plants pursuant to the horticultural pest law.[82] In addition, as long as WDA has probable cause to support condemnation of imported nursery plants, nurseries are barred from receiving compensation for destroyed plants.[83]

Although the existence of some explicit authority on this matter is relatively rare and is positive, the remaining gaps leave significant room for improvement in the law. When compensation is sought in a category not covered by an explicit ban on compensation, the outcome of the claim may depend on whether the pest is a nuisance. This determination is somewhat complicated under Washington law, however. On one hand, the definition of "nuisance" under both the general and horticultural pest laws is the same, and, as discussed above, automatically declares any infestation capable of spreading to be a nuisance. Thus, if a destroyed plant was infested and likely to spread the infestation, compensation is unlikely. Uninfested plants, however, are unlikely to constitute a nuisance even if they are likely to become infested at a later date because they are not a "source" of infestation at the time they are destroyed. Compensation actions arising from the destruction of such plants are thus likely to succeed.

Complicating this analysis is the procedure for obtaining the declaration of a specific infested property as a nuisance under the horticultural pest law.[84] This procedure appears to be a non-discretionary duty, but may or may not result in a nuisance finding. Where the board declines to find a property a nuisance, a compensation action would likely succeed, and vice versa.

Unlike its stance towards liability, Washington law explicitly allocates responsibility for response costs, which may be extensive. Costs to impound, treat, or destroy infested items are the responsibility of the owner under the general pest law.[85] The same rule applies for actions by the Department pursuant to the horticultural law.[86] Finally, when Local Boards undertake response actions due to a landowner's failure to do so, the owner remains responsible for the costs of the response action.[87]

Finally, Washington law contains a unique provision permitting WDA to contract for response measures and to indemnify its contractors for losses from those eradication efforts.[88] While exposing the state to potential liability, this provision must be counted as a positive by increasing the universe of potential responders and by leveraging private sector expertise to respond in areas where the Department may be ill-prepared. As a result, this authority may actually enhance the effectiveness of an ED/RR action.

WDNR

WDNR authority, unlike that applicable to WDA, contains no explicit provisions regarding compensation for trees destroyed during a control action. It does, however, include the nuisance provision described above, so in the vast majority of cases compensation for infested trees is unlikely.

The situation for determining who must pay for the costs of agency control actions is more complicated. In responses undertaken by landowners, those landowners appear to be responsible for the costs incurred. When WDNR undertakes response actions in control districts where a landowner has refused or failed to do so, it is required to use public funds that have been made available for that purpose.[89] Where state and federal funds are insufficient to cover the cost of control, however, the Department can collect from the landowner an amount equal to a maximum of twenty-five percent of the response cost from the landowner.[90] No similar mandated cost-sharing arrangement applies in forest health emergencies, however, although the Department is permitted to voluntarily reimburse cooperating landowners for the actual costs of their assistance.[91]

These cost-sharing arrangements are unique, as most states shift the costs of response actions resulting from landowner recalcitrance to the landowners. This system carries with it a significant negative in that Washington law encourages landowners to refuse to voluntarily undertake response actions: by waiting for the Department to act, landowners ensure that they will be forced to underwrite a maximum of 25 percent of the response cost rather than then entire bill. Although they do receive an exemption from the statute for voluntary compliance, this exemption has no apparent financial benefit, and may thus lack a countervailing force encouraging compliance. On the other hand, the provision permitting cost-sharing may encourage landowners to be more forthcoming about infestations on their lands. Given the statute's nonexistent right of entry for inspection, voluntary disclosure by timber landowners is undoubtedly the best avenue for early detection of infestations. By volunteering, at a minimum, to assist with the financial cost of response, landowners receive an incentive to seek a regulatory response, including declaration of emergencies. In addition, the lack of any departmental authority to impose movement restrictions means that destroyed trees – at least uninfested destroyed trees – can still be transported out of the infested area, thereby minimizing the financial burden that emergency or control district declaration might otherwise impose on landowners. In sum, an exemption that would provide a tangible benefit to compliance with a control order would likely increase the efficacy of the statute, but it is otherwise hard to fault Washington for making a clear effort to balance the burdens and benefits of forest pest control on private lands.

Tree Cutting

While WDA authority includes no restrictions on tree cutting – and indeed seems to anticipate it – WDNR's provisions are generally more restrictive. The WFPA timber harvesting provisions, however, explicitly apply solely to commercial harvesting, and are thus inappli-

cable to governmental pest response actions.[92] Due to the non-commercial nature of pest response and the exemption for pest responses from application and permitting under the WFPA, these provisions do not explicitly restrict tree cutting sanctioned by either WDA or WDNR.

There are, however, some limitations imposed by WDNR regulations. All pest control measures must be based on integrated pest management principles, and must follow generally- applicable road construction and maintenance, timber harvest, and forest chemical rules "to the extent possible without compromising control objectives."[93] As a result, some forest cutting is restricted unless necessary to the control effort. This exclusion appears to swallow the rule, as it permits any tree cutting so long as it is necessary for pest suppression. In the ED/RR context, therefore, general forest management practices are largely irrelevant. Despite the weakness of the forest management rules, the WFPA regulations are more certain with respect to other limitations. Where trees are cut for pest control, for example, reforestation rules apply.[94]

Pesticides

State FIFRA Analogue

Generally, Washington pesticide law requires registration and classification of pesticides, requires licensing of most pesticide applicators and other pesticide professionals,[95] and restricts the use of pesticides as in FIFRA.[96] Thus, sale of unregistered pesticides or sale to unlicensed or unpermitted persons is prohibited.[97] In addition, Washington pesticide law contains standard provisions for FIFRA emergency permits and SLN registration.[98]

As in some other states, the "use" of pesticides is defined. As a general rule, it is unlawful to use any pesticide "contrary to label instructions" or contrary to WDA regulations, where the regulations differ from the label.[99] Use contrary to the label does not include, however, use at a lesser dosage, concentration, or frequency than specified on the label, use against a non- specified pest if applied to a labeled crop, use of an application method not specified on the label, or mixing of fertilizer and pesticide.[100]

In addition to these definitional limits on pesticide use, applicators cannot use pesticides in any way that endangers humans or their environment.[101] Applications that "pollute water supplies or waterways, or cause damage or injury to land, humans, desirable plants and animals, or wildlife" are also prohibited.[102]

Washington law also contains minimal notice requirements. Schools must provide advance notification to parents that an application is pending.[103] Registered pesticide-sensitive individuals must also be notified of landscape and right-of-way applications a minimum of two hours prior to application.[104] These limitations are unlikely to present a significant hurdle to ED/RR actions.

The government's response activity is also eased by some specific exemptions from the generally-applicable pesticide registration and application provisions. First, federal, state, or county agencies need not be licensed as pesticide dealers.[105] Public officials engaged in the performance of their "official duties" are not liable for, among other things, distributing unregistered pesticides, but they must be licensed as public applicators.[106]

Forest Chemical Application

In addition to the regulations governing pesticide application that are part of WDA's FIFRA compliance responsibility, WDNR also limits the application of pesticides in forest areas under its management.[107] State policy requires protection of riparian and other aquatic areas from harm by pesticides.[108] As a result, in addition to complying with WDA and municipal watershed limitations, pesticide application in sensitive riparian management zones and wetlands management zones must be by hand and aerial application of pesticides in those zones requires prior notice and must leave a buffer around riparian, residential, and agricultural areas to avoid harm to these sensitive areas.[109] Ground application is also prohibited in designated sensitive areas, as are unnecessary hand applications.[110]

These restrictions on forest pesticide application do not include emergency exceptions or specific plant pest exclusions. As a result, pesticide use may not be available in core riparian and wetlands areas and some application methods may be outlawed in other areas.

The special restrictions on uses in residential areas may prove especially knotty, as nascent infestations may be concentrated in these areas.

Biological Control Agents

Finally, Washington is unique in its regulation of biological control agents through the general pest law. While biological control agents are expressly excluded from FIFRA's definition of pesticide and are thus similarly excluded from most states' pesticide regulations, Washington has deemed their regulation worthy of consideration to avoid introductions of organisms that could in turn become invasive. Washington law defines biological control agents to include any "parasite, predator, or pathogen" that is "intentionally released[] by humans" and is intended to negatively affect a specific target organism.[111] This definition is sufficiently broad to cover all potential introductions of living control agents.

The meat of the biological control agent provisions in the plant pest law is built around permitting. A WDA permit is required prior to the release of any biological control agent. Permits are granted only if WDA determines that the biological control agent is target-specific and "not likely" to affect "beneficial organisms."[112] WDA can rely on findings by the United States Department of Agriculture or other experts in making permitting decisions.[113] The requirement that WDA make a determination as to the potential impact on other species is a definite positive from the invasive species prevention perspective, as it precludes the release of unstudied biological controls. As a result, these controls – unless previously studied and found useful in other states – are unlikely to be available in Washington.

Notes

1. Wash. Rev. Code § 17.24.007. The law also instructs the agency to regulate genetically modified organisms (GMOs). Wash. Rev. Code § 17.24.011.
2. Wash. Rev. Code § 15.08.010 *et seq*.
3. Wash. Rev. Code § 17.24.003.
4. Note that the WDA regulations do not distinguish between the general pest provisions and horticultural pest provisions. As a result, discussion of these regulations is placed where most relevant in the following analysis.
5. Wash. Rev. Code § 17.24.111.
6. Wash. Rev. Code § 17.24.007. *See also* Wash. Admin. Code § 16-402-100 (expressing purpose of statute and listing some, but not all, pest types).
7. Although the horticultural pest act defines "commercial area," the general pest act does not. Given the similarity between other statutory definitions such as "pest" and "nuisance," however, it is likely that the horticultural definition of "commercial area" should apply to the general statute.
8. Wash. Rev. Code § 15.08.02(4).
9. Wash. Rev. Code § 15.08.010.
10. Wash. Rev. Code § 15.13.250(6).
11. Wash. Rev. Code § 15.09.020.
12. Wash. Rev. Code §§ 15.58.040, 17.21.030.
13. Wash. Rev. Code §§ 15.58.030, 17.21.020(35).
14. Wash. Rev. Code § 17.21.020(36), *citing* 15.58.030 (including any product to be used with pesticide).
15. *See* Wash. Rev. Code §§ 76.06.030, 76.09. *See also* Wash. Admin. Code § 222-50-010 ("A major policy of the Forest Practices Act and the board is to work toward a comprehensive, statewide system of laws and rules for forest practices which avoids unnecessary duplication and provides for interagency input and cooperation to the extent that can be accomplished without interfering with the authority of the affected federal, state, regional and local agencies.").
16. *See* Wash. Rev. Code § 76.06.
17. Wash. Rev. Code § 76.06.020(10).
18. Wash. Rev. Code § 76.06.010.
19. Wash. Rev. Code § 76.09.020(10)(f).
20. Wash. Admin. Code § 222-20-075.
21. Wash. Admin. Code § 222-20-075.
22. *See* Wash. Admin. Code § 222-50-020 (clarifying that WDNR permits are sometimes needed in addition to other agency requirements to ensure compliance with state laws).
23. Wash. Rev. Code § 76.06.150.
24. Wash. Rev. Code § 76.06.130.
25. *Id*.
26. Wash. Rev. Code § 17.24.021.
27. Wash. Rev. Code § 17.24.021(2).
28. Wash. Rev. Code § 17.24.101.
29. Wash. Rev. Code § 17.24.021.
30. Wash. Rev. Code § 17.24.031.
31. Wash. Rev. Code § 17.24.081.
32. Wash. Rev. Code § 17.24.131.
33. Wash. Rev. Code § 15.08.040.
34. Wash. Rev. Code § 15.09.050.
35. Wash. Rev. Code § 15.09.070.
36. Wash. Rev. Code § 15.13.280.
37. Wash. Rev. Code § 15.13.265.
38. Wash. Admin. Code § 16-402-120.
39. Wash. Admin. Code § 16-402-130.
40. *See* Wash. Admin. Code § 16-461-010.

41. Wash. Rev. Code §§ 17.24.051, 17.24.081. WDA does have the power, however, to grant permits for importation or release of pests, although it is only likely to exercise this authority to permit GMOs. Wash. Rev. Code § 17.24.051.

42. Wash. Rev. Code § 17.247.091.

43. *Id*.

44. Wash. Rev. Code § 17.24.007(20).

45. Wash. Rev. Code § 17.247.091.

46. Wash. Rev. Code § 17.24.091.

47. Wash. Rev. Code § 17.24.171.

48. Wash. Rev. Code § 17.24.171.

49. Wash. Rev. Code § 43.06.010(13).

50. *Id*.

51. Wash. Rev. Code § 15.08.030.

52. *See* Wash. Rev. Code §§ 15.08.020 -.025.

53. Wash. Rev. Code § 15.08.030.

54. Wash. Rev. Code § 15.08.050.

55. Wash. Rev. Code § 15.08.060.

56. Wash. Rev. Code § 15.080.090.

57. Wash. Rev. Code § 15.08.180.

58. Wash. Rev. Code § 15.08.190.

59. Wash. Rev. Code § 15.08.210.

60. *Id*.

61. Wash. Rev. Code § 15.08.250.

62. Wash. Rev. Code § 15.13.390; Wash. Admin. Code §§ 16-402-015, -020.

63. Wash. Rev. Code § 15.13.430.

64. Wash. Rev. Code § 15.13.440.

65. There is a potential for conflict between this provision and specific management guidelines that could still require coordination between agencies. The resolution of specific conflicts, however, is impossible to predict and beyond the scope of this analysis.

66. Wash. Rev. Code § 15.09.080.

67. Wash. Rev. Code § 76.06.040.

68. *Id*.

69. Wash. Rev. Code § 76.06.050.

70. Wash. Rev. Code § 76.06.060.

71. Wash. Rev. Code § 76.006.080.

72. Wash. Rev. Code § 76.06.130.

73. Wash. Rev. Code § 17.24.041. WDA may also acquire lands for quarantine inspection stations and other pest control purposes. Wash. Rev. Code § 17.24.121. It is unlikely that this authority will be useful for ED/RR actions.

74. *Id*. Extant quarantines are listed at Wash. Admin. Code §§ 16-470-010 *et seq*., 16-472 – 16-497.

75. Wash. Rev. Code § 17.24.041.

76. Wash. Rev. Code § 76.06.050.

77. Wash. Rev. Code § 76.06.090.

78. Wash. Rev. Code § 76.06.050.

79. Wash. Rev. Code § 76.06.130. Note that "forest health emergency" is also a defined term that includes the introduction or an outbreak of exotic pest species by threatening the "survivability" of native species. Wash. Rev. Code § 76.06.020(9). The definition thus appears slightly inconsistent with the conditions for declaration of an emergency, creating a possible grounds for judicial limitation of WDNR emergency declarations.

80. Wash. Rev. Code § 76.06.130.

81. Wash. Rev. Code § 17.24.091. This section could be read to apply only to infested plants, leaving a regulatory gap for compensation for the destruction of uninfested plants.

82. *See* Wash. Rev. Code §§ 15.08, 15.09.

83. Wash. Rev. Code § 15.13.447.

84. *See* Wash. Rev. Code §§ 15.08.180-15.08.210.

85. Wash. Rev. Code § 17.24.091.

86. Wash. Rev. Code § 15.08.090.

87. Wash. Rev. Code § 15.09.080.

88. Wash. Rev. Code § 17.24.210.

89. Wash. Rev. Code § 76.06.060.

90. Wash. Rev. Code § 76.06.070.

91. Wash. Rev. Code § 76.06.130.

92. Wash. Admin. Code § 222-30-010.

93. Wash. Admin. Code § 222-20-075.

94. Wash. Admin. Code § 222-20-075.

95. "Incidental" applicators and, among others, forest landowners applying pesticides manually are not subject to licensing requirements. Wash. Rev. Code § 17.21.200.

96. Wash. Rev. Code §§ 15.58.050, 17.21.150(15).

97. Wash. Rev. Code §§ 15.58.150(1)(a), 15.58(2)(a).

98. Wash. Rev. Code § 15.58.405.

99. Wash. Rev. Code § 15.58.150(2)(c).

100. Wash. Admin. Code § 16-228-1225.

101. Wash. Admin. Code § 16-228-1200.

102. Wash. Admin. Code § 16-228-1220.

103. Wash. Rev. Code § 17.21.415.

104. Wash. Rev. Code § 17.21.430.

105. Wash. Rev. Code § 15.58.090.

106. Wash. Rev. Code §§ 15.58.300(2), *citing* 15.58.150(1)(a)-(e), 17.21.220, 17.21.203.

107. *See* Wash. Admin. Code § 222-38. Note that WDNR regulations are automatically superseded by WDA regulations where a conflict arises between them in the pesticide context. Wash. Admin. Code § 222-50-040.

108. Wash. Admin. Code § 222-38-010.

109. Wash. Admin. Code § 222-38-020. Note that the aerial application restriction exempts application of *Bacillus thuringiensis* (Bt), a bacterium used to combat gypsy moth. *Id*.

110. *Id*.

111. Wash. Rev. Code § 17.24.007(19).

112. Wash. Rev. Code § 17.24.051.

113. *Id*. 0