STATUS AND TRENDS IN STATE INVASIVE SPECIES POLICY: 2002-2009

APPENDIX

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Methodology

This appendix contains detailed descriptions of amendments to state laws and regulations relevant to invasive species in 11 states. The amendments considered in these pages occurred between 2002 and December, 2009. They do not include proposed changes. As a consequence of focusing research on amendments to laws and regulations, these descriptions are not, nor were they intended to be, comprehensive descriptions of each state's legal authorities governing invasive species. For a more comprehensive consideration of state laws, please view this appendix in conjunction with the state-by-state appendix to *Halting the Invasion: State Tools for Invasive Species Management*, available at the ELI website. That report served as the organizing text for this report. As a result, each section of the state summaries presented here can be compared to an analogous in the 2002 appendix.

California

California has a complex invasive species regulatory system that it has altered substantially since 2002. Notably, the state created a comprehensive invasive species council in 2009, and it also has completed an aquatic invasive species management plan. The new focus on interagency coordination is tied to California's developing focus on the use of pathway-management for invasive species prevention, control, and management.

California has also enacted numerous legal and regulatory reforms. Notably, the state enacted a comprehensive definition of "invasive pests" as part of a new law directing the prospective creation of management plans for use when priority pests are detected. The state also revised its unique law governing ballast discharge and hull fouling, including adoption of enhanced vessel inspection authorities and funding mechanisms. In addition, the state revised its wildlife laws, repealed an aquatic invasive species law, created new authorities to address Dreissenid mussels in recreational vessels, clarified the relationship between noxious weeds and pest plants, and altered many other provisions applicable to specific species and pathways.

I. Invasive Species Councils and Plans

California's interagency council and planning programs have changed substantially since 2002. California has created a comprehensive interagency task force and aquatic invasive species and weed management plans, but has not yet created a comprehensive plan incorporating terrestrial species. Several of the state's multi-stakeholder efforts have also expanded.

The Invasive Species Council of California (ISCC) was established on February 10, 2009, by affected state agencies. ISCC is an *ad hoc* body and lacks legislative authority.[1] It is intended to coordinate state invasive species activities across agencies and taxa. ISCC and its advisory committee will attempt to guide efforts to bar invasive species from entering the state, find invasions before permanent establishment occurs, take steps to eradicate incipient populations of undesirable species, and promote a consistent approach to invasive species at the state and inter-state levels.[2]

ISCC is chaired by the Secretary of the Department of Food and Agriculture (DFA) and vice-chaired by the Secretary of the California Natural Resources Agency (CNRA). The Environmental Protection Agency, Business, Transportation and Housing Agency, Health and Human Services Agency, and Emergency Management Agency are also Council members. The Council has created a 24-member California Invasive Species Advisory Committee (CISAC), – a multi-stakeholder committee similar in structure to the federal Invasive Species Advisory Committee (ISAC). CISAC members may be drawn from local and tribal governments, federal agencies, environmental organizations, academic institutions, industry, and impacted landowners.[3]

ISCC is responsible for developing and maintaining a list of invasive species that have already entered or are reasonably likely to enter California for which the state might undertake an exclusion, detection, eradication, control, or management action. In addition, ISCC will create,

consolidate, and publicize a system for reporting sightings of invasive species and for referring reports to the appropriate agency. CISAC has been tasked with recommending priorities for an invasive species rapid response plan and with advising ISCC on development and implementation of other documents and strategies.[4]

California issued an Aquatic Invasive Species Management Plan (AISMP) that was approved by the governor in 2008.[5] The federal Aquatic Nuisance Species Task Force approved the AISMP pursuant to the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, qualifying the state for federal funding.[6] The AISMP focuses on coordinating state agencies and stakeholders through a shared baseline of data and agreed-upon priority actions, filling in gaps in the current laws and policies, and creating a statewide decision-making structure. Its core focus is internal state coordination. The AISMP describes 163 different management actions organized under eight objectives: coordination and collaboration; prevention; early detection and monitoring; rapid response and eradication; longer-term control and management; education and outreach; research; and laws and regulation.[7]

In 2003, the California Exotic Pest Plant Council (Cal-EPPC) changed its name to the California Invasive Plant Council (Cal-IPC).[8] The organization retained its mission and continues to function as a nonprofit organization, enhancing public and private awareness of wildland weed problems. Cal-IPC also continues to maintain a list of non-native plants that threaten wildlands, but this list is now called the California Invasive Plant Inventory.[9] In the last five years, Cal-IPC has taken an increasingly active role in advocating for sound policy, and was active in organizing support for the formation of the state's new interagency ISCC. Cal-IPC is currently focusing on development of statewide "risk mapping" in which current distribution is compared to a model of climatically suitable range (under current and future conditions) to set early detection strategies.[10]

The California Forest Pest Council (CFPC) continues to function as a nonprofit organization fostering education about forest pests and forest health and advising the California Board of Forestry and Fire Protection on forest health protection.[11] In 2000, CFPC created the California Oak Mortality Task Force (COMTF), which includes local, state, and federal agency members and private sector representatives.[12] COMTF is focused on Sudden Oak Death (*Phytophthora ramorum*) and is implementing a comprehensive and unified approach for research, management, education, and public policy.

Nonprofit and industry groups formed the California Invasive Weeds Awareness Coalition (CALIWAC) to enhance state weed control efforts.[13] Partners include Cal-IPC, CFPC, the California Cattlemen's Association, the California Farm Bureau Federation, and others. CALIWAC worked with DFA to publish the California Noxious and Invasive Weed Action Plan in 2005. The Plan provides a summary of existing weed control efforts as well as a blueprint for future responses.[14] CALIWAC engages in outreach to state and national policymakers on invasive weed issues and played a key role in supporting the formation of the state's new ISCC. Several active members of the coalition now serve on the CISAC.

Following discovery and successful eradication in California waters of outbreaks of the invasive algae, *Caulerpa taxifolia*, federal, state, and local agencies created the Southern California Caulerpa Action Team (SCCAT) in partnership with researchers and environmental groups. SCCAT's mission is to identify, eradicate, and prevent future *Caulerpa* infestations in Southern California. Its steering committee members include the National Marine Fisheries Service, the United States Department of Agriculture (USDA), the California Department of Fish and Game (DFG), the San Diego Regional Water Quality Control Board, and the Santa Ana Regional Water Quality Control Board.[15]

California's Interagency Noxious Weed Coordinating Committee (CINWCC)[16] changed its name to the California Interagency Noxious & Invasive Plant Committee (CINIPC) in 2006. It continues to operate as in 2002, providing a venue for state and federal agency staff to discuss invasive plant policy and management. These individuals will provide input to the ISCC and CISAC.

The state's network of forty local Weed Management Areas lost state funding in 2004 but regained it in 2006 after advocacy efforts from CALIWAC. Regional efforts are being initiated, including the Bay Area Early Detection Network (BAEDN), which coordinates efforts of nine counties in the San Francisco Bay Area.[17]

Finally, the California Horticultural Invasives Prevention (Cal-HIP) partnership was established in 2006. Cal-HIP includes the nursery industry, environmental groups, and agencies and to date has produced the PlantRight campaign to suggest safe alternatives to invasive plants still available through the nursery trade.[18]

II. Provisions Applicable to all Invasive Species

A. Planning and Notification of Invasive Pest Removal

New legislation on Invasive Pest Planning[19] requires California to undertake advance planning to address invasive pests that threaten the state's agriculture, environment, or economy.[20] The law defines "invasive pests" as "animals, plants, insects, and plant and animal diseases, or groups of those animals, plants, insects, and plant and animal diseases, including seeds, eggs, spores, or other matter capable of propagation for which introduction into California would or likely would cause economic or environmental harm."[21] This definition excludes "agricultural crops, livestock, or poultry generally recognized by the Department or the United States Department of Agriculture as suitable to be grown or raised in the state."[22]

Under the new chapter, DFA is responsible for developing and maintaining a list of invasive pests that are reasonably likely to enter California and for which a detection, exclusion, eradication, control, or management action by the state might be appropriate.[23] In developing this list, the Department must consider invasive pests already identified by the federal or state governments.[24] The Department is also charged with determining which of the listed invasive pests are of highest priority and with developing and maintaining a written plan that identifies the most appropriate options for detecting, excluding, eradicating, controlling, or managing the highest priority invasive pests. To these ends, the Department must consult with USDA, the

University of California, other state agencies and departments, and others in the scientific and research community.[25] The Department may use only federal funds to implement this chapter.[26]

If the plan determines that aerial application of pesticides is an appropriate strategy to respond to invasive pests, it must discuss the most appropriate pesticides, their ingredients, and their appropriate concentrations and application frequencies. In addition, it must summarize the scientific information on the impacts of each pesticide, including effects on healthy children and adults, children and adults with compromised health, domestic animals, fish and wildlife, and public health and the environment, including drinking water.[27]

The development of the invasive pest response plan requires public involvement.[28] The Department must hold public hearings that include a presentation by the Department and an opportunity for public comment, and it must establish a process for submitting public comments. In light of the comments, the Department must reassess the appropriateness of the proposed response and may revise it and hold additional public hearings. The plan must characterize the number and nature of the public comments received. The Department must make the plan publicly available, including on its web site.

The Governor, governing boards of affected cities and counties, and county agricultural commissioners must be notified when a listed invasive pest enters California.[29] If a plan has not been prepared for any listed invasive pest that enters the state, DFA is required to consult with appropriate agencies, inform the Governor that no plan exists, and advise the Governor on the best available options.[30] In addition, if DFA determines that a listed invasive pest has entered the state and the preferred response includes urban aerial pesticide application or communitywide ground pesticide application, the Department must advise the Governor and provide a copy of the relevant pest response plan.[31] If the plan for urban aerial application or communitywide ground application of a pesticide is selected, the Department must also:

- notify the governing boards of affected cities and counties and their agricultural commissioners and health officers;
- notify the public about the invasive pest and the consequences of not addressing it, the pesticide's active ingredients, inert materials, and application method, and the implications of the pesticide's use – including its effects on human health, domestic animals, fish and wildlife, and the environment;
- hold public hearings in areas subject to pesticide applications; and
- establish a telephone hotline for the public to report adverse health consequences.[32]

The new law contains two important exceptions. It does not apply to either cooperative agreements between the State Department of Public Health and local vector control agencies[33] or authorized mosquito abatement and vector control districts.[34]

Under the direction of the Secretary of DFA, California's county agricultural commissioners are to play a larger role in protecting the state from exotic and invasive species – particularly those spread by human activities such as landscaping and yard maintenance.[35] When the Secretary proclaims an eradication project in an urban area that includes potential aerial application of a pesticide, the Secretary or the appropriate commissioner must conduct a public hearing, jointly evaluate human health and environmental risks with the Department of Pesticide Regulation and the Office of Environmental Health Hazard Assessment, and notify residents, area physicians, and local media.[36] This notice must identify when the proposed pesticide applications will occur, what pesticides will be applied, any health and safety precautions that should be taken, contact information for public health personnel, and the active ingredients and inert materials in the pesticide.[37]

III. Wildlife

A. General Authority

As in 2002, a permit is required to import, transport, possess, or release alive any wild animal listed by the legislature or listed by the Fish and Game Commission as a restricted animal.[38] DFG regulations continue to require a permit to import, export, transport, maintain, dispose of, or "use for any purpose" any restricted animal.[39] DFG has periodically promulgated regulations altering its list of restricted animals and the types of permits that it issues.[40] Thus, while the structure of California's remains consistent, the state has altered several elements of the wildlife laws relevant to invasive species.

In 2005, the legislature enacted AB 820, which amended several provisions of the wild animal statutes related to permitting and housing of exotic wild animals, inspections of wild animal facilities, reporting of escaped animals, identification and tracking, and use of lethal force in capturing escaped animals. AB 820 directed DFG to issue regulations to implement the amended provisions in the statute.[41] The Department has proposed to issue revised regulations to address the changes in the wild animal statutes, but these regulations are not yet final.[42] The elements proposed for inclusion in the new regulations include establishment of a new permitting system for wildlife exhibitors and for businesses using birds to abate nuisance birds and new and revised regulations to address issues such as breeding, escape, emergency contingency planning, public safety, identification of animals, and cost recovery.

Other statutory changes in AB 820 include a change to the definition of "enforcing officer," which now includes DFG, state plant quarantine officers, local law enforcement agents, county sheriffs, and county agricultural commissioners.[43] DFG now is authorized to enter into memoranda of understanding with eligible local entities to administer and enforce any provision concerning the possession of, handling of, care for, or holding facilities provided for, any wild animal listed by DFG. The Department may reimburse such entities for costs they incur.[44] The Department or an eligible local entity is also directed to inspect the wild animal facilities of every person holding a permit, and DFG has been directed to develop memoranda of agreement with local entities if it decides not directly to inspect every wild animal facility.[45]

DFG has several new authorities to impose penalties. The penalties authorized by the statute include civil and criminal penalties, and district, city, and county counsel can collect civil penalties and reasonable costs and fees through civil action. If an animal is confiscated, its claimant must pay reasonable expenses to DFG or to the new custodian of the animal, and failure to claim a confiscated animal allows DFG to euthanize or place the animal with an appropriate wild animal facility.[46] The Department also now can hold prior owners of confiscated wild animals[47] liable to the animal's new custodian for any actual and necessary costs for new cage construction or for returning the animal to a healthy state. However, the prior owner is only so liable if the animal's confiscation was the result of the prior owner's acts or omissions.[48] DFG has issued associated regulations providing that when a violation of the law is detected, violators now may transfer the animal to an appropriate facility, transfer the animal out of state, or humanely destroy the animal. If the violator does not comply, enforcing officer may take any of these actions at the violator's expense.[49] If the live wild animal is designated as a furbearer, game, nongame, fully protected, threatened, or endangered animal, or is of a species native to California, the enforcing officer may release the animal into the wild.[50]

The legislature also amended the permitting requirements for certain categories of entities. Zoos now are exempt from any permit requirement for importing, possessing, or transporting restricted live wild animals, except for animals whose importation, transportation, or possession is jointly determined by DFG and DFA to be detrimental to agriculture, native wildlife, or the public health or safety.[51] Special provisions also exist for wildlife exhibitors and bona fide scientific institutions.

A new section was added to the code to require unique identification of dangerous mammals. Any person holding a permit to possess a wild mammal species that poses a risk to the health and safety of the public must uniquely identify each listed animal and report this identification to the Department for inclusion in a registry.[52] The statute directed DFG to promulgate regulations governing the implementation of such a registry.

The agency has new authority enabling inspection of live shipments of listed species and of the conditions under which such species are kept in captivity.[53] Shipments of listed animals must be held for inspection.[54] Any shipment of wild animals will be destroyed, quarantined, or returned to its point of origin if DFG has reason to suspect that any animal in the shipment is infected with a disease that is or may be detrimental to agriculture, native wildlife, or public health or safety.[55] Finally, intentional or unintentional escape or release of permitted wild animals immediately must be reported to the Department and the nearest enforcing officer of the city or county.[56] The permit-holder is liable for all expenses associated with recapture.[57]

B. Injurious Wildlife

1. Vertebrate Pests

A vertebrate pest is "any species of mammal, bird, reptile, amphibian, or fish that causes damage to agricultural, natural, or industrial resources, or to any other resource, and to the

public health or safety."[58] The Secretary of DFA is required to establish and administer a research program to control vertebrate pests that pose a significant threat to the welfare of the state's agricultural economy**,** infrastructure*,* and the public.[59] The program must include both basic research (experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view) and applied research (conducted to solve practical problems or objectives).[60] The secretary must also establish the Vertebrate Pest Control Research Advisory Committee, which annually must recommend to the Secretary priorities for conducting various vertebrate pest control research projects and the amount necessary to carry them out.[61] The legislature created a Vertebrate Pest Control Research Account in the DFA Fund to pay for these provisions.[62]

C. Miscellaneous Animals

Captive reptiles and amphibians may not be released into the wild without DFG's written approval.[63]

D. Shooting Preserves/Shooting Enclosures

The Department's former authority to establish cooperative hunting areas with private landowners has been repealed[64] and replaced by the Shared Habitat Alliance for Recreational Enhancement ("SHARE") program.[65] This program compensates private landowners for voluntarily opening their land to the public for "wildlife-dependent recreational activities."[66] The SHARE Account, established within the Fish and Game Preservation Fund to support this program, is funded from non-state sources.[67] The Department may also enter into voluntary agreements with private landowners to facilitate access to adjacent public land, upon approval of the governmental entity that holds title to the land.[68] Funds received from SHARE are encouraged to be used for wildlife conservation purposes on the landowner's property. The SHARE program has not been used in the context of invasive species management to date.

In addition, since 2007, DFG has been authorized to contract with landowners to establish cooperative hunting areas according to certain conditions, including that the Fish and Game Commission may establish regulations and set fees for the management and control of hunting in these areas.[69]

E. Restoration

In addition to the Fish and Game Preservation Fund, DFG maintains both the Fish and Game Mitigation and Protection Expendable Funds Account and the Fish and Game Mitigation and Protection Endowment Principal Account.[70] The Department may deposit money into these accounts to mitigate the adverse biological impacts of a specific project, activity, or release, or to protect, conserve, restore, enhance, manage, and maintain fish, wildlife, native plants, or their habitats.[71] These funds may be received from a variety of settlements and agreements with private parties.[72] The funds in these Accounts may only be used to mitigate adverse biological impacts resulting from projects or activities or to protect, conserve, restore, enhance, manage, or maintain fish, wildlife, native plants, or their habitats.[73] However, none of these funds currently go towards invasive species management.

F. Other

1. Rehabilitation Facilities

All rehabilitation facilities, regardless of when established, are required to comply with the wildlife care standards. Additionally, all wildlife rehabilitation facility personnel, professional and volunteer, must complete one Department-approved training session each year.[74] These facilities are not considered to contribute substantially to invasive species management.

2. Avian Influenza

In the interest of public health, the legislature enacted the Avian Influenza Wildlife Surveillance Act. The Act directs the California Resources Agency to create a surveillance program for avian influenza in wild bird and animal populations.[75] In consultation with DFG, DFA, USFWS, the US Department of Agriculture, the State Department of Health Services, the Office of Emergency Services, and the University of California, the Resources Agency is required to develop and implement a plan for the surveillance, monitoring, sampling, diagnostic testing, and reporting of avian influenza in wild birds and animals in the state.[76] The Secretary of the Resources Agency is charged with establishing the Avian Influenza Working Group to assist in developing the plan and to coordinate communication and response plans for avian influenza in wild birds.[77] The Director of DFG must compile and submit to the legislature reports on the development and implementation of an avian influenza detection and response plan for wild birds in the state.[78]

IV. Aquatic Life

A. General Authority

The legislature altered the penalty amounts for violations of the Fish and Game Code. Violations now constitute a misdemeanor and are punishable by a fine of between $100 and $1,000.[79]

In 2003, the legislature also repealed the Aquatic Nuisance Species Prevention and Control Act[80] and enacted a new chapter of the Fish and Game Code in its place.[81] The new chapter defined aquatic nuisance species and authorized DFG to work cooperatively with the State Lands Commission and the Water Resources Control Board to implement the state Ballast Water Management Program.[82] However, the legislature repealed the new chapter in 2005.[83] As a result, the statutory definition and cooperative authorization are no longer in effect.[84]

B. Fish

Spawning, incubation, or cultivation of any species of finfish belonging to the family *Salmonidae*, transgenic fish species, or exotic species of finfish is prohibited in California waters.[85] The statute defines "transgenic" as "genetically altered" and "exotic species" as fish not native to California waters that do not currently exist in the state as viable wild populations.[86] This law does not apply to salmon or steelhead trout reared from native California stocks that are propagated and cultured either for research conducted by, or on

behalf of DFG, or for release into ocean waters for the purpose of recovery, restoration, or enhancement of California's native salmon and steelhead trout populations. Artificial propagation, rearing, or stocking of transgenic freshwater and marine fishes, invertebrates, crustaceans, or mollusks is now prohibited.[87]

C. Aquaculture

In consultation with the Aquaculture Development Committee, DFG is required to prepare programmatic environmental impact reports for existing and potential commercial aquaculture operations in both coastal and inland areas of the state if funds are appropriated for this purpose and if matching funds are provided by the aquaculture industry.[88] The final Fish and Game Commission-approved programmatic environmental impact report for coastal marine finfish aquaculture projects must provide a framework for managing marine finfish aquaculture in an environmentally sustainable manner that, at a minimum, adequately considers a number of designated factors.[89]

The registration fee for aquaculture facilities was increased from $400 to $549 for new registrations, and from $200 to $275 for renewals.[90]

In addition, DFG listed barramundi (*Lates calcarifer*) on the restricted species list (see above, wildlife).[91] DFG also has proposed to issue new regulations for aquaculture and seafood, but these provisions are not yet final. They would allow importation, possession, transportation, and sale of barramundi under a permit, allow live retail sale of barramundi in some areas, establish new permitting systems to allow the live importation, possession, transportation, and sale of restricted aquatic species for aquaculture farming purposes by a registered aquaculturist and for retail sales from commercial establishments, and address emergency contingency planning and cost recovery in the event of a containment failure.[92]

Finally, pursuant to a court order, DFG has been directed to create an environmental impact report for its hatchery operations, as well as for private hatcheries and fish stocking operations. A draft report was issued in September, 2009, and is expected to be finalized in January, 2010. It will address potential invasive species issues that can be caused during operations at the hatcheries, while stocking fish, and by anglers congregating at waterbodies that are stocked.[93]

D. Aquatic Plants

In addition to its pre-existing authority to enter at any time a car, warehouse, depot, ship, or growing area where aquatic plants are stored to determine whether they are infected, diseased, or parasitized, DFG may now enter such premises to determine if aquaculture products are being or have been legally imported, transported, or possessed.[94]

E. Ballast Water and Hull Fouling

1. <u>Ballast Water</u>

Halting the Invasion contains a lengthy discussion of ballast water management under the Ballast Management for Control of Nonindigenous Species Act (AB 703) of 1999.[95] AB 703

charged the California State Lands Commission (SLC) with oversight of the program, which regulated discharge of ballast water from commercial vessels of over 300 gross registered tons that carried ballast water into California waters after operating outside the exclusive economic zone (EEZ). Qualifying vessel operators were required to use specific ballast water management practices. SLC was charged with collecting and monitoring reports from vessels and inspecting vessels for compliance. Other agencies were charged with conducting research and reporting on the program's activities and efficacy.

California has amended its ballast water management requirements on several occasions. In 2003, the legislature enacted the Marine Invasive Species Act (MISA) (AB 433), widening the scope of the ballast management program.[96] Additional ballast-related amendments occurred with the passage of the Coastal Ecosystems Protection Act of 2006 (SB 497)[97] and in 2008[98] and 2009[99] MISA amendments.

The Act now applies to all vessels carrying or capable of carrying ballast water into the coastal waters of California from a port or place outside the EEZ (200 nautical miles seaward),[100] except vessels of the armed forces or vessels in innocent passage that do not discharge ballast water into the waters of the state, or into waters that may impact waters of the state.[101] The master, owner, operator, or person in charge of such vessels must: (i) discharge only the amount of ballast water essential for vessel operations while in the waters of the state; (ii) minimize the discharge or uptake of ballast water in areas within or that may affect marine sanctuaries, preserves, parks, and coral reefs; (iii) minimize or avoid uptake in certain designated areas; (iv) clean the ballast tanks regularly; (v) provide samples of ballast intake and discharge to SLC upon request; (vi) maintain a ballast water management plan that was specifically prepared for each vessel; and (vii) train all crew on the management plan.[102] At a minimum, a ballast water management plan must describe the vessel's management strategy such that a master or other appropriate ship's officer or crew member serving on that vessel could understand and implement the ballast water management strategy. The management plan must be made available to SLC for inspection and review.[103]

The operator of any vessel carrying or capable of carrying ballast water into California water from outside the EEZ must provide SLC with detailed information before the vessel departs from the each port of call in California.[104] This information now includes the manufacturer and product name of any ballast treatment system onboard, the organization that approved the system, the relevant approval or certification number, the number of tanks and volume of each tank that is managed using the system and by any alternative system and that was discharged in state waters.[105] Vessel operators must retain, for two years, a separate ballast water log that outlines ballast water management activities for each ballast water tank aboard the vessel. Operators must make the log available to the Commission for review.[106]

In order to assess compliance with the Act, SLC, in coordination with USCG, is required to take samples of ballast water and sediment from at least 25% of the arriving vessels, examine documents, and make "other appropriate inquiries."[107] Copies of sampling results must be provided to the State Water Resources Control Board.[108] SLC, in consultation with the Board,

USCG, and DFG, must submit biennial reports to the legislature. The reports must summarize ballast water discharge forms, report on and analyze monitoring and inspection data, evaluate the effectiveness of existing measures and recommend improvements, and summarize ongoing research efforts.[109]

California law now directs SLC to adopt regulations governing ballast water management practices for vessels arriving at a California port or place from a port in the Pacific Coast Region. The statute provides that these regulations be based on the best available technology economically achievable and be designed to protect the waters of the state.[110] The statute also requires that vessels arriving from beyond the Pacific Coast Region follow at least one of five enumerated ballast water management practices.[111]

SLC, in consultation with the U.S. Coast Guard (USCG), also was charged with adopting regulations governing the evaluation and approval of shipboard experimental ballast water treatment systems.[112] If an operator of a vessel applied to install such a system before 2008, and the Commission approved the application, the Commission must deem the system to be in compliance with any future treatment standard adopted within a period of five years after the initial standard was adopted. Approvals are renewable at the Commission's discretion but may be rescinded at any time if the Commission determines that the system has not been operated in accordance with conditions in the application, or if there exists a serious deficiency in performance, human safety, or environmental soundness relative to anticipated performance.[113] No experimental ballast water treatment system will be approved unless the operator demonstrates that the system has significant potential to improve upon the ability of existing systems to kill, inactivate, or otherwise remove nonindigenous species from ballast water. SLC is required to disseminate the test results and evaluations to the public.[114]

MISA, as amended, requires SLC to draft a report recommending specific performance standards for the discharge of ballast water into state waters in consultation with the State Water Resources Control Board and after considering the recommendations of an advisory panel.[115] The panel included representatives from California regional water quality control boards, DFG, USCG, USEPA, and persons representing shipping, port, conservation, fishing, aquaculture, agriculture, and public water agency interests.[116] Like SLC's regulations, the performance standards in the report were to be based on the best available technology economically achievable and designed to protect the beneficial uses of affected and potentially affected waters. The report could recommend different performance standards based on vessel type and origin or a total prohibition on the discharge of nonindigenous species.[117] The report was submitted to the legislature and made publicly available in January, 2006.[118]

MISA also called for SLC to analyze vectors other than ballast water for release of nonindigenous species from vessels and to determine the relative risks of those vectors. This vector analysis was developed in consultation with the State Water Resources Control Board, USCG, and a technical advisory group of interested persons including, but not limited to, shipping and port representatives.[119] The report was submitted to and made publicly available in April, 2006.[120]

In 2006, the legislature enacted a new section requiring the Commission to adopt regulations by 2008 to require vessel owners and operators, other than those operating approved experimental systems, to implement the interim performance standards for ballast water discharge recommended in the SLC report on ballast water performance and to require vessels operating in state waters to comply with those standards according to a schedule (Figure 1).[121] In addition, the new section requires SLC to require vessel owners and operators to meet the final performance standard of zero discharge, for all vessel size classes, by 2020.[122] In addition, SLC is directed to issue a report not less than 18 months prior to scheduled ballast water performance implementation dates (Fig. 1). SLC must consult with the Water Resources Control Board, the United States Coast Guard, and the ballast water program advisory panel for this report. The report must review the efficacy, availability, and environmental impacts, including the effects on water quality, of currently available technologies for ballast water treatment systems; if technologies are not available to meet the standard, SLC must indicate the reasons for the shortfall in the report.[123] The 2006 law also prohibited SLC from requiring ballast water treatment prior to 2010.[124]

Fig. 1

Ballast water capacity of vessel	Standards apply to new vessels in this size class constructed on or after:	Standards apply to all other vessels in this size class beginning in:
Less than 1500 metric tons	January 1, 2010	January 1, 2016
1500-5000 metric tons	January 1, 2010	January 1, 2014
More than 5000 metric tons	January 1, 2012	January 1, 2016

Other state agencies are authorized to enforce the Marine Invasive Species Act.[125] Violators of the Act are subject to civil[126] and criminal liability.[127] Intentional or negligent failure to comply with MISA may result in an administrative civil penalty of up to $ 27,500 per day of violation.[128] Failure to comply with reporting requirements may subject the violator to the same penalty. A person who, knowingly and with intent to deceive, falsifies a ballast water control report form or tampers with or disables a ballast water treatment system may be liable for the same penalty[129] and such violation additionally constitutes a misdemeanor punishable by imprisonment for up to one year.[130] Further, it is a misdemeanor to throw ballast overboard within the anchorage of any port, harbor, or cove of the state into which vessels may enter for the purpose of receiving or discharging cargo.[131]

The legislature created a Marine Invasive Species Control Fund in 2003 for the purpose of carrying out the Marine Invasive Species Act.[132] All money accruing in the pre-existing Exotic Species Control Fund was transferred to the new Fund, which SLC administers.[133] In addition to appropriations, the Fund is supported by ballast fees established by SLC regulation. By law, the

fees cannot exceed $1,000 for each voyage. The State Board of Equalization collects fees and deposits them in the Fund.[134]

Finally, if a federal program is established similar to that established under MISA, SLC is directed to report to the legislature with a comparison of the state and federal programs and to make a finding as to the federal program's relative effectiveness in preventing the introduction of marine invasive species. SLC is directed to recommend repeal of the state program only if it finds that the federal program is equally or more effective at implementing and funding effective controls on the release of aquatic invasive species.[135]

2. Hull Fouling

The 2007 amendments to MISA (AB 740) expanded the scope of the 1999 Act, as amended, to include provisions for managing hull fouling.[136] "Hull fouling" is defined as "the attachment or association of marine organisms to the submerged portion of a vessel[137] or its appurtenances, including, but not limited to. sea chests, propellers, anchors, and associated chains."[138] Section 71204 requires masters, owners, operators, or persons in charge of vessels carrying or capable of carrying ballast waters to take several actions to minimize the uptake and release of nonindigenous species. These include removal and disposal of fouling organisms and sediments from the hull, piping, propellers, sea chests, and other submerged portions of the vessel by the expiration date of the USCG Certification of inspection, or within 60 months of the previous out-of-water drydocking.[139] Cleaning must be conducted with the best available technologies economically achievable and in accordance with all local, state, and federal laws.[140] On or before January 1, 2012, SLC, in consultation with the State Water Resources Control Board, USCG, and a technical advisory group consisting of interested persons including shipping, port, and environmental conservation representatives, must develop and adopt regulations governing hull fouling management on vessels arriving in California. The regulations must account for vessel design and voyage duration, must be based on the best available technology economically achievable, and must be designed to protect state waters.[141]

Until SLC has adopted regulations governing hull fouling management on vessels arriving in California, the master, owner, operator, agent, or person in charge of the vessel annually must provide the Commission information in electronic or written form. The operator must maintain records including: (i) the date and location of drydocking events; (ii) what parts of the vessel were cleaned during drydocking; (iii) the date and geographic location for any in-water cleaning of the submerged portion of the vessel or antifouling paint application; and (iv) the brand of antifouling paint applied.[142]

3. Research

The Marine Invasive Species Act outlines DFG's responsibility for research on ballast water and marine invasions. The Department, in consultation with SLC and USCG, is charged with collecting data necessary to establish and maintain an inventory of the locations and geographic ranges of nonindigenous species populations in coastal and estuarine state waters.[143] New data must supplement existing data on nonindigenous species with studies of intertidal and near-shore, subtidal habitats along the open coast. DFG also must monitor the

state's coastal and estuarine waters for newly introduced species and expansion of existing nonindigenous species populations and is directed to assess the effectiveness of ballast water controls, in consultation with the U.S. Coast Guard.[144] DFG must report on its findings every three years. Information collected under this research must be useful for subsequent studies to allow: (i) the determination of alternative discharge zones; (ii) identification of environmentally sensitive areas to be avoided for uptake or discharge of ballast waters; (iii) long-term effectiveness of discharge control measures; (iv) determination of potential risk zones where uptake or discharge should be prohibited; or (v) the rate and risk of establishment of nonindigenous species in coastal waters.[145] DFG, SLC, and the Water Resources Control Board, in consultation with interested stakeholders, must also identify and conduct any other research necessary to carry out the Marine Invasive Species Act.[146] The DFG Office of Spill Prevention and Response (OSPR) compiles the inventory in a database called the California Aquatic Non-Native Organism Database (CANOD), which is available on the internet.[147] SLC's Marine Invasive Species Program (MISP) also funds up to $600,000 of research annually related to preventing the introduction of non-native species via ballast water or hull fouling.[148]

In 2006, the reauthorization of the Marine Invasive Species Act further charged DFG with production of a report assessing the effectiveness of the marine invasive species program.[149] The Department produced this report in consultation with SLC and USCG and submitted it to the legislature in 2009.[150] As directed, the report compares current and baseline data on nonindigenous species populations and will be updated every three years.[151]

4. Regional Water Quality Control

Certain regional water quality control boards have determined that the California Water Code, and in particular the California Porter-Cologne Water Quality Control Act, provides authority for ballast water regulation.[152] Where any person discharging waste within any region that could affect the "quality of the water" – including biological properties and characteristics of water which affect its use – regional water quality control boards may prescribe specific waste discharge requirements.[153] The San Francisco Bay Regional Water Quality Control Board, for example, has determined that "ballast water and hull fouling discharges cause pollution as defined by the Porter-Cologne Water Quality Control Act," and might use the act as authority for regulation of such discharges.[154]

F. Natural Areas

Marine and estuarine areas may be designated with any number of six managed area classifications. The "state marine reserve" classification was formerly defined as an area where the managing agency may protect or restore rare, threatened, or endangered native plants, animals, or habitats in marine areas. This definition has expanded to allow the managing agency to: (i) protect or restore outstanding, representative, or imperiled marine species, communities, habitats, and ecosystems; (ii) protect or restore diverse marine gene pools; or (iii) contribute to the understanding and management of marine resources and ecosystems by providing the opportunity for scientific research in outstanding, representative, or imperiled marine habitats or ecosystems.[155] Ecological reserves created under the Marine Resources Protection Act have been repealed[156] and reformed as Marine Protected Areas in NOAA's

Channel Islands National Marine Sanctuary. They include the same or similar habitats, and restrictions on take are now more stringent.[157]

G. Dreissenid Mussels

Except as authorized by DFG, it is illegal to possess, import, ship, or transport Dreissenid mussels in California or to place or plant them in state waters.[158] DFG agents may stop and inspect vehicles, boats and other watercraft, containers, and trailers (together, "conveyances") that may carry or contain adult or larval Dreissenid mussels.[159] The Department may order that conveyances containing water be drained, dried, or decontaminated, and it may impound or quarantine conveyances for up to five days, or another period of time as necessary.

Any person, agency, district, or other authority that owns or manages a reservoir where recreational, boating, or fishing activities are permitted, except for privately owned reservoirs not open to the public, must assess that reservoir's vulnerability to the introduction of Dreissenid mussels and must develop and implement a program to prevent their introduction.[160] Prevention programs created pursuant to this requirement must include public education, monitoring, and activities management components. This requirement does not apply to reservoirs where mussels have been detected. Public and private agencies that operate water supply systems also must cooperate with DFG to implement measures to avoid infestation by Dreissenid mussels and to control or eradicate any infestation that may occur in a water supply system.[161] If Dreissenid mussels are detected in a water supply system, the operator of the affected system must cooperate with DFG to prepare and implement a plan to control or eradicate the mussels. Such plans must contain methods to delineate the infestation, methods to control or eradicate adult mussels and decontaminate water containing larval mussels, a systematic monitoring program, and a provision to update measures on the basis of scientific advances. Any entity that discovers Dreissenid mussels in California must immediately report the discovery to DFG.[162]

The Department may inspect state waters and facilities located within state waters that may contain Dreissenid mussels, and it may close or otherwise restrict affected waters. Upon finding mussels, the statute directs DFG to close, quarantine, or restrict access to affected waters or facilities. The Director must order that conveyances removed from, or introduced to affected areas be inspected, quarantined, or disinfected in a manner and for a duration necessary to detect and prevent the spread of Dreissenid mussels within the state.[163] To authorize any closure, quarantine, or other restriction, the Director must obtain the concurrence of the Secretary of the Resources Agency. If a closure lasts longer than 7 days, DFG must update the operator of the affected facility every 10 days on efforts to address the infestation and notify the public on its website.[164] DFG must develop procedures to properly notify affected local, state, and federal agencies in the event of a decision to close, quarantine, or restrict a facility.[165] The DFG Director must consult with the agency, entity, owner, or operator with jurisdiction, control, or management responsibility over the affected facility to ensure that restrictions on use avoid or minimize disruption of economic or recreational activity in the vicinity of the affected facility.[166] The DFG Director may, by written agreement,

authorize other state agencies to exercise the above authorities to regulate Dreissenid mussels.[167]

Any person who violates Dreissenid mussel laws or regulations is subject to an administrative penalty of up to $1,000. California's statute on Dreissenid mussels contains a sunset date of January 1, 2012.

V. Plants

A. Noxious Weeds

Since 2002, DFA has amended the list of noxious weeds on several occasions.[168] The state's definition of "noxious weed" includes plants that are detrimental to "important native species" but also remains limited to species that are not detrimental to agriculture.[169]

In A.B. 2479,[170] the legislature amended how funding appropriated to the Noxious Weed Management Account in the DFA Fund is to be spent. Under the new statute, eighty percent of funds appropriated for expenditure by the Secretary for the Account must be allocated to eligible weed management areas or county agricultural commissioners for the control and abatement of noxious weeds according to an approved integrated weed management plan. Ten percent must be allocated toward research on the biology, ecology, or management of noxious and invasive weeds, to be made available to qualified researchers through a DFA-administered grant program. DFA must evaluate proposals in consultation with the Range Management Advisory Committee, with emphasis placed on funding needs-based, applied, and practical research. Finally, ten percent of the appropriation accrues to DFA itself, to be used for an approved purpose. Approved purposes include: (i) carrying out legislative provisions relating to noxious weed management; (ii) developing noxious weed control strategies; (iii) seeking new, effective biological control agents for long-term control of noxious weeds (iv) conducting private and public workshops to discuss and plan weed management strategies with local, state, and federal agencies, private landowners, educational institutions, interest groups, and county agricultural commissioners; and (v) appointing a noxious weed coordinator and weed mapping specialist to assist in weed inventory, mapping, and control strategies.[171]

Since 2002, the legislature has repealed the authority of the Board of Directors of the Bear Valley Community Services District to adopt and enforce ordinance measures to abate, control, and remove weeds in the district.[172] However, open space maintenance districts are now empowered to destroy and remove noxious, dangerous, or unsightly weeds.[173] Any local agency may form an open space maintenance district, within which it may assess property to pay for improving, maintaining, and reducing the risk of fire in open spaces that the agency has acquired.[174]

1. Miscellaneous Noxious Weeds

Since 2002, *Hydrilla* eradication areas have expanded to include the entirety of Calaveras, Imperial, Lake, Madera, Mariposa, Nevada, Shasta, Tulare, and Yuba counties.[175] Eradication areas for South American Spongeplant (*Limnobium laevigatum)* have also been established in

Fresno, Madera, Merced, and Shasta counties.[176] The spongeplant eradication areas are analogous to the preexisting areas established for alligatorweed, dudaim melon, and Hydrilla.

B. Seeds

California has amended its seed laws in several technical respects. In 2006, the legislature amended the definition of "weed seed" to specifically include *vegetable* seeds.[177] Second, the secretary of DFA and any commissioner are now authorized to issue and enforce "stop-sale" orders to prevent the shipment, delivery, transportation, or sale of agricultural or vegetable seed that contains prohibited noxious weed seeds.[178] Finally, as in 2002, each container of agricultural seed for sale in California for sowing purposes must be labeled with the percentage by weight of all weed seeds and the name and approximate number of each kind of restricted noxious weed seed per pound.[179] However, the legislature enacted a new labeling provision that requires each label of agricultural and/or vegetable seed to include an Arbitration/Conciliation/Mediation Notice.[180]

C. Restoration

In 2003, the legislature authorized the Adopt-A-Riverway Program, which is a government-volunteer partnership to assist weed management areas in implementing integrated weed management plans.[181] The program may include planting native seedling trees, grasses, and wildflowers along an adopted riverway and removing litter and noxious and invasive plant species. These activities must be part of an approved integrated weed management plan and must be coordinated with the responsible local agency. In addition, they should be conducted only on publicly owned land, unless a private property owner grants permission for program activities on his or her land. Activities are subject to review pursuant to the California Environmental Quality Act and state or local river management or conservancy plans.

The legislature did not provide direct funding for the program. Instead, the statute requires that DFA carry out the program using existing staff resources, as available.[182] However, the statute authorizes the Department to receive funds and services to assist a weed management area in implementing an integrated weed management plan.[183] The legislature created the Adopt-A-Riverway Fund to house these monies. The Secretary of the Department may grant monies from the Fund to nonprofit organizations for integrated weed management along riverways and in riparian habitats. 15% of Fund monies must be reserved for Departmental use in: (i) carrying out the Adopt-A-Riverway Program; (ii) developing noxious weed control strategies; (iii) seeking new biological control agents for long-term noxious weed control; and (iv) conducting workshops to discuss and plan weed management strategies with all interested and affected parties.[184] To date, no funds have been contributed or spent for implementation of this program.

VI. Plant Pests and Disease

A. General Authority

Prior to 2005, DFA held authority, with approval of the governor, to cooperate with USDA officials or with officials of other states to conduct pest or disease investigations outside of

California in the interest of protecting California's agricultural industry from pests or diseases not generally distributed in the state.[185] In 2005,[186] the legislature further authorized DFA to enter into cooperative agreements with USDA to carry out a program to prevent and control avian influenza.[187] The statute directs the Department to adopt regulations necessary to implement the program requirements set out in such an agreement.

B. Nurseries

All plants defined as noxious weeds under DFA regulations are also considered pest plants.[188] Pest plants do not meet required standards of cleanliness[189] and may not be produced, held, or offered for sale as nursery stock.[190]

C. Forests

The Department of Forestry and Fire Protection remains responsible for pest control and for establishing and maintaining facilities to support pest control.[191] Several related authorities have been amended in recent years, however. Specifically, the Department is no longer charged with taking all steps necessary to prevent or retard the introduction, establishment, and spread of Dutch elm disease. Rather, it must prevent or retard more generally the introduction and spread of known or potentially damaging or devastating pests and diseases.[192] Furthermore, the department now is directed to cooperate with statewide and regional urban forestry organizations or associations and arboricultural organizations or associations, other private and public entities or persons, and appropriate local, state, and federal agencies when taking actions relating to pest control. These include setting quarantine boundary lines and enforcing quarantine and pest abatement provisions[193] in quarantine areas established to prevent the spread of any introduced pest or disease affecting the state's urban forests.[194]

D. Specific Pest Abatement Districts

1. <u>Grape Phylloxera</u>

In 2004, the California legislature shifted responsibility for compliance with the notice, protest, and hearing requirements from the "legislative body" to the responsible District board of supervisors.[195]

E. Specific Quarantines

California has lifted its quarantine for the olive fruit fly.[196] Those pests, along with their hosts and possible carriers, that are still under interior quarantine include: peach mosaic disease, Ozonium root rot, the Mediterranean fruit fly, citrus tristeza virus, the pink bollworm, hydrilla, the western cherry fruit fly, the Mexican fruit fly, date palm disease, the oriental fruit fly, the melon fruit fly, Chrysanthemum white rust disease, the sweet potato weevil, and karnal bunt disease. New interior quarantines have also been established for the following pests, their hosts, and possible carriers: peach fruit fly, diaprepres root weevil, light brown apple moth, and Asian citrus psyllid.[197]

F. Specific Eradication Areas

DFA may declare any portion of California an eradication area with respect to a pest, and may prescribe the means to be used in eradicating or controlling the pest.[198] Because it is no longer quarantined, the eradication areas for the olive fruit fly have been repealed.[199] Eradication areas remain established for the Mexican fruit fly, the Japanese beetle, the whitefringed beetle, the pink bollworm, the oriental fruit fly, the Mediterranean fruit fly, the gypsy moth, the cotton boll weevil, the peach fruit fly, the guava fruit fly, the melon fruit fly, Chrysanthemum white rust disease, and karnal bunt disease.[200] New eradication areas have been established for the Asian longhorned beetle, the diaprepres root weevil, the light brown apple moth, Asian citrus psyllid, and the false-coding moth.[201]

G. Specific Host-Free Districts and Periods

The regulation establishing host-free districts for the cotton-boll weevil has been repealed.[202] Host-free districts for pink bollworm and lettuce root aphid still exist.[203] Host free-districts and host-free periods also still exist for western celery mosaic virus, lettuce mosaic virus, and Chrysanthemum white rust.[204]

H. Specific Plant Diseases

1. Curly Top Virus:

Formerly, every producer or producer-handler of agricultural crops susceptible to curly top virus was required to pay an assessment on all those crops marketed directly, sold, or delivered to a handler.[205] This provision was amended to specify which crops are subject to the assessment. The amended legislation requires the DFA to determine which crops are susceptible and sets forth a non-exhaustive list of crops to which the assessment may apply, including tomatoes, sugar beets, melons, beans, cucumbers, spinach, and peppers.[206]

2. Pierce's Disease

As noted in *Halting the Invasion*, the legislature formed the Pierce's Disease and Glassy-winged Sharpshooter Board within DFA, The Board consists of specified numbers of producer and processor representatives in the grape industry, each of whom is appointed by the Secretary of Food and Agriculture. The law set forth the powers of the Board and authorized an annual assessment to be paid by the processors into a DFA fund. The monies are to be spent on, among other things, research and other activities related to the transmittal of Pierce's disease and its vectors, the glassy-winged sharpshooter in particular.

The pre-existing law establishing the Pierce's Disease and Glassy-winged Sharpshooter Board remains valid but will be repealed on March 1, 2011, unless certain procedures are followed.[207] To avoid repeal, producers, processors, and persons who paid the assessment on grapes crushed in the immediately preceding season, and who the Secretary deems eligible, must participate in a referendum in which forty percent of eligible voters must vote and a sixty-five percent majority must vote to extend the article's application.

The legislature also amended the Pierce's disease provisions to include a new section authorizing the Secretary of DFA, if recommended by the Board, to expedite research relating to the eradication of Pierce's disease by contract with nonprofit experts .[208] In addition, the amended law required that DFA to appoint a Pierce's Disease Advisory Task Force to advise the Secretary on the control and management of Pierce's disease. The statute requires the Task Force to include scientific experts, including university researchers and agricultural representatives. [209] In practice, Task Force members include county agricultural commissioners, scientists, agricultural representatives, and other experts who meet regularly to review program progress and develop recommendations for the Secretary.[210]

3. Sudden Oak Death

The legislature enacted the Sudden Oak Death Management Act of 2002 to respond to the detection of *P. ramorum* in oak trees in the state.[211] The Act requires the Department of Forestry and Fire Protection, working with recommendations from the California Oak Mortality Task Force, to administer a program to safeguard public safety and the environment against the spread of sudden oak death.[212] The Department must implement a program to detect, remove, and if possible, treat trees infected with the fungus. The program must encourage tree management and replanting in urban and other infected areas.[213]

The Department must cooperate with federal forestry agencies and perform all actions necessary to secure the benefits of federal forestry programs for the state in connection with this program.[214] The Act also provides for state funding, which was appropriated to the Department in the budget.[215] In addition, the Director, with advice from the task force, may enter into contracts to provide assistance for the costs of eligible projects that implement the Act.[216] If necessary, the Department also may cooperate with DFA to set quarantine boundary lines and enforce the provisions relating to plant quarantine and pest control.[217] The department must provide information and technical assistance on sudden oak death to cities, counties, districts, regional entities, homeowner neighborhood groups, and nonprofit organizations. It also may assist local tree maintenance programs by loaning surplus equipment for regional and local urban forestry.[218]

VII. Insects

California has not amended its invasive species laws or regulations relating to insects.

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[1] ISCC, *Invasive Species Council of California*, *at* http://www.iscc.ca.gov/. *See also* CDFA, *Establishing the Invasive Species Council*, *available at* http://www.cdfa.ca.gov/invasives/files/EstablishInvasiveSpeciesCouncil_02.09.09.pdf (2009). The Governor previously vetoed a bill creating an Invasive Species Council.
[2] *Id*.
[3] *Id*.
[4] *Id*.
[5] STATE OF CAL., RES. AGENCY, DEP'T OF FISH & GAME, CALIFORNIA AQUATIC INVASIVE SPECIES MANAGEMENT PLAN iv, xi (2008), *available at* http://www.dfg.ca.gov/invasives/plan/.
[6] National Invasive Species Act of 1996, 16 U.S.C. § 4724, P.L. 104-332 (2006).
[7] *Id.*at xii-xvi, 50-96.
[8] Cal-IPC, *California Invasive Plant Council*, *at* http://www.cal-ipc.org/.

[9] The inventory was last updated in 2008. Cal-IPC, *Invasive Plant Inventory*, *at* http://www.cal-ipc.org/ip/inventory/index.php#inventory.
[10] Cal-IPC. *Risk Mapping for Early Detection*, at http://www.cal-ipc.org/ip/mapping/statewide_maps/index.php
[11] California Forest Pest Council, *Our Mission*, *at* http://caforestpestcouncil.org/.
[12] California Oak Mortality Task Force, *Current Events & Updates*, *at* http://nature.berkeley.edu/comtf/index.html. The Task Force is similar to the Pine Pitch Canker Task Force, which the CFPC created previously.
[13] Cal-IPC, *California Invasive Weeds Awareness Coalition*, *at* http://www.cal-ipc.org/policy/state/caliwac.php.
[14] *See* CDFA, *Noxious Weed Information Project: Program Details*, *at* http://www.cdfa.ca.gov/phpps/ipc/noxweedinfo/noxweedinfo_hp.htm.
[15] Southern California Caulerpa Action Team, *About SCCAT*, *at* http://www.sccat.net/#about-sccat-1e86f0.
[16] CDFA, *California Interagency Noxious Weed Coordinating Committee*, *at* http://www.cdfa.ca.gov/phpps/ipc/CINWCC/cinwcc_hp.htm.
[17] BAEDN, *The Bay Area Early Detection Network*, *at* http://baedn.org/
[18] PlantRight, *The People Behind PlantRight*, *at* http://www.plantright.org/about.
[19] Cal.Food & Agric.Code D. 4, Pt. 1, Ch. 4.5, added by Stats.2008, c. 573 (A.B.2763), § 1.
[20] Cal.Food & Agric.Code § 5260.
[21] Cal.Food & Agric.Code § 5260.5.
[22] Cal.Food & Agric.Code § 5260.5.
[23] Cal.Food & Agric.Code § 5261.
[24] Cal.Food & Agric.Code § 5261.
[25] Cal.Food & Agric.Code § 5262.
[26] Cal.Food & Agric.Code § 5266.
[27] Cal.Food & Agric.Code § 5262.
[28] *Id.*
[29] Cal.Food & Agric.Code § 5263.
[30] Cal.Food & Agric.Code § 5264.
[31] *Id.*
[32] Cal.Food & Agric.Code § 5265.
[33] *See* Cal. Health and Safety Code § 116180.
[34] Cal.Food & Agric.Code § 5267. See Cal. Health and Safety Code commencing with § 2000 for laws concerning mosquito abatement and vector control districts.
[35] *Id.* at § 2276.5.
[36] *Id.* at § 5771.
[37] *Id.* at § 5776.
[38] Cal. Fish & Game Code § 2118.
[39] 14 Cal. Code Regs. § 671.1.
[40] *Id*.
[41] Cal. Fish & Game Code §§ 2120, 2157, 2193.
[42] *See* DFG, Initial Statement of Reasons for Regulatory Action (April 7, 2009), *available at* http://www.fgc.ca.gov/regulations/new/2009/671isor.pdf.
[43] Cal. Fish & Game Code § 2117.
[44] *See* Cal. Fish & Game Code § 2127. "Eligible local entities" means a county, local animal control officer, local humane society official, educational institution, or trained private individual.
[45] Cal. Fish & Game Code § 2150.4.
[46] Cal. Fish & Game Code § 2125.
[47] 14 Cal. Code Regs. § 671.
[48] Cal. Fish & Game Code § 2195.
[49] 14 Cal. Code Regs. § 671.5.
[50] *Id*.
[51] Cal. Fish & Game Code § 2150.

[52] Cal. Fish & Game Code § 2157. The following species of mammals pose a risk: wild cats, elephants, nonhuman primates, bears, and wolves.
[53] Cal. Fish & Game Code §§ 2185, 2187.
[54] Cal. Fish & Game Code § 2185.
[55] *Id*. at § 2186.
[56] Cal. Fish & Game Code § 2193.
[57] *Id*.
[58] Cal. Food & Agric. Code § 6025.2.
[59] *Id*. at § 6025.5.
[60] *Id*. at § 6025.3.
[61] *Id*. at §§ 6026, 6026.5.
[62] *Id*. at § 6027. Expenditure is limited to: (i) reasonable administrative and operational expenses of the Committee and the Department; (ii) federal and state regulatory fees for the continued registration of vertebrate pest control materials and for the registration of new materials; (iii) basic and applied research; and (iv) educational outreach concerning vertebrate pest control methods. *Id*. at § 6027.5.
[63] 14 Cal. Code Regs. § 40(e).
[64] Stats 2003 ch 758 § 1.
[65] Cal. Fish & Game Code § 1570.
[66] *Id*. at §§ 1570, 1573.
[67] *Id*. at § 1572.
[68] *Id*. at § 1573.
[69] *Id.* at § 1575.
[70] Cal. Fish & Game § 13014.
[71] *Id.*
[72] Cal. Fish & Game Code § 13014. Relevant income sources include agreements or permits pursuant to the Natural Communities Conservation Planning Act, conservation bank agreements, habitat conservation implementation agreements, incidental take permits, legal settlements, mitigation agreements, streambed or lakebed alteration agreements, and trust agreements. *Id*.
[73] Cal. Fish & Game Code § 13014.
[74] 14 Cal. Code Regs. § 679. See also, more in depth instructions for applying for permit.
[75] Cal. Fish & Game Code § 3861.
[76] *Id*. at § 3862.
[77] *Id*. at § 3863.
[78] *Id*. at § 3864.
[79] Cal. Fish & Game Code § 12000.
[80] Stats 2003 ch. 610 § 9.
[81] *Id*.
[82] *Id*. at § 12 (formerly Cal Fish & Game Code § 6957) (2003). *See also* Cal. Pub. Res. Code § 71200 *et seq*. (ballast water management program).
[83] Repealed by Stats 2005 ch. 77 § 10.
[84] This refers solely to section 6957 of the Fish and Game Code, not to the overall ballast management program. For more information on ballast management, see subsection E.
[85] Cal. Fish & Game Code § 15007.
[86] *Id.*
[87] *Id.*
[88] Cal. Fish & Game Code § 15008.
[89] *Id.*
[90] Cal. Fish & Game Code § 15101.
[91] 14 Cal. Code Regs. § 671
[92] *See* DFG, Initial Statement of Reasons for Regulatory Action (April 7, 2009), *available at* http://www.fgc.ca.gov/regulations/new/2009/671isor.pdf.

[93] DFG, *DFG Hatchery Operations Environmental Impact Report (EIR) / Environmental Impact Statement (EIS)*, *at* http://www.dfg.ca.gov/news/pubnotice/hatchery/.
[94] Cal. Fish & Game Code § 6301.
[95] Environmental Law Institute, HALTING THE INVASION: STATE TOOLS FOR INVASIVE SPECIES MANAGEMENT 11-13 (2002) (*citing* Cal. Pub. Res. Code §§ 71201 – 71216).
[96] Marine Invasive Species Act, AB 433 (2003), Stats 2003 ch. 491(*amending* Cal. Pub. Res. Code §§ 71200-71216, 71271).
[97] Coastal Ecosystems Protection Act of 2006 (SB 497), Stats 2006 ch. 292.
[98] SB 1781, Stats 2008 ch. 696.
[99] AB 248, Stats 2009 ch. 317.
[100] Cal. Pub. Res. Code § 71201.
[101] *Id.* at § 71202.
[102] *Id.* at § 71204.
[103] *Id.*
[104] *Id.* at § 71205. Previously, vessels were required to provide information at the *first* port of call. The required information was increased in the 2009 MISA amendments.
[105] *Id*.
[106] *Id.*
[107] Cal. Pub. Res. Code § 71206.
[108] *Id.*
[109] Cal. Pub. Res. § 71212. To view reports, see: http://www.slc.ca.gov/Spec_Pub/MFD/Ballast_Water/Reports_Presentations.html
[110] *Id.* at § 71204.5. Until these regulations are implemented, at least one ballast water management practice should be followed, as in § 71204.3 for vessels arriving from port or place *outside* of Pacific Coast Region. *Id*. at § 71204.2.
[111] *Id.* at § 71204.3.
[112] *Id.* at § 71204.7.
[113] *Id.*
[114] *Id.*
[115] *Id.* at § 71204.9.
[116] Meetings of the advisory panel shall be open to the public.
[117] *Id.* at § 71204.9.
[118] California State Lands Commission, *Reports and Presentations*, *at* http://www.slc.ca.gov/Spec_Pub/MFD/Ballast_Water/Reports_Presentations.html.
[119] *Id.* at § 71210.5.
[120] California State Lands Commission, *Reports and Presentations*, *at* http://www.slc.ca.gov/Spec_Pub/MFD/Ballast_Water/Reports_Presentations.html.
[121] Cal. Pub. Res. Code § 71205.3.
[122] *Id*.
[123] *Id*.
[124] Cal. Pub. Res. Code § 71207
[125] *Id.* at § 71207.
[126] Cal. Pub. Res. Code §§ 71207, 71216.
[127] *Id.* at §§ 71207, 71216.
[128] Cal. Pub. Res. Code § 21716.
[129] *Id*.
[130] Cal. Pub. Res. Code § 71217.
[131] Cal. Harb & Nav. Code § 132.
[132] Cal. Pub. Res. Code § 71215.
[133] *Id.*

[134] *Id.* Cal. Rev. & Tax Code §§ 4400, 4405, 4407, 4408 are accordingly amended as well. The $1000 limit is adjustable for inflation.
[135] Cal. Pub. Res. Code § 71271.
[136] *See* Cal. Pub. Res. Code § 71201.
[137] Those parts submerged when the vessel is loaded to the deepest permissible legal draft. Cal Pub. Res. Code § 71200(n).
[138] Cal. Pub. Res. Code § 71200.
[139] Cal Pub Res. Code § 71204. The Commission may approve a time extension. § 71204 (f)(1)(c).
[140] *Id.*
[141] Cal. Pub. Res. Code. §71204.6.
[142] Cal Pub Res. Code §71205.
[143] Cal. Pub. Res. Code § 71211. Amends the previous § 71211, which required the Department to establish baseline conditions.
[144] *Id.*
[145] *Id.*
[146] *Id*. at § 71213.
[147] *See* Office of Spill Prevention and Response, *CANOD Database*, *at* http://www.dfg.ca.gov/ospr/about/science/misp.html.
[148] *See* SLC, *MISP – Monitoring and Research*, *at* http://www.slc.ca.gov/Spec_Pub/MFD/Ballast_Water/Research.html.
[149] Cal. Pub. Res. Code § 71211 (b)(3).
[150] DFG Office of Spill Prevention and Response, *Introduced Aquatic Species in the Marine and Estuarine Waters of California* (2008), *available at* http://www.dfg.ca.gov/ospr/about/science/2008_Marine_Invasive_Species-Legislative_Report_Final.pdf.
[151] Cal. Pub. Res. Code § 71211.
[152] CAL. DEP'T OF FISH AND GAME, CALIFORNIA'S LIVING MARINE RESOURCES: A STATUS REPORT 518 (2001), *available at* http://www.dfg.ca.gov/marine/status/invasive_species.pdf.
[153] *See e.g.* Cal. Water Code § 13243.
[154] CAL. DEP'T OF FISH AND GAME, *supra* note 152.
[155] Cal. Pub. Res. Code § 36700.
[156] 14 Cal. Code Regs. § 630.5 (Repealed 2005).
[157] DFG, Marine Protected Areas in NOAA's Channel Islands National Marine Sanctuary, Vol. I, ch. 3 (2002), *available at* http://www.dfg.ca.gov/marine/ci_ceqa/.
[158] Cal. Fish & Game Code § 2301.
[159] *Id.*
[160] Cal. Fish & Game Code § 2302.
[161] *Id.*
[162] *Id.*
[163] *Id.*
[164] *Id.*
[165] *Id.*
[166] *Id.*
[167] *Id.*
[168] Cal. Admin. Code. tit. 3 § 4500.
[169] Cal. Food & Agric. Code § 5004.
[170] 2006 Cal. Legis. Serv. Ch. 323, *amending* Cal. Food & Agric. Code § 7271.
[171] Prior to enactment of the new law, funds were allocated to these purposes in the amount of eighty-five percent, ten percent, and five percent, respectively.
[172] Repeal of Cal. Gov't Code § 61601.25.
[173] Cal. Gov't Code § 50583.
[174] Cal. Gov't Code § 50582.

[175] Cal Food & Agric. Code § 3962.
[176] 3 Cal. Code Regs. § 3963 (2009).
[177] Cal. Food & Agric. Code § 52260, amended by AB No. 1598 (2006).
[178] Cal. Food & Agric. Code §§52391, 52482.
[179] Cal. Food & Agric. Code §§ 52452.
[180] 3 Cal. Code Regs. § 3867. The notice is described in Cal. Food & Agric. Code § 3915.1. This provision does not apply to seed covered by Sections 52454 and 52455 of the Food and Agriculture Code. However, seed covered by Section 52454 must bear the notice required by Section 52454(b).
[181] Cal Food & Agric. Code § 7275 (2008) (Added by Stats 2003 ch. 675 § 3 (AB 66)).
[182] *Id*.
[183] *Id*.
[184] Cal. Food & Agric. Code § 7276.
[185] Cal. Food & Agric. Code § 481.
[186] Stats 2005 ch. 609 § 2 (AB 460), effective January 1, 2006.
[187] Cal. Food & Agric. Code § 481.
[188] 3 Cal. Code Regs. § 3060.3, *citing* 3 Cal. Code Regs. § 4500.
[189] *See* 3 Cal. Code Regs. § 3060.2
[190] *Id.*
[191] Cal. Pub. Res. Code § 714.
[192] Cal. Pub. Res. Code § 4799.10.
[193] The provisions to which the cooperation requirement apply include Division 4 of the Food and Agricultural Code, commencing with Section 5001.
[194] *Id.*
[195] Cal. Food & Agric. Code § 6253(f)(1).
[196] 3 Cal. Code Regs. § 3431, repealed 2002.
[197] 3 Cal. Code Regs. §§ 3424, 3424, 3433, 3435 (respectively).
[198] Cal. Food & Agric. Code §5761.
[199] 3 Cal. Code Regs. § 3591.17.
[200] 3 Cal. Code Regs. §§ 3588-3637.
[201] 3 Cal. Code Regs. §§ 3591.18-3591.22.
[202] 3 Cal. Code Regs. § 3596.
[203] 3 Cal. Code Regs. §§ 3595, 3597.
[204] 3 Cal. Code Regs. §§ 3610-3612.
[205] Cal. Food & Agric. Code § 6032
[206] Cal. Food & Agric. Code § 6032.
[207] SB 1650 (2004).
[208] Cal. Food & Agric. Code § 6047.3.5.
[209] Cal. Food & Agric. § 6047.29
[210] *See* CDFA, *Advisory Groups*, *at* http://www.cdfa.ca.gov/pdcp/advisory_groups.html.
[211] Cal. Pub. Res. Code § 4750 *et seq*.
[212] *Id.* at § 4750.1.
[213] *Id.* at § 4750.4.
[214] *Id.*
[215] *Id.* at § 4750.7.
[216] *Id.* at § 4750.6.
[217] *Id.* at § 4750.4.
[218] *Id.* at § 4750.5.

Colorado

Colorado has made several substantial amendments to its invasive species programs since 2002. First, it has created new interagency bodies to coordinate the state response for weeds and aquatic species. The most important legal amendment was the enactment of a new aquatic nuisance species law responding to the "devastating economic, environmental and social impacts of aquatic nuisance species on the aquatic resources and water infrastructure of the state." The law responded to detection of Dreissenid mussels in the region. It defines aquatic nuisance species and is intended to detect, prevent, contain, control, monitor, and eradicate these species in Colorado waters by authorizing enhanced regulation of recreational vessels. Colorado also strengthened the Colorado Noxious Weed Act by creating a three-tiered listing system that must be updated every three years. The state also implemented additional reforms for aquatic species, plants, and plant pests and diseases.

I. Invasive Species Councils and Plans

A State Noxious Weed Advisory Committee was established in 2003.[1] The committee has 15 members, each appointed by the Commissioner of Agriculture. Of the 15, at least one member must represent private and public landowners or land managers; at least two members must represent weed management professionals from the federal, state, or local levels; at least one member must represent public or private weed scientists; at least two members must represent local governing bodies; at least four members must be agricultural producers; and at least three members must represent knowledgeable resource specialists or industries, including, but not limited to, environmental organizations.[2] The committee is responsible for making recommendations concerning the designation and classification of state noxious weeds, the development and implementation of state weed management plans and prescribed techniques for eradication, containment and suppression of state noxious weeds.[3] It must also periodically assess the progress made to implement the relevant provisions of the Colorado Noxious Weed Act, measure the results and effectiveness of endeavors to eradicate, contain, and suppress noxious weeds and recommend ways to enhance statewide efforts to stop the spread of noxious weeds.[4]

The non-profit, open membership Colorado Weed Management Association has broadened its mission, and seeks to provide "education, regulatory direction, professional improvement, and environmental awareness to preserve and protect our natural resources from the degrading impacts of invasive species (terrestrial and aquatic vegetation) in Colorado and surrounding states."[5]

Under the new "aquatic nuisance species" provisions, the Division of Parks and Outdoor Recreation and the Division of Wildlife are required to develop a strategic statewide plan to prevent, control, monitor, educate persons about, and, wherever possible, eradicate aquatic nuisance species.[6]

II. Wildlife

The Wildlife Commission has re-codified its regulations in relation to wildlife parks and unregulated wildlife.[7] These Regulations provide that a person may not possess, sell, propagate, acquire, purchase, broker, transport, trade or barter live wildlife without a license.[8] A person may only trade wildlife with another person who is properly licensed.[9] Approval of a license cannot be granted if the proposed wildlife is deemed to be detrimental to native wildlife.[10] A contingency plan (backed by financial assurance or bonding) is required in respect of a facility holding animals in the *Canidae*, *Felidae*, or *Ursidae* families. The plan must detail procedures for the disposition of the animals in the event that the facility is abandoned, or loses its license by expiration or revocation.[11] As before, domestic animals are exempt from the requirements of the regulations and there is a list of "unregulated" wildlife that may be imported, sold, bartered, traded, transferred, possessed, propagated and transported in Colorado provided that all importation, disease, and any other state, local or federal requirements are met.[12] However, the regulations clarify that it is unlawful to intentionally release any wildlife in Colorado, even if it has been declared to be "unregulated."[13]

III. Aquatic Life

The Division of Parks and Recreation and the Division of Wildlife ("the Divisions") are authorized to monitor the state waters for the presence of aquatic nuisance species, provided permission has been granted by the persons controlling access to such waters.[14] "Aquatic nuisance species" means "exotic or nonnative aquatic wildlife or any plant species that have been determined [by the Board of Parks and Outdoor Recreation] to pose a significant threat to the aquatic resources or water infrastructure of the state."[15] The Divisions must submit an annual report of the efforts addressing aquatic nuisance species to the relevant legislative committees.[16] Aquatic nuisance species funds have been created in the state treasury, one administered by the Division of Parks and Outdoor Recreation and the other by the Division of Wildlife.[17] The priorities in using such moneys are the containment and eradication of aquatic nuisance species and preventing their introduction into vulnerable areas.[18] Under the new provisions, a person must immediately notify the Divisions if he knows that an aquatic nuisance species is present at a specific location.[19]

In recognition of the potential of recreational vessels as a significant source of the spread of aquatic nuisance species,[20] new provisions have been introduced which authorize the inspection, decontamination, impoundment and quarantine of a "conveyance."[21] Every qualified peace officer is authorized to stop and inspect a conveyance for the presence of aquatic nuisance species: (i) prior to a vessel being launched onto state waters; (ii) prior to departing from state waters or a vessel staging area; (iii) that is visibly transporting any aquatic plant material; and (iv) upon a reasonable belief that an aquatic nuisance species may be present.[22] A "conveyance" means "a motor vehicle, vessel, trailer, or any associated equipment or containers, including, but not limited to, live wells, ballast tanks, and bilge areas that may contain or carry an aquatic nuisance species".[23] An authorized officer may impound and quarantine a conveyance if: (a) after an inspection he finds, or reasonably believes, that an

aquatic nuisance species may be present; (b) the person transporting the conveyance refuses to submit to an inspection; or (c) the person transporting the conveyance refuses to comply with an order to decontaminate it.[24]

Under the new provisions it is an offence to: (i) possess, import, export, ship, or transport an aquatic nuisance species; or (ii) release, place, to plant (or cause to be released, placed, or planted) an aquatic nuisance species into the waters of the state; or (iii) refuse to comply with an order issued under this article.[25]

On conviction a person is subject to a fine of $150 for a first offence and $1000 for a second offense. A third or any subsequent offense is a class 2 misdemeanor, which is punishable by a minimum of 3 months imprisonment and/or a fine of $250 and a maximum of 12 months imprisonment and/or a fine of $1,000.[26]

The Board of Parks and Outdoor Recreation has promulgated rules to administer and enforce the new legislation. These came into effect on April 1, 2009. Unless provided for in the Rules, authorized by the Divisions or under Title 33 (Wildlife/Parks and Recreation) or Title 35 (Agriculture) of the Colorado statutes, it is unlawful for a person to possess, import, export, ship, transport, release, place, plant (or cause to be released, placed or planted) into the waters of the state any aquatic nuisance species.[27] If requested, a person must submit a vessel for inspection prior to launching it onto, operating it on, or removing it from any state waters or vessel staging area (or attempting to do so).[28] Inspections are mandatory in respect of vessels removed from a state water known to be infested with aquatic nuisance species, or which have been in another state's waters in the previous 30 days.[29] A person must also comply with a request from a qualified peace officer to remove and dispose of aquatic nuisance species.[30] It is unlawful for a person to launch onto, operate on or remove from any water of the state, or vessel staging area, a vessel they know contains any aquatic nuisance species (or attempt to do so).[31] The rules also set out detailed procedures for the impoundment, quarantine, and decontamination of vessels containing aquatic nuisance species.[32]

The Wildlife Commission has reformatted and amended the Regulations relating to "aquatic wildlife." A new provision prohibits the import, transport, possession or release of any aquatic nuisance species, unless specifically authorized by the Division of Wildlife or a permit issued under Title 35 of the state statutes.[33] For these purposes, "aquatic nuisance species" means "exotic wildlife and plant species that the Director [of the Division of Wildlife] determines poses a significant threat to aquatic wildlife or their habitats."[34] Live aquatic wildlife may only be transported within Colorado pursuant to: a personal fishing license (for use as bait only); a commercial fishing license; a receipt from a permitted aquaculture or pet animal facility; an aquaculture facility permit; a pet animal facility permit; an importation license; or a bill of lading or other similar documentation.[35] All live fish must be accompanied by a copy of the fish health certificate for the source facility, unless the shipment is being transported through Colorado for delivery in another state.[36] A person must obtain an Importation License from the Division of Wildlife before importing any live aquatic wildlife into the state and such wildlife may not be imported into Colorado except as provided for by the regulations or authorized by

the Division of Wildlife or under Title 33 or Title 35 of the Colorado statutes.[37] The possession of any live native or non-native aquatic wildlife is unlawful except as provided for by the regulations or authorized by the Division of Wildlife or under Title 33 or Title 35 of the statutes.[38] The possession of certain listed species, their hybrids or viable gametes is specifically prohibited.[39] The release of any native or non-native aquatic wildlife in Colorado is prohibited except for certain stocking purposes that are set out in the Regulations.[40] Provision is also made in the regulations for annual fish health inspections and certifications of all in-state fish production or holding facilities, which sell or stock live fish, and out of state facilities importing live fish into Colorado.[41]

IV. Plants

The Commissioner of Agriculture is required to designate and classify noxious weeds into a minimum of 3 categories[42], including:

"**List A**", which means rare noxious weed species that are subject to eradication wherever detected in order to protect neighboring lands and the state as a whole;

"**List B**", which means noxious weed species with discrete statewide distributions that are subject to eradication, containment, or suppression in portions of the state designated by the Commissioner in order to stop the continued spread of these species;

"**List C**", which means widespread and well-established noxious weed species for which control is recommended but not required by the state, although local governing bodies may require management.

The lists must be reviewed at least every 3 years.[43]

The Commissioner is required to implement state noxious weed management plans for List A and B species[44] and, after consulting with the State Noxious Weed Advisory Committee, prescribe integrated management techniques for each of the listed species.[45] Detailed new Rules have been introduced that classify state noxious weeds into Lists A, B and C, implement state noxious weed management plans and prescribe certain integrated management techniques. They also provide a process for granting compliance waivers to local governing bodies and landowners.[46]

New responsibilities related to the eradication of designated noxious weeds have been placed on the Commissioner, local governing bodies and landowners. The Commissioner is required to provide certain educational, financial or in-kind resources to local governing bodies and/or affected landowners regarding the eradication of List A species and populations of List B species designated for eradication.[47] The Commissioner is also required to provide the inventory and mapping infrastructure necessary to facilitate the classification of state noxious weeds and the development and implementation of state noxious weed management plans[48]

Local governing bodies are required, amongst other things, to initiate and maintain communications with affected landowners and provide technical assistance for the eradication of List A species and populations of List B species designated for eradication.[49] Landowners/occupants whose property may be affected by List A species, or populations of List B species designated for eradication, are required to allow access for immediate inspection if: (a) the landowner or occupant requests an inspection; (b) a neighboring landowner or occupant has reported a suspected noxious weed infestation and requested an inspection; or (c) an authorized agent of the local government or commissioner has made a visual observation from a public right-of-way or area and has reason to believe that a noxious weed infestation exists.[50] A warrant to inspect may be sought if the landowner fails to give consent to such an inspection.[51] In the event that List A species or List B species designated for eradication are found on land, the relevant local body is required to notify the affected landowner/occupant and advise them to commence eradication.[52] If the landowner fails to take action, there is a procedure by which the relevant local body may do so. Any costs incurred will be assessed and may be levied as a lien against the land.[53]

Subject to limited exceptions for research, or in connection with a noxious weed management plan, it is unlawful to intentionally introduce, cultivate, sell, offer for sale, or knowingly allow to grow any designated noxious weed.[54] Violators of this section (or of sections 35-5.5-108 or 35-5.5-108.5, or any rule adopted to implement these sections) are responsible for the costs of inspection and eradication of List A or List B species, which may include both actual immediate and estimated future costs.[55] A civil penalty of up to $1,000 (or double that where more than one violation has occurred) may also be imposed for a violation of the provisions of the Act or any rule made pursuant to it.[56]

V. Plant Pests and Diseases

A. Specific Quarantines

A quarantine was imposed, effective from May 3, 2004, against the importation into the San Luis Valley of all plant material of the genus *Prunus* (with the exception of certain named species).[57] The purpose of the quarantine is to protect potato fields against the over wintering of the green peach aphid, which carries certain viral diseases that affect potatoes. Any person who has reason to believe that prohibited material will be or has been shipped into the San Luis Valley may notify the Department, Division of Plant Industry. All registered nurseries in the San Luis Valley must be inspected at least once annually to determine compliance with the quarantine. Any shipment of prohibited material found by the Commissioner to be in violation of the quarantine must be removed from the San Luis Valley within 48 hours or it will be destroyed.[58]

B. Pest Control Compact

Colorado became a party to the pest control compact in 2007.[59]

VI. Insects

There have been no significant relevant changes to the Colorado laws or regulations relating to insects.

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[1] Colo. Rev. Stat § 35-5.5-108.7.
[2] Colo. Rev. Stat § 35-5.5-108.7 (1)(a).
[3] Colo. Rev. Stat § 35-5.5-108.7 (2).
[4] Colo. Rev. Stat § 35-5.5-108.7 (4).
[5] Colorado Weed Management Association, *CWMA Mission Statement*, *at* http://www.cwma.org.
[6] Colo. Rev. Stat. § 33-10.5-103(4).
[7] They may now be found at 2 Colo. Code Regs. 406-11.
[8] 2 Colo. Code. Regs. 408-11-1102 A.
[9] *Id.*
[10] *Id*.
[11] 2 Colo. Code Regs. 408-11-1102 B & C.
[12] 2 Colo. Code Regs. 406-0-11-1103.
[13] 2 Colo. Code Regs. 406-11 (See Introduction).
[14] Colo. Rev. Stat. § 33-10.5-103(3).
[15] Colo. Rev. Stat. § 33-10.5-102 (1).
[16] Colo. Rev. Stat. § 33-10.5-103(5).
[17] Colo. Rev. Stat. § 33-10.5-108.
[18] *Id*.
[19] Colo. Rev. Stat. § 33-10.5-106.
[20] Colo. Rev. Stat. § 33-10.5-101.
[21] Colo. Rev. Stat. §§ 33-10.5-103-104.
[22] Colo. Rev. Stat. § 33-10.5-104(1)..
[23] Colo. Rev. Stat. § 33-10.5-102(4).
[24] Colo. Rev. Stat. § 33-10.5-104(2).
[25] Colo. Rev. Stat. § 33-10.5-105(1).
[26] Colo. Rev. Stat. § 33-10.5-105(2).
[27] 2 Colo. Code Regs. 405-1-801(A).
[28] 2 Colo. Code Regs. 405-1-801 (C).
[29] 2 Colo. Code Regs. 405-1-803 (B) & (C).
[30] 2 Colo. Code Regs. 405-1-801 (C).
[31] 2 Colo. Code Regs. 405-1-801 (D).
[32] 2 Colo. Code Regs. 405-1-803-805.
[33] 2 Colo. Code Regs. 405-0-12 (D).
[34] 2 Colo. Code Regs. 405-0-0.
[35] 2 Colo. Code Regs. 405-0-10.
[36] *Id*.
[37] 2 Colo. Code Regs. 405-0-11.
[38] 2 Colo. Code Regs. 405-0-12.
[39] *Id*.
[40] 2 Colo. Code Regs. 405-0-13.
[41] 2 Colo. Code Regs. 405-0-14.
[42] Col. Rev. Stat. § 35-5.5-108(2).
[43] Col. Rev. Stat. § 35-5.5-108(2.1).
[44] Col. Rev. Stat. § 35-5.5-108(2.3).
[45] Col. Rev. Stat. § 35-5.5-108(2.5).
[46] 8 Colo. Code Regs. 1206-2.
[47] Col. Rev. Stat. § 35-5.5-108.5(2).
[48] *Id*.
[49] Col. Rev. Stat. § 35-5.5-108.5(3).

[50] Col. Rev. Stat. § 35-5.5-108.5(4).
[51] Col. Rev. Stat. § 35-5.5-108.5(5).
[52] Col. Rev. Stat. § 35-5.5-108.5(7).
[53] Col. Rev. Stat. § 35-5.5-108.5(9).
[54] Col. Rev. Stat. § 35-5.5-104.5(1).
[55] Col. Rev. Stat. §§ 35-5.5-104.5(2) & 118(1)(b).
[56] Col. Rev. Stat. §§ 35-5.5-118(1)(a).
[57] 8 Colo. Code Regs. 1203-18.
[58] *Id*.
[59] Col. Rev. Stat. § 35-4.

Florida

Florida has extensively overhauled its invasive species programs since 2002. It published a statewide invasive species management plan, but its invasive species council was inactive until recently. However, it has been replaced in some respects by other new interagency coordination bodies. With respect to legal developments, the state updated its rules specifically relating to invasive wildlife and aquatic animals, including its tiered listing system. In addition, the state created specific requirements for possession and sale of six species of "reptiles of concern." Florida has also extensively amended its laws and regulations governing invasive plants. Authority over aquatic plants has been shifted to different agencies and enhanced in some areas. Florida also created new authority specific to the planting of non-native crops for fuel production and now requires a permit and a financial bond for this activity. The state noxious weed law listing process was updated to allow petitions and to proactively use information from scientific experts to determine whether a plant will negatively impact native communities. Specific amendments have also been made with respect to nursery stock, noxious weeds, and specific plant pests and diseases.

I. Invasive Species Councils and Plans

Several developments in interagency coordination have occurred since 2001. The Invasive Species Working Group (ISWG) is no longer active. The Pest Exclusion Advisory Committee (PEAC)'s enabling legislation was repealed in 2005.[1] PEAC took no action after issuing its report in 2001. Finally, the South Florida Ecosystem Restoration Task Force (SFERTF) created the Florida Invasive Animal Task Team (FIATT) to join its sister team, the Noxious Exotic Weed Task Team (NEWTT).

The Invasive Species Working Group (ISWG) was created by executive request in 2001 to develop a statewide invasive species management plan for Florida.[2] In 2003, the Governor approved ISWG's statewide plan and each participating state agency signed a Memorandum of Understanding to improve agency collaboration.[3] In addition, the ISWG's Species Risk Assessment Subcommittee recommended development of a risk assessment methodology. As a result, in 2007, the Department of Agriculture and Consumer Services (DACS) and the Institute of Food and Agricultural Sciences (IFAS) at the University of Florida cooperated to complete two species risk analyses.[4] Having accomplished its goal of creating a statewide management plan, the ISWG's continued mission was unclear. As a result, the ISWG became inactive for several years pending creation of a permanent state invasive species council or further clarification of the working group's ongoing role.[5] The ISWG suggested that Florida create a standing invasive species council through either executive order or legislation, but such action has not occurred to date. In 2009, however, the working group met in order to solicit direction from the heads of the signatory agencies. As a result, the ISWG may become more active in the near future.

Pending creation of a more permanent council, ISWG subcommittee members created the Florida Invasive Species Partnership (FISP) in 2008. FISP seeks to protect Florida's natural environment from invasive species through partnerships and collaboration between non-

governmental and governmental actors. Its partners include fourteen federal, state and local governmental, nongovernmental, and academic organizations.[6] FISP's goals are to "increase effectiveness and decrease costs by working together, provide tools to develop a unified approach and bridge the gap between landowners, and encourage development and implementation of new and innovative approaches."[7] To carry out these goals, FISP is identifying existing incentive programs for invasive species control, providing outreach and training, promoting other collaborative partnerships, and providing an information clearinghouse.[8] FISP partners work with public and private land owners and managers, technical service providers, and Cooperative Invasive Species Management Area (CISMA) organizations to develop a means of effectively containing invasive species.[9]

Separately, an additional council has been created since 2002. The Florida Invasive Animal Task Team (FIATT) is part of the joint federal-state effort to promote restoration of the Everglades ecosystem. FIATT was established in 2004 by the South Florida Ecosystem Working Group (SFEWG), which had created NEWTT in 2001 to address exotic plant issues in South Florida. SFEWG, in turn, is a working group of the South Florida Ecosystem Restoration Task Force (SFERTF), both of which were created by the federal Water Resources Development Act (WRDA) of 1996, as amended.[10] Fourteen federal, state, local, and tribal members comprise SFERTF, as stipulated by WRDA. SFERTF is responsible for coordinating the ongoing intergovernmental Everglades restoration projects, including the development of consistent "policies, strategies, plans, programs, projects, activities, and priorities for addressing the restoration, preservation, and protection of the South Florida ecosystem."[11] SFEWG is responsible for "formulating, recommending, coordinating, and implementing the policies, strategies, plans, programs, projects, activities, and priorities of the Task Force."[12]

NEWTT and FIATT are advisory bodies to SFEWG, so their members are similarly drawn from federal, state, tribal, and local agencies. Neither NEWTT nor FIATT has any regulatory power, but they rather organize, coordinate, and plan for invasive species issues on behalf of SFEWG.[13] NEWTT was created to coordinate the implementation of the Working Group Assessment and Strategic Plan for managing invasive exotic plants in South Florida. NEWTT responsibilities included development of an Implementation Plan, a Science Plan, a coordinated multi-agency budget, and a timeline for completion of goals, and completion of the steps and actions identified in the Invasive Exotic Strategic Plan.[14] In turn, FIATT focuses on controlling and managing existing invasive wildlife and has created a list of invasive species of "special concern" in Florida.[15] The majority of the members of this list are present in Florida, but a few – such as the brown tree snake (*Boiga irregularis*) – are future threats.[16]

Finally, the legislature created a new Pest Control Enforcement Advisory Council (PCEAC) within DACS to advise the Department on "the regulation of pest control practices" and to advise other state agencies on "activities related to their responsibilities regarding pest control." By statute, the council is intended to be a forum to coordinate activities related to pest control to "eliminate duplication of effort and [to] maximize protection of the public."[17]

II. Wildlife

A. General Authority

Effective January, 2008, FWC created a new chapter of its regulations to address exotic wildlife.[18] The new regulations incorporated provisions formerly in chapters relating to freshwater fish, and expand the provisions to include wild animal life (as opposed to the more restrictive "wildlife") and marine plants and marine life, resulting from amendments to the Florida Constitution in 1999 delegating marine life authority to the Commission (previously in DEP and the Marine Fisheries Commission). Specifically, the regulations provide that it is unlawful to "introduce, or possess, for any purpose that might reasonably be expected to result in liberation into the state, any freshwater fish, aquatic invertebrate, marine plant, marine animal, or wild animal life not native to the state, without having secured a permit from the Commission," except for specific listed species that do not require a permit.[19] Unlimited take of non-native species is allowed.[20] A new FWC regulation provides for the Commission to sponsor pet amnesty events during which exotic pet owners without permits can surrender pets to the Commission, which places them with qualified adopters. Such surrenders are deemed not to constitute a violation of the restriction on transfer of wildlife from unpermitted entities.[21]

FWC has issued regulations describing the conditions for obtaining a permit for non-native wildlife. Species are organized into tiers based on the risks they pose to the environment, economy, or human health and safety. A few non-native species are exempted from the general permit requirement, while listed "conditional" and "prohibited" species require special permits that are available only to certain owners and include conditions for facility design and operation.[22] *Conditional species* cannot be possessed without a special permit that is available only to researchers, commercial import and export businesses, public zoos and aquaria, and public educational exhibitors. Permits are not available for personal possession or exhibition in private zoos or aquaria.[23] FWC may inspect facilities where conditional species are held before issuing a permit to ensure that the facility has sufficient protections to prevent escapes. Aquatic[24] and venomous[25] wildlife enclosures are subject to specific design standards to guard against escape of adults, juveniles, and eggs. *Prohibited species* are subject to the most stringent use and ownership limits. It is unlawful to "import into the state, sell, possess, or transport any live specimens of the species or hybrids or eggs thereof" for any prohibited species, without a permit.[26] Prohibited species permits are available only to public wildlife exhibitors[27] and researchers.[28] FWC's consolidated regulations also include specific provisions for leopard, (*Geochelone pardalis*), African spurred (*Geochelone sulcata*), and Bell's hingeback tortoises (*Kinixys belliana*).[29]

FWC has issued new regulations governing captive wildlife. "Captive wildlife" includes "any wildlife, specifically birds, mammals, reptiles, and amphibians."[30] Specific listed species are excluded from the definition, and no permit is required to possess these species for personal use, "unless possession of a species is otherwise regulated by other rules of the commission."[31] Excluded species are largely but not entirely common pets.[32]

Possession of captive wildlife requires a permit[33] and it is illegal to buy wildlife from or sell wildlife to an unpermitted entity.[34] The conditions for obtaining a permit differ based on the threats represented by particular species. FWC has created a three-tiered classification for wildlife. Class I wildlife, the most dangerous, cannot be possessed as a pet. Class II wildlife species present a real or potential threat to human safety, but can be possessed as a personal pet with a special permit that requires the owner to display experience dealing with the species. Most wildlife species are included in Class III, which is a catchall that includes all wildlife species not listed in classes I or II or otherwise excluded. Ownership of Class III wildlife requires a no-cost permit and a showing that the owner is competent to care for the species.[35] Captive wildlife permits require owners to maintain certain caging requirements that differ from class to class.[36] These requirements are designed to protect owners and the public by preventing escape of the wildlife. The caging requirements are enforced through inspection, which may be required prior to permit issuance.[37] Owners must prepare a critical incident/disaster plan and must report escapes of Class I species, and must also document their experience.[38] Experience documentation and permit pricing differ for Class I and Class II wildlife.

Captive wildlife must be "maintained in captivity for exhibition, sale, personal use, propagation, preservation, rehabilitation, protection, or hunting purposes."[39] A permit is required to exhibit[40] or sell wildlife in Florida,[41] including frogs and freshwater fish.[42] However, FWC has lifted this requirement for sales of a few listed species and for private game preserves.[43] The wildlife sale exemption applies primarily to common pets.[44] Owners must post a bond to exhibit Class I species or venomous reptiles.[45]

In 2007, the Florida legislature amended its treatment of several reptile species.[46] The legislation requires and authorizes FWC to establish a list of "venomous, nonvenomous, native, nonnative, or other reptiles, which require additional regulation for capture, possession, transportation, or exhibition due to their nature, habits, status, or potential to negatively impact the environment, ecology, or humans."[47] Possession of regulated reptiles requires a $10,000 bond.[48] FWC has listed six reptiles of concern that, due to their size, constitute a potential threat to human safety as well as a potential ecological threat.[49] While this list includes important species, it also excludes a number of known species of concern identified by the South Florida Ecosystem Task Force.[50] All live venomous reptiles and reptiles of concern require a permit for possession and must be identified by implantation of an identification microchip and/or through photographic record.[51] Owners must develop a critical incident plan and are subject to FWC facility inspection at any time. Listed species are also subject to enhanced caging, transportation,[52] and record-keeping[53] requirements.[54] The knowing release or grossly negligent escape of a non-native venomous reptile or reptile of concern is a Level Three violation[55] punishable as a first degree misdemeanor pursuant to the statute governing captive wildlife penalties.[56]

Florida also renumbered its wildlife statutes in 2008, completing a process initiated by a Constitutional change that included marine life in FWC's jurisdiction. Chapters 370 and 372

were repealed and their contents moved to chapter 379, to form one combined chapter.[57] This action eliminated obsolete sections but did not alter the substance of pre-existing provisions.

Finally, FWC reallocated its agency responsibilities. FWC reorganized in 2004 to create a new Division of Habitat and Species Conservation, which includes an exotic species coordination section (ESCS).[58] ESCS has a broad spectrum of duties, including collecting data, coordinating regulatory and enforcement actions, and developing rules.[59] To date, ESCS has successfully led the development of the Commission's new non-native species regulation.

B. Animal Disease

As part of its consolidation of the rules regarding non-native fish and wildlife, FWC also amended its regulation governing the introduction of carriers of disease. This amendment deleted provisions prohibiting the importation and release of non-native fish and wildlife without a permit (incorporated into Chapter 68-5 as discussed previously) and incorporated provisions regarding inspection of facilities that might harbor diseased aquatic organisms from Rule 68A-23.008, which was be repealed.[60] In addition, FWC created and subsequently amended a new section governing importation of cervids. The regulation is intended to prevent the introduction of chronic wasting disease (CWD) into the state and requires compliance with DACS Rule 5C-26, governing movement of cervids.[61]

The DACS rule, new in 2002, applies to transmissible spongiform encephalopathies (TSEs), including CWD, and restricts the importation of cervids to those from herds monitored for TSEs and requires prior permission from the State Veterinarian or DACS representative prior to intrastate movement.[62] It also imposes testing requirements and creation of herd health plans for all cervid herds in the state.[63] Any herds with positive, exposed, or suspect animals are subject to immediate quarantine and depopulation of the herd is the preferred management option.[64] DACS regulations also state the CWD is a dangerous, transmissible disease and that it constitutes a public nuisance. Any person who has knowledge of the existence of this disease, or signs of any neurological disease in Cervidae in the state, is required to report such information to the State Veterinarian immediately.[65]

III. Aquatic Life

As noted above, Florida reorganized the statutes governing FWC permits and fees, including those relating to aquatic animals. In addition, many of the substantive changes previously described (see Wildlife) apply equally to aquatic species. Such provisions are not repeated in this section but are included by reference. This section therefore includes provisions not previously mentioned that are specific to aquatic species.

A. Aquatic Animals

Florida has made several statutory and regulatory amendments related to aquatic animals. On a statutory level, importation of fish without a permit is now a level three violation subject to the penalties enumerated in section 379.401 of the Florida statutes; previously, the penalty was listed as a first degree misdemeanor.[66] Similarly, importation or possession of nonindigenous

marine plants and animals is a level three violation.[67] Second, the Florida legislature repealed the statute declaring possession of nutria to be unlawful without a permit and secure housing;[68] however, nutria are listed as conditional species in FWC regulations.[69] Finally, in 2007, the legislature enacted a statute that clarified that FWC's constitutional power does not include authority over marine life or marine aquaculture retained by the legislature itself or vested in any agency except the Marine Fisheries Commission, as of March, 1998, or July, 1999, respectively.[70] FWC jurisdiction therefore includes all non-native species in the wild but does not extend to some endangered marine species and marine aquaculture.

The primary regulatory changes resulted from the consolidation of FWC's non-native species rules in the new chapter of the regulations, as discussed above.[71] This consolidation resulted in the amendment or repeal of several commission rules, including part or all of sections governing importation and release of non-native fish and wildlife and inspection of facilities that might harbor diseased aquatic organisms.[72] The new regulations also include specific conditions for several species of aquatic animals, including piranhas and pirambebas.[73] Freshwater and marine aquatic species were also added, respectively, to the conditional species list (red-eared sliders and nutria) and prohibited species list (weeverfishers, stonefishes, sea snakes).[74]

B. Aquaculture

The legislature increased the annual fee for aquaculture registration from $50 to $100.[75] DACS also updated its aquaculture best management practices manual to include new requirements for aquaculture marine net pens and water conservation and a revised cross reference guide which includes specific best management practice requirements for alligator, aquatic turtles, and aquatic snails.[76] As previously, compliance with the manual is required to obtain a certificate of registration from DACS.

C. Aquatic Plants

The legislature has substantially amended the Florida Aquatic Weed Control Act (AWCA)[77] and Aquatic Weeds Management Act (AWMA), previously known as the Nonindigenous Aquatic Plant Control Act.[78] As of 2008, FWC is responsible for implementing the AWCA and AWMA in place of the DEP, which formerly was responsible for aquatic weed and plant management.[79] FWC adopted the pre-existing DEP regulations in their entirety.[80] FWC now directs the control, eradication, and regulation of noxious aquatic weeds, including the authority to use fish as a biological control agent (an authority previously excised from DEP powers).[81] FWC now may delegate functions to any appropriate state agency, special district, local or county government unit, commission, authority, or other public body.[82] Like DEP, FWC can disburse funds to special districts or local authorities; however, it now needs no proof of sufficient funds to match state funds on an equal basis. In addition, although the commission must review and approve such programs, it need not determine their conformance with the state control plan.[83]

As under DEP regulations, a permit is required to control, eradicate, remove, or otherwise alter aquatic weeds or plants in waters of the state. Activities that are permitted under the AWCA or AWMA do not require a dredge and fill permit from the Department of Environmental

Protection, but the AWCA now limits the turbidity mixing zone for such activities to 150 meters downstream (or 150m radius in non-flowing waters).[84] The Board of Trustees of the Internal Improvement Trust Fund may also delegate to FWC the authority to take independent action to approve the use of trustee-owned submerged lands for aquatic weed control.[85] The AWCA and AWMA direct FWC to take such final action with respect to such sovereign submerged lands.[86]

The Commission is now authorized to collect aquatic plants to be used for habitat enhancement, research, education, and for other purposes necessary to undertake its activities; to quarantine or confiscate noxious aquatic plant material incidentally adhering to a boat or boat trailer; and to conduct a public information program, including, but not limited to, erecting road signs, in order to inform the public and interested parties of its new authority and of the dangers of noxious aquatic plant introductions.[87]

With respect to the AWMA, the legislature repealed the definition of "nonindigenous aquatic plant" and expanded the reach of the statute to include all aquatic plants rather than just nonindigenous plants. The definition of a "management program" was amended such that management need not be carried out on a continuous basis to maintain the plant population at the lowest feasible level. Definitions of intracounty and intercounty waters were repealed, as were jurisdictional differences in the responsibility for plant control in each type of water. As under the AWCA, restrictions on the use of fish as a biological control agent were eliminated, and FWC is not required to obtain proof of cost share funding prior to disbursement of funds to local districts for plant control. The requirements for preparation of an annual report were simplified; the report now simply must be posted on the FWC website. FWC can delegate management responsibilities to other agencies and districts; recipients of such delegation are bound by FWC rules.[88]

Finally, Florida has amended the penalties that apply to violations of the AWCA and AWMA. It is prohibited to fail to obtain any needed permit or to make any false statement in any required certification or application to FWC. Any person who violates these provisions is liable for any damage caused by aquatic weeds or plants and for civil penalties. Willful violations of the AWCA or AWMA constitute a third degree felony, and violations due to reckless indifference or gross careless disregard constitute second degree misdemeanors; willful violations of permit requirements are first degree misdemeanors.[89] FWC also is authorized directly to enforce the AWCA and AWMA pursuant to these amended penalty provisions.[90]

In addition to the changes that shifted DEP's aquatic weed and plant management responsibility to FWC, the legislature shifted DEP's responsibility over the aquatic plant trade to DACS.[91] It now is illegal to engage in business activity involving the importation, transportation, cultivation, collection, sale, or possession of any aquatic plant species without a permit issued by DACS. Previously, a permit was not needed for nursery cultivation; nurseries are no longer excluded and now are subject to inspection.[92] The revised statute also eliminated authority to carry out a public education program.[93] DACS adopted in their entirety the relevant, pre-existing DEP regulations regarding aquatic plants.[94]

IV. Plants

A. General Authority

Florida has altered several provisions relating to importation of nursery stock. According to current law, each separate container of nursery stock shipped into Florida must bear a valid certificate of inspection issued by the state of origin certifying that the shipment is apparently free of plant pests and is in compliance with DACS rules. All commercial shipments of nursery stock or other plants and plant products entering peninsular Florida by road are required to stop at an agricultural inspection station to be inspected and screened for proper certification. Shipments also must bear a bill of lading.[95] Non-commercial shipments of house plants may enter the state but must bear a certificate of inspection.[96]

Special permits are also required to import sugarcane and citrus propagules. Propagative parts of sugarcane may not enter Florida unless accompanied by a Department-issued special permit.[97] No "citrus plant or citrus plant product or propagation therefrom" may enter Florida without a Department-issued permit, unless specifically excluded by Department rules.[98] Any plants propagated from illegally-imported material are contraband and DACS is authorized to confiscate and destroy these plants without providing compensation.[99]

B. Noxious Weeds

DACS has amended its noxious weed regulations in several respects. First, it amended the noxious weed list to include several additional species.[100] Second, DACS amended its regulations to use information from IFAS and other experts to determine whether a plant poses a serious agricultural threat to Florida, if it will negatively impact protected plant species, or if it is a naturalized plant that disrupts naturally-occurring native communities. DACS will propose that plants failing these provisions be classified as a noxious weed or invasive plant and included on the Noxious Weed and Invasive Plant List. Any person may petition to include a plant species by application to the Department and the Noxious Weed and Invasive Plant Review Committee. After considering the Committee's recommendation, DACS makes a final determination initiating the rule amendment process. DACS also may list a plant by emergency rule if the plant threatens the "agricultural, horticultural, environmental, or public interest of the state."[101]

The second change to the noxious weed program concerns a pilot program for the use of Australian pine (*Casuarina cunninhamiana*) in citrus plantations. Within a limited geographic area, commercial citrus grove owners may apply for a special permit to plant Australian pine as a windbreak. To qualify, Australian pine must be produced in an authorized, registered nursery and certified by the Department as having been vegetatively propagated from a male plant. The state annually will reevaluate the pilot program and conduct a comprehensive review in 2013 to determine whether the use of Australian pine as an agricultural pest and disease windbreak causes any adverse environmental effects. DACS must also establish a monitoring protocol to determine the invasiveness of the plant.[102]

The windbreak pilot program also authorizes DACS to determine that Australian pine has become invasive on a site upon a recommendation from the Noxious Weed and Invasive Plant Review Committee and DEP and after consultation with a representative of the citrus industry who has such a windbreak. Once DACS has declared the plant to be invasive on a site, the property owner must destroy all the trees on the property within 6 months. All Australian pines must also be destroyed if the property owner takes permanent action to no longer use the site to produce citrus commercially, if the site has not been used for commercial citrus production for 5 years, if the property owner ceases annually to maintain the trees as per the permit; or if the Department determines that continued use of the species as a windbreak threatens public health, safety, or welfare. If a property owner refuses or neglects to comply with these regulations, DACS is authorized to destroy the plants at the owner's expense.[103]

C. Seeds

Florida has made some changes to its noxious weed seed regulations. Two of the five noxious seeds – Nutgrass and Tropical Soda Apple – that were previously classified as "prohibited" are now classified as "restricted." Seed lots containing one Tropical Soda Apple seed per pound may now be relabeled to convey the presence of Tropical Soda Apple seed and sold exclusively within Florida. If subsequent testing finds that the seed lot continues to be in violation, the seed lot must be destroyed as under previous law, but no longer needs to be destroyed in a solid waste disposal facility.[104]

D. Biofuel Production

Florida has issued a new statute and regulations to limit biofuel production. A special permit is now required to plant more than 2 contiguous acres of a non-native plant, including a genetically engineered plant or a plant that has been introduced for purposes other than agriculture. A special permit is not required if the Department determines, in conjunction with IFAS, that the plant is not "invasive," here defined as "a naturalized plant that disrupts naturally occurring native plant communities,"[105] and subsequently exempts the plants by rule. DACS regulations reinforce these new statutory provisions, with specific reference to fuel production.[106] DACS will not issue permits for any state or federal noxious weed.[107]

Separate biomass permit applications are required for each noncontiguous growing location. Applications must include a complete description of the non-native plant to be grown and the estimated cost of removing and destroying the plant, including the basis for calculating or determining that estimate. In evaluating the permit application, DACS must visit the proposed growing location and determine if feasible measures can be taken to prevent the spread of the plant into neighboring ecosystems. Permits will include the following minimum requirements:

> (a) A system of traps or filters to prevent plants or plant parts from spreading through ditches, natural waterways, or other drainage.
> (b) Measures to prevent spread by seed.
> (c) A fallow area wide enough to prevent plant spread into adjacent areas. The fallow area will be on both sides of a berm surrounding the biomass planting.

(d) Cleaning of any equipment used on the site for all plant debris before being moved from the property.
(e) Wildfire protection measures to mitigate fire risk and damages to surrounding areas.
(f) A compliance agreement containing any additional requirements needed to prevent plant spread, signed as an addendum to the permit. Failure to abide by the permit stipulations or the compliance agreement is considered to be a violation of the rules.[108]

Each permit-holder is required to maintain a bond or certificate of deposit for each separate growing location in an amount determined by the Department, but not less than 150 percent of the estimated cost of removing and destroying the cultivated plants. The bond or certificate of deposit may not exceed $5,000 per acre, unless the Department determines that a higher amount is necessary to protect public health, safety, and welfare, or unless the Department grants exemption because of conditions specified in the application.[109]

To facilitate regulation, the Department may require verified statements of the cultivated acreage subject to the special permit from any permit-holder. DACS may review the permit-holder's business or cultivation records at her or his place of business during normal business hours to determine the acreage cultivated. The Department may suspend the special permit if the permit-holder fails to cooperate and may revoke the permit if it finds that the failure is intentional.[110]

Abandonment of a biomass planting is prohibited. If a special permit expires or if the permit-holder ceases to meet its conditions, the permit-holder is required immediately to remove and destroy the plants subject to the permit and to notify DACS within 10 days.[111] It is the property owner's or permit-holder's responsibility to completely destroy the planting prior to vacating the property or stopping commercial production. If the Department determines that the permit-holder is no longer maintaining or cultivating the plants subject to the permit and that it has not removed and destroyed the plants authorized by the permit, or if it has exceeded the permit's conditions, DACS may remove the plants by issuing an immediate final order and executing the bond or certificate of deposit.[112] To issue an immediate final order, the Department may: (a) determine that the permit-holder is no longer maintaining or cultivating the plants subject to the permit and has not removed and destroyed the plants that the permit authorizes; (b) determine that the continued maintenance or cultivation of the plants imminently threatens public health, safety, or welfare; (c) determine that the permit-holder has exceeded the permit's conditions; or (d) receive a notice of cancellation of the surety bond associated with the planting.[113] If the permit-holder fails to remove and destroy the plants subject to the permit within 60 days after issuance of an immediate final order, or such shorter period as public health, safety, or welfare requires, DACS may enter the cultivated acreage and remove and destroy the concerned plants at the owner's expense. The Department may, however, extend the time for removing and destroying the plants upon a written request showing why the plants could not reasonably be removed and destroyed in time.[114]

V. Plant Pests and Diseases

A. General Authority

DACS prohibits importation of listed host fruits originating from areas infested with fruit flies.[115] Importation is permitted, however, if accompanied by a certificate, issued by an authorized USDA representative or by the state of origin, indicating that the fruit is free of listed flies or has been treated pursuant to DACS or USDA standards. The host fruit list regulation was amended to clarify that fruit or articles that are not listed but that are infestednonetheless cannot be moved into Florida.[116]

Each container entering Florida must bear either a certificate of origin or a legible waybill that identifies the number and type of commodity, as well as the point of origin of the plant or plant product. Containers must also bear a document showing compliance with a cooperative arrangement or a legible certificate of inspection indicating that they are free of pests and in compliance with applicable Florida entry requirements. Plants and plant products lacking certification, actually infested or infected with pests or diseases, or exposed to a plant pest not known to be established in the state may be refused entry, returned to the owner, quarantined, treated, or destroyed at the owner's expense by an authorized Department representative. Shippers shall be immediately suspended from shipping into Florida when shipments of plants and plant products are found to be infested or infected with a plant pest not known to be established in the state if it is determined that the pest could be damaging to Florida agriculture. This suspension shall continue until the shipper pays the Department for handling the shipment, and the Department and the state of origin department of agriculture agree the problem has been resolved.[117]

Plants and plant products found infested or infected with or exposed to a plant pest of limited distribution in the state are subject to immediate quarantine and are not eligible for certification until treated as prescribed by the Department and released from quarantine.[118]

B. Nurseries

Other than the amendments previously discussed, Florida has not altered its laws or regulations governing plant pests and diseases in nurseries.

C. Specific Plant Pests and Diseases

In the wake of disputes over the destruction of citrus trees in citrus canker eradication areas, Florida laws and regulations governing citrus pests have been altered in several ways. First, the state of Florida has preempted county, municipal, or local ordinances or regulations that would impose requirements, restrictions, or conditions on the removal or destruction of citrus trees.[119] The citrus disease statute also was modified to refer to "citrus diseases" rather than "citrus canker" and to require citrus "management" rather than "eradication."[120]Second, the legislature supplemented DACS authority to authorize research on citrus diseases, including but not limited to citrus canker and citrus greening, as recommended by the Florida Citrus Production Research Advisory Council, within the limits of appropriations made specifically for that purpose.[121] In addition, DACS has repealed all of its regulations regarding nematodes of citrus, citrus canker, and citrus budwood.[122]

D. Pest Control Compact

Florida joined the Interstate Pest Control Compact in 2009.[123]

VI. Insects

Up to $50,000 per year of state assistance for mosquito or arthropod control now is available to counties or districts regardless of matching funds. In the event of an emergency, the Commissioner of Agriculture may increase the level of assistance.[124] However, such funding must be used for an integrated pest management program.[125] DACS also now is authorized to collect, detect, suppress, and control mosquitoes and other arthropods that the State Health Officer determines to threaten public or animal health on both public and private land. The Commissioner of DACS also can declare a threat to animal health when the Department "discovers the occurrence of an infectious disease in animals that can be transmitted by mosquitoes or other arthropods" for a certain limited geographic region. The Commissioner shall then order ameliorative measures notwithstanding other laws.[126] Finally, the Department has amended administration of the mosquito control program to clarify licensure of and supervision by mosquito control directors.[127]

In 2004 and 2005, DACS amended several provisions relating to honeybees. The DACS list of regulated honeybee pests includes listed pests capable of damaging or causing abnormalities to honeybees, colonies of honeybees, or beeswax. By rule, regulated honeybee pests are declared to constitute a nuisance.[128] The list of regulated pests now includes American foulbrood, the Troplaelaps clarae mite, and any other pest that the Department may determine to be a threat to the state.[129] Second, each beekeeper maintaining honeybee colonies in Florida must register with DACS. Beekeepers must have their colonies inspected for nuisance pests by DACS within 12 months prior to their appliacation, and colonies must also be reasonably free from common honeybee pests. Any violation is a first degree misdemeanor or, upon subsequent offense, a third degree felony, and may result in a $5000 fine.[130] Certificates of inspection for the sale and movement of honeybees and other regulated articles both into and within Florida and for shipments out of state.[131]

In addition, all hives found infected or infested with American foulbrood must be destroyed by burning or decontaminated by another Department-prescribed method within 30 days of diagnosis. Honeybee colonies and related equipment must be stored or maintained to prevent exposure to other honeybees. All colonies found in the same apiary where American foulbrood is detected shall be quarantined for a minimum of 30 days. Discovery of other honeybee pests initiates the quarantine of all colonies located within a Department-prescribed distance of the infested apiary. DACS must inspect all honeybees in the quarantine area and prescribe a recommended eradication or control method.[132] The rules also now provide that Florida-resident owners of colonies and regulated articles destroyed due to infection or infestation with American foulbrood will be awarded limited compensation, but will not be compensated for depopulation of colonies due to the presence of other honeybee pests, except by special provision.[133]

[1] Fl. Stat. ch. 2005-2.
[2] ISWG, STATEWIDE INVASIVE SPECIES STRATEGIC PLAN FOR FLORIDA 15-16 (2003).
[3] ISWG, Statewide Invasive Species Strategic Plan for Florida (2003). Each agency has signed a memorandum of understanding (MOU) resolving jurisdictional issues and providing for integrated and coordinated activities pursuant to the plan. ISWG, Annual Report of the Invasive Species Working Group, 2004 (2004) [hereinafter 2004 Annual Report]. The MOU also created two subcommittees, one focusing on education and the other on *Caulerpa taxifolia* management. Caulerpa taxifolia *Hybrid Response Plan Initiated*, 20 FLORIDA AQUACULTURE 3 (2003).
[4] DACS, pers. comm.
[5] Email from Brian Nelson, Aquatic Plant Management Manager, Southwest Florida Water Management District, to Don Schmitz, Research Program Manager, Florida Department of Environmental Protection (Sep. 11, 2007, 16:18 EST) (on file with author).
[6] FISP, *Partners*, *at* http://www.floridainvasives.org/partners.html.
[7] FISP, *Florida Invasive Species Partnership*, *at* http://www.floridainvasives.org/about.html.
[8] Kristina Serbesoff-King, *The Florida Invasive Species Partnership (FISP): Invasive Species Know NO Boundaries- Do We?*, *at* http://www.floridainvasives.org/articles/FISP-WildlandWeeds-Winter2008.pdf.
[9] *Id*.
[10] Pub. L. 104-303, § 528(f)-(g), 110 Stat. 3658 (1996).
[11] *Id.* at § 528(g).
[12] *Id*. at § 528(g)(D).
[13] *See* SFEWG, Implementation of the Invasive Exotic Animal Assessment and Strategy Recommendations – NEATT Directive, *available at* http://www.sfrestore.org/issueteams/fiatt/documents/NEATT%20Recommendations.pdf.
[14] NEWTT, *Noxious Exotic Weed Task Team (NEWTT)*, *at* http://www.sfrestore.org/issueteams/exotic/index.html
[15] FIATT, *Invasive Species of Special Concern* (2006), *available at* http://iswgfla.org/files/FIATT_Invasive%20Animal%20Species%20of%20Special%20Concern_082306.pdf.
[16] *Id*.
[17] Fl. Stat. ch. 482.243.
[18] Fla. Admin. Code r. 68-5.
[19] Fla. Admin. Code Ann. r. 68-5.001. The lone exceptions to this prohibition include the fathead minnow, variable platy, coturnix quail, and ring-necked pheasant. *Id*. at r. 68-5.001. *See also* Fl. Stat. ch. 379.231 (formerly 372.265);
[20] Fla. Admin. Code r. 68-5.001.
[21] Fla. Admin. Code r. 68-5.004.
[22] Prior to FWC's regulatory reorganization, these regulations used a slightly different clean/restricted/prohibited classification system. The latter two categories conform to the current conditional/prohibited categories. The applicable regulations were formerly found at Fla. Admin. Code r. 68A-23.008.
[23] Fla. Admin. Code r. 68-5.001(2).
[24] Outdoor fish facilities must have pond banks that are greater than or equal to 1 foot above the 100-year flood elevation, must be secure from public intrusion, and must not discharge water at any time. Indoor facilities must be secure and their outflows must either be nonexistent or screened. Turtle facilities must maintain fencing to avoid escape by burrowing and eggs must be collected daily. Fla. Admin. Code rr. 68-5.001, 68A-4.005. Aquaculture facilities permitted by FDACS are not required to obtain a FWC permit. *Id*. at r. 68.5-001.
[25] Venomous reptiles (whether or not listed as conditional or prohibited) must be enclosed in escape-proof enclosures and non-native species are subject to enhanced security measures.
[26] Fla. Admin. Code r. 68-5.001(3).
[27] Exhibitors (zoos, aquaria, etc.) must have current accreditation from the American Zoo and Aquarium Association (AZA) or the American Association of Museums (AAM). Fla. Admin. Code r. 68-5.001(3)(a). The AZA accreditation standards include limited facility design requirements. *See* AZA, Accreditation Standards and Related Policies: 2007 Edition 14 (2007). The standards do not, however, focus on escape or release in facility design accreditation. It is likely that the exceptions for AZA and AAM institutions are meant to ensure that permitted institutions have appropriate financial and governance resources to adequately ensure that the species will not present a danger to the public.

[28] Fla. Admin. Code r. 68-5.001(3)(b). Researchers are subject to certain conditions to avoid escape. In addition, FWC is proposing modifications to the commission in December, 2009.
[29] Fla. Admin. Code r. 68A-5.001.The tortoise provisions were included previously at Fla. Admin. Code r. 68A-25.002, except that a new species was added to rule 68-5.001.
[30] Fla. Admin. Code r. 68A-1.004.
[31] Fla. Admin. Code r. 68A-6.0022.
[32] Fla. Admin. Code r. 68A-6.0022. Presumably, "protected" refers to the state and federal ESA and similar statutes.
[33] Fl. Stat. ch. 379.303 (formerly 372.922), Fla. Admin. Code r. 68A-6.0011. This prohibition does not apply to research facilities registered and regulated under the federal Animal Welfare Act. Fla. Admin. Code r. 68A-6.0011.
[34] Fla. Admin. Code r. 68A-6.0021.
[35] *Id*. *See* Fla. Admin. Code r. 68A-6.002 (listing species by class), Fla. Admin. Code r. 68A-6.0022 (clean list).
[36] Fla. Admin. Code rr. 68A-6.0023, 68A-6.003, 68A-6.004, 68A-6.007
[37] Fla. Admin. Code r. 68A-6.0022(6).
[38] Fla. Admin. Code r. 6.022.
[39] Fla. Admin. Code r. 68A-1.004.
[40] Exhibitor permits are required regardless of whether the wildlife is shown for profit. Any person may own and operate a private game farm, but game farms must be licensed, are subject to inspection by FWC, and must be fenced to prevent escape. Game farm license requirements and fees were abolished. Fl. Stat. ch. 379.302 (formerly 372.16).
[41] Fla. Admin. Code Ann. r. 68A-6.006. The permit requirement applies to dealers of exotic birds commonly kept as pets. These dealers are subject to inspection and the animals to seizure if they are held in an unsanitary or unsafe manner and the owner fails to remedy the situation within 30 days. Fl. Stat. ch. 379.304 (formerly 372.921). Public zoos and exhibitions, traveling zoos, and circuses regulated under Ch. 205 are exempt from the permit requirement. *Id*. Note that Ch. 205 deals with local business taxes. Neither zoos nor circuses are regulated therein. This may be scrivener's error.
[42] The permit applies to bait and to exotic or nonindigenous fish. Fl. Stat. ch. 379.363 (formerly 372.65).
[43] SB 1304 (2008); Fl. Admin. Code r. 68A-6.022(3).
[44] *See* Amy Ferriter et al., *The Status of Nonindigenous Species in the South Florida Environment*, *in* 2006 SOUTH FLORIDA ENVIRONMENTAL REPORT VOLUME I: THE SOUTH FLORIDA ENVIRONMENT 9-2, 9-10 (2006).
[45] Fl. Admin. Code r. 6.024.
[46] S. 2766 (2007), *amending* Fl. Stat. § 372.86, *now at* § 379.372 (reptiles of concern).
[47] Fl. Stat. 379.372.
[48] Fl. Stat. 379.374.
[49] Fla. Admin. Code r. 68A-6.007. The reptiles of concern include Indian or Burmese python (*Python molurus*), reticulated python (*Python reticulatus*), African rock python (*Python sebae*), amethystine or scrub python (*Morelia amethystinus*), green anaconda (*Eunectes murinus*), and Nile monitor (*Varanus niloticus*). *Id*.
[50] Amy Ferriter et al., *The Status of Nonindigenous Species in the South Florida Environment*, *in* 2006 SOUTH FLORIDA ENVIRONMENTAL REPORT VOLUME I: THE SOUTH FLORIDA ENVIRONMENT 9-2, 9-10 (2006).
[51] Fla. Admin. Code r. 68A-6.0072.
[52] Fla. Admin. Code r. 68A-6.007.
[53] Fla. Admin. Code r. 68A-6.0071.
[54] *See also* Fl. Stat. ch. 379.372.
[55] Fl. Stat. ch. 379.305.
[56] Fl. Stat. ch. 379.4015.
[57] S. 1304 (2008).
[58] *See* Environmental Law Institute, FILLING THE GAPS: TEN STRATEGIES TO STRENGTHEN INVASIVE SPECIES MANAGEMENT IN FLORIDA (2004) (noting that, as of 2003, Florida had no such program).
[59] Specifically, ESCS collects and manages data on exotic species, issues recommendations on prevention and control actions, coordinates with other federal and state agencies and participates in interagency task forces,

develops monitoring, control, and reporting protocols, proposes rules, communicates species risks, and develops risk assessment protocols. FWC, *The Division of Habitat and Species Conservation* 4 (2005) (on file with author).
[60] Fla. Admin. Code r. 68A-4.005.
[61] Fla. Admin. Code r. 68A-4.0051.
[62] Fla. Admin. Code rr. 5C-26.001 – 26.004.
[63] Fla. Admin. Code rr. 5C-26.005 - 26.006
[64] Fla. Admin. Code r. 5C-26.007
[65] Fla. Admin. Code r. 5C-26.009.
[66] HB 471 (2006); Fl. Stat. ch. 379.28.
[67] Fl. Stat. ch. 379.26 (formerly 370.081; this section was repealed by SB 1304 (2008)).
[68] SB 1304 (2008)
[69] Fla. Admin. Code r. 68-5.001.
[70] Fl. Stat. ch. 20.331; *see also* HB 7173 (2007) (repealing Fl. Stat. ch. 370.025(4)).
[71] *See* Fla. Admin. Code r. 68-5.
[72] Fla. Admin. Code rr. 68A-4.005; 68A-23.008.
[73] *Id*.
[74] *Id.*
[75] Fl. Stat. ch. 597.004; S. 1702 (2008).
[76] Fla. Admin. Code r. 5L-3.004.
[77] Fl. Stat. ch. 369.20.
[78] Fl. Stat. ch. 369.22.
[79] *See* S. 1294 (2008).
[80] *See* Fla. Admin. Code r. ch. 68F.
[81] Fl. Stat. ch. 369.20; S. 1294 (2008).
[82] *Id*.
[83] *Id*.
[84] Fl. Stat. ch. 369.20; HB 1423 (2009).
[85] Fl. Stat. ch. 253.002; S. 1294 (2008).
[86] Fl. Stat. ch. 369.20(7).
[87] Fl. Stat. ch. 369.20.
[88] S. 1294 (2008); Fl. Stat. ch. 369.22.
[89] Fl. Stat. ch. 379.501.
[90] Fl. Stat. ch. 369.20; HB 1423 (2009).
[91] Fl. Stat. ch. 369.25; S. 1294 (2008).
[92] *Id*.
[93] *Id.*
[94] Fla. Admin. Code r. 5B-64. Note that some elements of the prior statutes, such as permit requirements for non-nursery cultivation only, are present in the regulations.
[95] Fla. Admin. Code r. 5B-3.003.
[96] Fla. Admin. Code r. 5B-3.003.
[97] Fla. Admin. Code r. 5B-3.003.
[98] Fla. Admin. Code r. 5B-3.003.
[99] Fla. Admin. Code r. 5B-3.003.
[100] Fla. Admin. Code r. 5B-57.007.
[101] Fla. Admin. Code r. 5B-57.010.
[102] Fl. Stat. ch. 581.091.
[103] Fl. Stat. ch. 581.091.
[104] Fla. Admin. Code r. 5E-4.0041.
[105] Fl. Stat. ch. 581.011.
[106] Fla. Admin. Code r. 5B-57.011.
[107] Fla. Admin. Code r. 5B-57.011.

[108] Fla. Admin. Code r. 5B-57.011.
[109] Fl. Stat. ch. 581.083; Fla. Admin, Code r. 5B-57.011.
[110] Fl. Stat. ch. 581.083.
[111] Fl. Stat. ch. 581.083.
[112] Fla. Admin. Code r. 5B-57.011.
[113] Fl. Stat. ch. 581.083.
[114] Fl. Stat. ch. 581.083.
[115] Applicable species include *Anastrepha spp.* (except *A. suspensa*), *Bactrocera spp*., *Dacus spp*., *Rhagoletis spp*., and *Ceratitis spp*.
[116] Fla. Admin. Code r. 5B-3.0035.
[117] Fla. Admin. Code r. 5B-3.0038.
[118] Fla. Admin. Code r. 5B-3.0038.
[119] Fl. Stat. ch. 581.184.
[120] *Id*.
[121] Fl. Stat. ch. 581.031.
[122] Fla. Admin. Code r. 5B-44; 5B-58.001; 5B-60.
[123] HB 255 (2009), Fl. Stat. ch. 570.345.
[124] Fl. Stat. ch. 388.261.
[125] Fl. Stat. ch. 388.281.
[126] Fl. Stat. ch. 388.361.
[127] Fla. Admin, Code r. 5E-13.021, 5E-13.032.
[128] Fla. Admin. Code r. 5B-54.003.
[129] *Id*.
[130] Fla. Admin, Code r. 5B-54.010; Fl. Stat. ch. 586.15.
[131] Fla. Admin. Code r, 5B-54.014.
[132] Fla. Admin. Code r. 5B-54.017.
[133] Fla. Admin. Code r. 5B-54.018.

Louisiana

Louisiana has made substantial changes to its invasive species laws and regulations since 2002. It has created an aquatic invasive species management plan and, by legislation, subsequently created an aquatic invasive species task force and council with an ongoing mandate to implement the plan. Legal and regulatory amendments include alteration of the details of several laws and regulations governing certain classes of wildlife, including creation of a new list of nuisance wildlife. The legislature and agencies also have amended provisions applicable to specific wildlife species and animal diseases. Louisiana also substantially amended the laws governing aquatic animals, including by amending the state list of exotic fish, creating a new list of domestic aquatic organisms for use in aquaculture, and creating new authorities, including a fund, for control of invasive, noxious aquatic plants. The state made more limited amendments have been made to the state's plant and plant pest provisions.

I. Invasive Species Councils and Plans

To date, Louisiana has not created a comprehensive invasive species council that addresses all categories of invasive species. However, it has created through legislation a new aquatic invasive species council and task force to implement the management plan adopted by the pre-existing governor's task force on aquatic invasive species.

In 2002, the governor issued an executive order creating the Louisiana Non-Indigenous Aquatic Nuisance Species Advisory Task Force. This task force was charged with creation of an aquatic nuisance species management plan. The management plan was completed by the deadline of July 1, 2003. The federal Aquatic Nuisance Species Task Force has approved the plan, qualifying Louisiana for federal funding.

In 2004, the Louisiana legislature enacted a bill creating two new bodies: Louisiana Aquatic Invasive Species Council (LAISC) and Louisiana Aquatic Invasive Species Task Force (LAISTF).[1] The legislature charged the Council with coordinating implementation of the management plan and its goals; coordinating and supporting state, regional, and national aquatic invasive species efforts; and identifying funding sources for aquatic invasive species activities. The Council is also required to submit to the legislature a status report on implementation of the management plan every two years. The new Task Force was directed to advise the Council through development of data and information related to aquatic invasive species, and management plan implementation and revision.[2]

The Secretary of the Department of Wildlife and Fisheries chairs LAISC. The other Council members include: the Governor; the Commissioner of Agriculture; the Secretaries of the Department of Natural Resources, Department of Environmental Quality, Department of Transportation and Development, Department of Health and Hospitals, Department of Culture, Recreation and Tourism; and the state superintendent of education.[3] Membership in LAISTF is established by statute and includes both government agency representatives and non-governmental entities.[4]

II. Wildlife

A. General Authority

Since 2002, Louisiana has altered its general wildlife authorities relevant to invasive species in several instances, including creating new emergency authority, limiting destruction of illegally-taken wildlife, and providing for destruction of wild quadrupeds that are causing either a nuisance or property damage.

First, the Secretary of the Wildlife and Fisheries Commission now is authorized to take any action necessary to protect the state's fish and wildlife resources upon declaration of an emergency. Actions taken pursuant to an emergency declaration remain in effect until seven days after the next Commission meeting.[5]

Second, it is illegal for any person to intentionally conceal, destroy, or deposit any fish, wildlife, or other animal illegally if that person knows or has reason to believe that such action could affect a criminal proceeding.[6] A violation of this provision is considered a Class Six offense and is punishable by a fine of $900 to $950, imprisonment for up to one hundred twenty days, or both. The offender must also forfeit to the Commission anything seized in connection with the violation.

Finally, the Department of Wildlife and Fisheries (DWF) amended its list of potentially dangerous wild quadrupeds, big exotic cats, and non-human primates. It is illegal to import, possess, purchase, or sell any listed species in Louisiana.[7] However, these restrictions do not apply to zoos accredited by the American Zoo Association, research facilities, circuses, those transporting listed animals through the state, and colleges and universities that use the animals as mascots. Non-accredited zoos and animal sanctuaries may apply for a permit to exempt them from this rule. A disabled person may also apply for a permit to exempt her or himself from the rule to allow her or himself to use a non-human primate to manage her or his disability.[8] Violations of the rules regarding big cats are considered Class Two offenses.[9] A first offense is punishable by a fine of $100 to $350, imprisonment for up to sixty days, or both. A second offense is punishable by a fine of between $300 and $550 and imprisonment for between thirty and sixty days. Subsequent offenses are punishable by a fine of between $500 and $750, imprisonment for between sixty days and ninety days, and forfeiture to the Commission of anything seized in connection with the violation.[10]

DWF also created a new list and authority relating to nuisance quadrupeds. No permit is required for any property owner to trap or shoot listed species of wild quadrupeds, provided that the species is a nuisance or is causing property damage. Listed species include coyotes, armadillos, nutria, beavers, skunks, and opossums.[11] To take these species, property owners have the burden to prove conclusively that an animal is creating a nuisance or causing property damage; although take can occur year-round, it must occur during daylight hours. In addition, no permit is required for live trapping and relocation of listed species, squirrels, rabbits, foxes, bobcats, mink, otter, muskrat, and raccoons.[12]

B. Miscellaneous Animals

1. Deer and Elk

It is illegal to import deer or elk into Louisiana. Transportation of deer or elk between licensed facilities within the state requires notice to DWF both prior to departure and upon arrival.[13] The Department is authorized to seize and euthanize illegally imported deer and elk. Illegally-possessed deer and elk originating in Louisiana can be either euthanized or placed with a licensed game breeder.[14]

2. Nutria

DWF launched the Coastwide Nutria Control Program in 2002 to incentivize the annual harvest of up to 400,000 nutria from Louisiana's coast. Louisiana trapping license-holders may apply to participate in the Program. Participants are paid for each tail harvested. The amount of the payment is set by the Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Task Force. Nutria may only be harvested from "permitted" property in coastal Louisiana during the open trapping season. They may be taken by any legal method except by non-steel shotgun ammunition, and their carcasses must be concealed such that birds are not able to feed on them. Violation of the nutria program regulations is considered a Class Two offense (see above).[15]

3. Venomous and Large Constricting Snakes

DWF has created a list of venomous and large constricting snakes that require a permit to possess in or import into Louisiana. Venomous snakes must be transported from field collection sites in secure containers. All restricted snakes must be kept in escape-proof enclosures with locking doors. If the enclosures are constructed below ground level they must be equipped with barriers to prevent visitors from falling in. Doors must remain locked at all times except when the animals are being fed or the cages are being cleaned or worked on. The permit requirement does not apply to animals kept by animal sanctuaries, zoos, aquariums, wildlife research centers, scientific organizations, or medical research facilities. A first violation of the permit will result in a five-year probationary period. A violation during the probationary period will result in a one-year suspension of the permit. A further violation will result in a five-year suspension of the permit. [16]

C. Shooting Preserves

It is legal for any person with a basic hunting license to hunt an unlimited number[17] of exotic animals on a licensed Supplemented Shooting Preserve at any time during the year during legal hunting hours.[18] For this section, "exotic animals" is defined as any member of the family Bovidae (except the Tribe Bovini [cattle]) or Cervidae not indigenous to Louisiana, including fallow, axis, red, and sika deer and black buck antelope.[19]

D. Animal Diseases

The State Livestock and Sanitary Board has been renamed the Board of Animal Health. The Board retains its authority to make and enforce rules to control, eradicate, and prevent the

introduction of Texas or tick fever and the fever-carrying tick (*Margaropus annulatus*) and all other animal diseases.[20]

The Department of Agriculture and Forestry (DAF) maintains a list of diseases that all veterinarians in Louisiana must report to the state veterinarian within 24 hours of diagnosis. If necessary to protect animal and poultry populations, the Department may quarantine involved and exposed animals and areas. Such quarantines remain in effect until the threat has been removed.[21] Owners who allow animals that are infected with contagious or communicable diseases to leave their enclosures are subject to modified penalties. Owners now may be fined between $300 and $1,000, imprisoned for between thirty and sixty days, or both.[22]

III. Aquatic Life

A. Fish

In 2003, the Louisiana legislature amended its statute governing exotic fish. The amendment expanded the list of exotic fish, which cannot be possessed, sold, or caused to be transported into the state without a permit from DWF.[23] In 2004, the legislature further amended the exotic species provisions by enacting a new regulation authorizing the Wildlife and Fisheries Commission to designate as exotic any species of fish not indigenous to Louisiana. The Commission is further authorized to regulate taking of exotic fish from state waters and to issue permits for that purpose.[24] DWF responded to its new authority in 2005 by promulgating a new regulation declaring as exotic fish Grass carp (*Ctenopharyngodon idella*), silver carp (*Hypophthalmichthys molitrix*), bighead carp (*Hypophthalmichthys nobilis*), and black carp (*Mylopharyngodon piceus*). The rule authorizes retention of these species as bycatch if caught in legal commercial fishing gear and declares that it is illegal to maintain, sell, barter, trade, or exchange live specimens of these species.[25]

A second substantial amendment to Louisiana's fish statutes occurred in 2008, when the legislature enacted HB 701.[26] This Act altered a variety of provisions of the state's fisheries laws. First, several definitions were relocated and amended. The Act relocated the state list of game fish species to the definitions section of the statutes.[27] It also consolidated categories of fish, including saltwater game fish and freshwater game fish within the definition of game fish, defined saltwater and freshwater commercial fish by reference to the game fish definition, and simplified the definition of recreational fish. The Act also introduced a new definition of "recreational purpose." Finally, it amended the definition of "domesticated fish" to include any fish approved by DWF and to remove a sentence excluding "bass, crappie, striped bass, bream, and tetra, as well as other exotic fish" from the definition.[28]

Second, the Act altered provisions governing possession of game fish. It remains illegal to purchase, sell, or exchange any game fish.[29] However, licensed seafood dealers now may import, purchase, or sell red drum, hybrid striped bass, and other game fish species approved by the Commission that were legally caught or "aquaculturally raised" outside the state. The Commission is authorized to regulate this trade in game fish.[30] These provisions amended the

Commission's prior authorization to issue permits authorizing residents to raise game fish species.

B. Aquaculture

In 2004, the legislature enacted a bill creating the Louisiana Aquaculture Coordinating Council (LACC). LACC is intended to develop the state's aquaculture industry by coordinating between the Department of Agriculture and Forestry and the Wildlife and Fisheries Commission, which share regulatory power over the aquaculture industry. LACC is housed within the Department of Agriculture and Forestry. It may issue recommendations on species suitable for aquaculture production, permitting criteria, and penalties.[31] The Wildlife and Fisheries Commission makes final determinations as to a species' suitability for aquaculture and may adopt regulations to prevent the species from harming the state's natural resources.[32]

The 2008 Act, discussed previously, substantially amended aquaculture governance. It eliminated aquaculture-specific definitions of 'agriculture,' 'cultivated crop,' 'livestock,' 'domesticated fish,' and 'privately owned waters.' The definition of domesticated fish was relocated, as previously discussed. These definitions were replaced by a legislative finding that "the introduction of nonnative aquatic organisms for … aquaculture presents a real threat to Louisiana's native species and their environments."[33] It then defined aquaculture for the purposes of the subpart as any activity associated with the possession, propagation, culture, management, transport, or marketing of domesticated aquatic organisms in a controlled environment, except for farm-raised catfish or crawfish. Domesticated aquatic organisms are defined as all domesticated fish listed in the statute and any fish listed by DWF as a domesticated aquatic organism.[34]

Following enactment of the statute, DWF promulgated a new regulation listing all "domesticated aquatic organisms" for use in aquaculture. The regulation includes a list of domesticated aquatic species that are approved for aquacultural use in Louisiana.[35] Any person can apply to DWF to add a species to the list. Upon receipt of an application, the Department will convene a technical committee to evaluate the application and issue a recommendation to the Secretary regarding its approval. The committee's evaluation must consider the potential risks the species under consideration presents to native species, habitats, and human health, as well as on the availability of measures to mitigate these risks.[36]

Having established a new category of domesticated aquatic organisms, the 2008 Act established a new permitting system. While it has long been illegal to engage in aquaculture without a certificate, it is now illegal to do so without a domesticated aquatic organism license.[37] Possession of a license authorizes transportation and sale of approved species in and from the state without registration as a seafood dealer. Licensed aquaculturists have been authorized to import certain game fish from certified out-of-state commercial fish hatcheries. These species include: rock bass, white bass, yellow bass, crappie, and bream fingerlings shorter than three inches; spotted bass and striped bass fingerlings shorter than ten inches; and largemouth bass of any size. These fish may be purchased to stock private ponds and approved public waters in Louisiana and may be sold by permitted residents.[38] DWF is authorized to

cancel sales or confiscate or destroy shipments of fingerlings that carry fish diseases or parasites that would endanger native fish populations. In addition, DWF may issue permits to residents to raise any type of bass, bream, and crappie for the purpose of sale to consumers for stocking of private ponds and lakes and approved public waters and for the purpose of selling to consumers in other states. No provisions, except those for game fish, apply to projects conducted by the Louisiana State University.[39]

In addition to the new domestic aquatic organism provisions, Louisiana has implemented new aquaculture facility inspection authorities since 2002. The Department of Agriculture and Forestry and the Department of Wildlife and Fisheries now may jointly inspect licensed aquaculture facilities and records during normal working hours. If any person is found guilty of violating any provision of the Louisiana Aquacultural Development Act (LADA)[40] or its regulations or any criminal violation, that person must reimburse the state for inspection costs incurred.[41] To prevent a violation or continued violation of any provision of the LADA or its regulations, the Department of Agriculture and Forestry commissioner may issue a stop order prohibiting the production, harvesting, distribution, sale, offer for sale, application, movement, or disturbance of any aquatic livestock or aquatic livestock products. The Commissioner may then release the stop order, order the cause for the stop order to be remedied, destroy the aquatic livestock or product, or provide for its disposition.[42]

C. Aquatic Plants

The Louisiana legislature created the Aquatic Plant Control Fund in 2002. The fund supports DWF's aquatic plant control program. In addition, it supports cooperative research and public education efforts concerning aquatic weed control and eradication by DWF and the Louisiana State University Agricultural Center.[43]

In 2006, the Louisiana legislature enacted HB 838, which amended the regulatory system for aquatic plants.[44] Under the new statute, DWF is responsible for regulating invasive, noxious aquatic plants that pose a threat to Louisiana's wildlife or fisheries resources to prevent their introduction and to control, eradicate, and prevent their spread or dissemination within the state.[45] The statute altered the standard of proof so that any import or transport of noxious plants is prohibited, regardless of knowledge. In addition, the plants to which the section applies are now listed as "invasive, noxious aquatic plants" rather than merely "noxious aquatic plants." The types of areas where such plants can grow were expanded to specifically include wetlands. Finally, the statute eliminated the statutory list of noxious aquatic plants but directed the Department to create and maintain a list of invasive, noxious aquatic plants.[46] In determining whether to list a plant, the Department must confer with the Department of Agriculture and Forestry to determine if regulated species are agriculturally important.[47]

As directed, DWF promulgated a list of invasive, noxious aquatic plants that includes a larger number of species than the previous statutory list.[48] The new regulation also makes it illegal to import, transport, or possess any listed aquatic plant into Louisiana without a permit. Permitted specimens may only be grown in controlled facilities, which must be sterilized after experimental work is completed. The permit-holder must notify the Department of Wildlife

and Fisheries one week prior to receiving or shipping regulated species. Department personnel may inspect facilities holding regulated species with 24 hours notice.[49]

IV. Plants

A. Noxious Weeds

Chinese tallow remains the sole noxious plant under Louisiana law. In addition, since 1990, the production of certified classes of sod requires a field to be left undisturbed for at least four weeks prior to planting and shown to be free of noxious and objectionable weeds.[50]

B. Seeds

In 2003, the Seed Commission's authority was expanded to include: holding hearings on alleged violations of regulations pertaining to seeds; advising the Agriculture and Forestry Commissioner on issuance of penalties; declaring plants to be weeds or noxious weeds, and in which parts of the state; and regulating the sale, distribution, movement, and use of weed seeds and noxious weed seeds.[51]

The Agriculture and Forestry Commissioner, or an authorized agent, may enter the premises of any person producing, processing, distributing, or selling seeds to obtain any information necessary for enforcing the regulations pertaining to seeds. The Commissioner may institute civil proceedings to enforce her or his orders and take any actions necessary to enforce the regulations pertaining to seeds.[52]

C. Highways

In 2000, the Louisiana Department of Transportation and Development issued guidelines for proper highway maintenance.[53] Unless state revenues are unavailable to fund the vegetation control policy, these regulations require herbicide application near roadsides two weeks prior to mowing to eliminate noxious grasses and weeds. Where herbicide use is restricted, hand trimming is required prior to mowing. Stands of wildflowers should not be sprayed unless absolutely necessary to control weeds.[54] If a strong weed or invasive grass population has become established in a wildflower area, it may be treated with contact herbicides or translocated herbicides to grant the wildflowers an advantage.[55]

V. Plant Pests and Diseases

A. Nurseries

Nurseries growing seedlings to be used for afforestation or reforestation must be inspected and found to be apparently free of pests, diseases, and noxious plants. Conifer or hardwood seedling shipments into or within the state for these purposes must bear a certificate issued by the Department of Agriculture and Forestry or the state of origin declaring them to be free of pests and diseases.[56]

B. Specific Plant Pests

1. Boll Weevil

In 2003 the Boll Weevil Eradication Commission was created within the Department of Agriculture and Forestry.[57] The Commission is authorized to conduct investigations and hold hearings on alleged violations of boll weevil regulations. It may create quarantines and eradication zones, and advise the Agriculture and Forestry Commissioner on boll weevil eradication and control within those areas. It may also regulate movement of regulated articles and set penalties for failure to pay assessments levied against cotton producers. The 2003 act also authorized DAF to enter property to conduct inspections, examine and copy records, and carry out suppression or eradication activities. DAF may also make final determinations and impose penalties relating to the violation of boll weevil regulations, and may institute civil proceedings to enforce boll weevil regulations.[58]

Finally, the entire state of Louisiana has been declared a single boll weevil eradication zone.[59] All cotton producers in the state are required to destroy cotton stalks in every field planted with cotton, on or before December 31 of each crop year, including stalks that come up in failed fields.[60]

C. Pest Control Compact

The Louisiana legislature enacted the Pest Control Compact into law in 2008.[61]

VI. Insects

A. Apiaries

Since 2002, the annual cost to register Class A and B apiaries has doubled for every interval of colony ownership.[62]

B. Fire Ants

Since 1960, Louisiana has regulated fire ants.[63] The Department of Agriculture and Immigration maintains a list of quarantined parishes in Louisiana, which are designated as such by the State Entomologist and approved by the Commissioner of Agriculture and Immigration. Department of Agriculture and Immigration agents may enter any premises in quarantined parishes to determine whether fire ants are present and to control or eradicate ants, using any method approved by the State Entomologist.[64] Regulations promulgated by the State Entomologist and approved by the Commissioner of Agriculture and Immigration include a list of regulated products[65] that may only be moved within or between quarantined areas if accompanied by a certificate.[66] The State Entomologist may inspect any shipment of regulated articles[67] and may cancel certificates upon a determination that the shipment may aid the spread of fire ants.[68] The Department may confiscate, destroy, or otherwise dispose of regulated products that are held, moved, or sold in violation of the quarantine.[69] When the Department gives prior notice that it will treat an area to control for fire ants, it is not responsible for the death of livestock, bees, or plants resulting from the treatment.[70]

[1] While the original executive order has not been amended or repealed, the governor's task force is no longer active, as the new entities largely replaced it.

[2] La. Rev. Stat. §56.360.3.
[3] La. Rev. Stat. §56.360.1.
[4] La. Rev. Stat. §56.360.2.
[5] La. Rev. Stat. §56:2(D).
[6] La. Rev. Stat. §56:16.
[7] La. Admin. Code tit. 76, §5:115.
[8] La. Admin. Code tit. 76, §5:115.
[9] La. Rev. Stat. §56:6.
[10] La. Rev. Stat. §56:32.
[11] This list is independent from other lists of wild quadrupeds and applies solely to this provision.
[12] La. Admin. Code tit. 76, §5:125.
[13] La. Admin. Code tit. 76, §5:117 (B).
[14] La. Admin. Code tit. 76, §5:121 (B).
[15] La. Admin. Code tit. 76, §5:123.
[16] La. Admin. Code tit. 76, §15:101 (K).
[17] La. Admin. Code tit. 76, §19:111 (C).
[18] La. Admin. Code tit. 76, §19:103 (F).
[19] La. Admin. Code tit. 76, §19:111 (C).
[20] La. Rev. Stat. §3:2093.
[21] La. Admin. Code tit. 7, §21:121.
[22] La. Rev. Stat. §3:2133.
[23] La. Rev. Stat. § 56:319. Acts 2003 No. 91.
[24] La. Rev. Stat. §56:319.2; Acts 2004, No. 98.
[25] La. Admin. Code tit. 76, §7:199.
[26] Acts 2008, No. 23.
[27] La. Rev. Stat. §56:8. The list was previously located at La. Rev. Stat. §56:327 (A).
[28] *Id*.
[29] La. Rev. Stat. § 56:327(A)(1).
[30] La. Rev. Stat. § 56:327(A)(2).
[31] La. Rev. Stat. §3:559.6
[32] La. Rev. Stat. §3:559.6.
[33] La. Rev. Stat. § 56:411.
[34] *Id*.
[35] La. Admin. Code tit. 76, §7:905
[36] *Id*.
[37] La. Rev. Stat. § 56:412.
[38] La. Rev. Stat. §56:412
[39] *Id*.
[40] La. Rev. Stat. § 3:559.1 et seq.
[41] La. Rev. Stat. §3:559.9
[42] La. Rev. Stat. §3:559.10
[43] La. Rev. Stat. §56.10.1
[44] Acts 2006, No. 400.
[45] La. Rev. Stat. §56.328 (C)
[46] La. Rev. Stat. §56.328 (B)
[47] La. Rev. Stat. §56.328 (D)
[48] La. Admin. Code tit. 76, §7:1101 (B)
[49] La. Admin. Code tit. 76, §7:1101
[50] La. Admin. Code tit. 7, §13:219 (B). This rule predates *Halting the Invasion* but was not included in the original publications. We include it here for completeness.
[51] La. Rev. Stat. §3:1433

[52] La. Rev. Stat. §3:1435
[53] La. Admin. Code tit. 70, §1:303
[54] La. Admin. Code tit. 70, §1:303
[55] La. Admin. Code tit. 70, §1:311. This rule predates *Halting the Invasion* but was not included in the original publications. We include it here for completeness.
[56] La. Admin. Code tit. 7, §15:132
[57] La. Rev. Stat. §3:1604
[58] La. Rev. Stat. §3:1604.1
[59] La. Admin. Code tit. 7, §15:314
[60] La. Admin. Code tit. 7, §15:327
[61] La. Rev. Stat. §3:3396.1
[62] La. Rev. Stat. §3:2305
[63] This rule predates *Halting the Invasion* but was not included in the original publications. We include it here for completeness.
[64] La. Admin. Code tit. 7, §21:2705
[65] La. Admin. Code tit. 7, §21:2709
[66] La. Admin. Code tit. 7, §21:2711
[67] La. Admin. Code tit. 7, §21:2715
[68] La. Admin. Code tit. 7, §21:2717
[69] La. Admin. Code tit. 7, §21:2723
[70] La. Admin. Code tit. 7, §21:2719

Maine

Since 2002, Maine has primarily amended and developed its programs related to aquatic invasive species. The state completed an aquatic invasive species management plan and the state aquatic invasive species task force is currently revising that plan. In addition, Maine repealed and replaced its laws and the Department of Inland Fisheries and Wildlife regulations governing wildlife and aquatic species. New laws were developed in 2001 to prevent the spread of aquatic plants through recreational vessel inspection and inspection authority, public education, and a new funding mechanism. The state has made a limited number of specific amendments to its legal authorities governing plants, plant pests and diseases, and insects.

I. Invasive Species Councils and Plans

Although the status of Maine's invasive species councils has changed little since 2002, the existing interagency groups have advanced planning efforts for aquatic invasive species management.

The Interagency Task Force on Invasive Aquatic Plants and Nuisance Species, which was established by legislation in 2001, remains in force. In 2002, as directed by statute, the Task Force created an Action Plan for Managing Aquatic Invasive Species.[1] The Action Plan was approved by the Governor's Land and Water Resources Council in October, 2002, and by the Federal Aquatic Nuisance Species Task Force in November, 2002.[2] The Task Force is currently reviewing and revising the Plan.

The Maine legislature created the Integrated Pest Management Council in 2001 within the Department of Agriculture, Food, and Rural Resources. The Council is administered jointly by the Department and the University of Maine Cooperative Extension Pest Management Office,[3] which must together appoint the 11 Council members. The Council meets at least twice a year to facilitate, promote, expand, and enhance integrated pest management adoption in all sectors of pesticide use and pest management within the State, and reports annually to the legislature on findings. The Commissioner shall credit funds from any source to the Integrated Pest Management Fund for the purpose of developing and implementing integrated pest management programs.[4]

Other pre-existing initiatives have not advanced. Maine created an Invasive Species Council as of 2002, but the Council has been and remains inactive. In addition, the Invasive Species Awareness and Prevention Plan, a plant-oriented plan developed by the Natural Areas Program of the Department of Conservation, has not been endorsed or implemented by state agencies or programs.

II. Wildlife

In 2003, the legislature repealed the laws governing the Department of Inland Fisheries and Wildlife (DIFW) in their entirety and replaced them with a newly-enacted Part of the revised

statutes.[5] In addition, DIFW replaced its wildlife regulations. Due to the complexity of Maine's alterations, this section does not attempt to separate amended provisions from pre-existing language that has been moved to a new location. Instead, this section discusses all relevant legal authorities as currently in force.

A. Non-Native Wildlife

In 2001, DIFW repealed and replaced its Regulations for Wildlife in Captivity to clarify the requirements for possessing and importing wildlife.[6] The revised regulations continue to require a permit to import into Maine any species of wildlife except for wildlife species designated "unrestricted" by the Commissioner and wildlife in continuous transit through Maine.[7] The Department may deny a permit if the animal would unreasonably threaten a wildlife population or the public welfare or if the applicant is not qualified or lacks a legitimate purpose or methodology for possession of the animal.[8] The Commissioner must consider certain factors when determining whether to issue an importation permit. These factors are established in the Department's regulations, and include: likelihood of survival if introduced into the wild, history of adverse environmental impacts in other places, possibility of harboring harmful agents, possibility of inflicting serious bodily harm to humans, and whether the applicant furnished the Commissioner with an interstate health certification of veterinary inspection.[9]

In addition to importation, current regulations require permits to exhibit, possess, propagate, rehabilitate, and collect for scientific purposes any wildlife.[10] The Commissioner may set special permit conditions to mitigate potential impacts on, or from, wildlife, and to ensure the welfare of captive wildlife.[11] Wildlife held in captivity must be contained, controlled, and sheltered so as to protect the wildlife itself, others' property, and public health and safety.[12] Permit applications must be accompanied by a written Emergency Plan for use in case of damage to enclosures due to fire, wind, or floods; animals attacking and/or injuring humans, other animals or property; and escape of any captive animal. The plan must include an updated list of dangerous wildlife in captivity, the availability of capture equipment, and weapons with detailed instructions on how to destroy dangerous wildlife. Local police or the local game warden must be immediately notified if a dangerous animal escapes.[13] If an animal escapes or is released, the permittee is responsible for all costs that the State incurs in confiscating the animal. The Commissioner may require the posting of a bond or other financial security for this purpose.[14]

No wildlife bearing an importation permit may be housed in, displayed, sold, or traded by a pet shop.[15] No primates may be granted an importation permit, except to provide therapeutic, emotional, or handicapped aid.[16] Authorized Department personnel and animal welfare agents may inspect wildlife facilities at all reasonable times.[17]

DIFW regulations, also now require the Commissioner appointment of a Technical Consulting Committee to provide advice regarding proposed wildlife possession and importation permits.[18] The Committee must include a representative from the Department's Bureau of Resource Management, the State Animal Welfare Board, the State Veterinarian, a current

wildlife possession permit holder, and 3 individuals with training or experience in wildlife conservation, vertebrate zoology, veterinary medicine, herpetology, or the husbandry of captive wildlife.[19] However, it is unclear whether such a committee has actually been established.[20]

Finally, the Commissioner may take or import fish and wildlife for scientific purposes, or authorize others to do so. The Commissioner may also take or import wild animals or birds of any kind, dead or alive, for the purpose of inspection, cultivation, propagation, distribution, or other purposes she or he considers to be of interest to the game industry.[21]

III. Aquatic Life

A. Aquatic Animals

As noted above, the Maine legislature repealed and replaced state laws authorizing DIFW. This change applied to the Department's authority over aquatic animals as well as over wildlife. As previously, we review the relevant statutory authority as currently in force.

Current law requires a permit to introduce live fish to inland waters and private ponds.[22] A permit is also required to introduce, import, or transport any live fish or gametes, or to possess such fish or gametes. Violation of these permits is considered a Class E crime, and is punishable by a fine of between $1,000 and $10,000. It also is illegal to import live fish that are commonly used for bait fishing in inland waters, including smelts. Violators are subject to a $20 fine for each fish unlawfully possessed.[23]

DIFW may issue a permit to introduce, import, or transport live fish or fish gametes, or to possess such fish or gametes if, after evaluating fish health, habitat, and population management issues, it determines that the species does not pose an unreasonable risk to other species of fish or other organisms.[24] Pursuant to the same criteria, DIFW may adopt rules allowing aquaria to possess and import certain species of tropical fish and goldfish without a permit.[25]

It is illegal to import or sell frozen or fresh salmon, brook trout, rainbow trout, lake trout, brown trout, or any member of the family Salmonidae whose source is outside of the continental United States, Canada, Alaska, or their adjacent waters. Violation of this provision is a civil violation punishable by a fine of between $100 and $500. Any violation beyond the first three within a 5-year period in considered a Class E violations and is punishable by a fine of up to $1,000.[26]

If an invasive fish species is illegally introduced and the Commissioner of Inland Fisheries and Wildlife determines it necessary for resource protection and management, the Commissioner may authorize licensed anglers to assist in taking and destroying the invasive fish species.[27]

B. Aquaculture

Maine has altered its aquaculture leasing law since 2002. For example, all finfish pen culture lease sites now must be located at least 2,000 feet from any other finfish lease site located in Maine waters.[28] However, key provisions governing invasive species remain unchanged. As in 2002, a lease is required to conduct aquaculture activities in state waters.[29] The Commissioner of Marine Resources issues leases. In determining whether to issue a lease, the Commissioner must consider the source of the lessee's proposed organisms to be cultured and whether the lease would interfere with the ability of the area to support ecologically significant flora and fauna.[30] The requirements for consideration of invasiveness are unchanged. The Commissioner may condition lease approval on reasonable requirements such as specific stocking limits, feeding requirements, or methods of husbandry, and environmental monitoring.[31] The importation of live animals is still subject to the permitting requirements of the Department of Marine Resources.[32]

C. Aquatic Plants

In 2001, the legislature enacted a law directing the Departments of Environmental Protection (DEP) and Inland Fisheries and Wildlife to prevent the spread of aquatic plants. The Departments are required to conduct a watercraft inspection program. Inspections are voluntary and may occur at or near Maine's borders and at boat launching sites on inland lakes for the presence of invasive aquatic plants. They must also provide educational materials to the public regarding invasive aquatic plants.[33]

The program consists of several components, including the Courtesy Boat Inspection (CBI) Program and a cost share program. CBI completed its 8th year in 2008.[34] Trained Courtesy Boat Inspectors describe to boaters the risk posed by invasive aquatic plants and show boaters how to inspect and remove vegetation from boating and fishing equipment. DEP contracts with Lakes Environmental Association to train volunteers and organize the inspections. In addition to CBI, cost-share grants are available to local governments, individuals, and organizations both for locally-initiated boat inspection programs and manual removal of invasive aquatic plants.[35]

In supplement of its educational inspection programs, Maine enforces penalties to encourage boaters to inspect their vessels. As in 2002, a person who places a watercraft contaminated with a listed invasive aquatic plant on inland waters is guilty of a civil violation and subject to a fine of between $500 and $5,000. Any person who violates this provision more than three times within five years is guilty of committing a Class E violation.[36] In addition, it is illegal not only for a person to transport any aquatic plant on the outside of a vehicle or boat on a public road and is illegal to possess, import, cultivate, transport or distribute any invasive aquatic plant or part thereof in a manner that could cause the plant to get into any state waters or to sell or offer for sale any invasive aquatic plant, or to fail to remove any invasive aquatic plant or plant parts from the outside of any watercraft on a public road.[37] Violators of these provisions may be subject to civil penalties of up to $500 for the first violation and up to $2,500 (previously $5,000) for subsequent violations.[38] Also, as in 2002, any person who intentionally or recklessly violates any provisions administered by DEP will be fined between $2,500 and $25,000 for each

day of the violation.[39] Any person who violates any Department provisions may be fined between $100 and $10,000 for each day of the violation, regardless of intent.[40]

As in 2002, the Invasive Aquatic Plant and Nuisance Species Fund funds DEP's enforcement of laws pertaining to aquatic plants, boat inspections, educational programs, eradication and management activities, invasive aquatic plant prevention activities, and production and distribution of lake and river protection stickers.[41] The corpus of the Fund is derived from the sale of[42] lake and river protection stickers issued to non-residents[43], a portion of the watercraft registration fee for Maine registered watercraft, and appropriations. The Lake and River Protection Fund serves a similar purpose within DIFW, as it is used for enforcing laws pertaining to invasive aquatic plants, inspecting watercraft for invasive aquatic plant materials, educational and informational efforts targeted at invasive aquatic plant prevention, eradication and management activities and the production and distribution of lake and river protection stickers.[44] It is funded from the same sources as the Aquatic Plant and Nuisance Species Fund.

Since 2002, the Lake and River Protection Sticker for Maine registered boats was combined with the Maine watercraft registration to save administrative costs of administering a separate sticker. Lake and river protection stickers are required on all watercraft. Failure to have a valid sticker is a civil violation, subject to a fine of between $100 and $250.[45] A municipality may appoint a harbor master to enforce this requirement[46] on any water within the municipality's jurisdiction.[47] Municipal harbor masters may also enforce the prohibition on placing watercraft contaminated with an invasive aquatic plant upon inland waters of the State.[48]

DEP and DIFW may jointly issue an emergency order restricting or prohibiting watercraft use on a water body that has been infested with aquatic invasive plants *and* now may require that watercraft be inspected and cleaned at sites that have been identified in the order.[49] Inspections must be conducted by designated state boat inspectors employed by the State and identified as qualified to properly conduct inspection activities by DEP or DIFW.[50] If the infested body is a public drinking water supply, chemical control agents cannot be used on it for invasive species control until the state both notifies the public and obtains prior written consent from each public water supplier using that water body.[51]

D. Water Quality

DEP has new authority to issue water discharge licenses for direct discharge of aquatic pesticide or chemical discharges into waters having a drainage area of less than 10 square miles, tributaries of Class-GPA waters, or Class AA waters if DEP or DIFW find that such discharge is necessary to restore biological communities affected by an invasive species.[52]

IV. Plants

A. General Authority

In May, 2007, Maine enacted a resolve directing the Maine Department of Agriculture, Food and Rural Resources (MDA) to study invasive terrestrial plant species in order to develop a process, with criteria, for listing potentially-invasive terrestrial plant species that could impact

natural ecosystems in Maine. Plants evaluated using this system would be those that are commercially distributed and not necessarily weeds on the landscape. The Commissioner of MDA appointed a committee to study the issue and a report was presented to the legislature in February, 2008.[53] The report notes that its criteria stress prevention and the need to address potentially invasive plants not currently established in Maine. In addition, it noted the time-intensive nature of applying the criteria to each species and the concomitant need for funding for this purpose.

The Natural Areas Program (MNAP), part of the Department of Conservation, conducts an ongoing, statewide inventory of Maine's natural areas in regard to species, ecosystems, and physical features.[54] MNAP completed the Invasive Plant Survey Atlas of Maine in 2002 and distributed it amongst district offices.[55] MNAP's current invasive plant program depends on funding availability and thus has been discontinuous.

B. Seeds

Maine's seed potato provisions specify that no seed potatoes grown outside Maine may be sold in Maine unless the seed meets Maine certified seed potato standards.[56] The upper limit of the civil penalty for violation of this provision has been reduced to $500 from $800.[57]

C. Wetlands Plants

An individual permit is not required to alter freshwater wetlands to cultivate cranberries as long as certain provisions are met. A new provision prohibits the introduction of non-indigenous cranberry plants to the project site.[58]

Under the Maine Natural Resources Protection Act (NRPA), a permit from the Land Use Regulation Commission is required to carry out listed activities occurring in, on, or over a protected natural resource or next to certain valuable coastal and freshwater wetlands.[59] The Act specifically prohibits issuance of a permit to plant non-native wetland plants in disturbed areas of NRPA wetlands.[60]

V. Plant Pests and Diseases

A. General Authority

Maine has not amended its plant pest or disease authority relevant to invasive species. However, regulations are being completed to address gypsy moths and European larch canker.

B. Pest Control Compact

In 2005, Maine enacted enabling legislation acceding to the Interstate Pest Control Compact.[61]

VI. Insects

Maine has not updated its laws or regulations related to insects.

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[1] Me. Rev. Stat. tit. 38, § 1872 (2009).

[2] As a result of federal approval, Maine is eligible for federal funds to prevent the introduction and spread of invasive aquatic species. Maine Department of Environmental Protection, *Interagency Task Force on Invasive Aquatic Plants and Nuisance Species*, *at* http://www.maine.gov/dep/blwq/topic/invasives/interagency_task_force/index.htm.
[3] Me. Rev. Stat. tit. 7, § 2404.
[4] Me. Rev. Stat. tit. 7, § 2405.
[5] 2003 Me. Laws Ch. 414. Me. Rev. Stat. tit. 12, §§ 7001-7954 were repealed and replaced with 12 Me. Rev. Stat. §§ 10001-13201.
[6] *See* Code Me. R. § 09-137-7 (2009). Code Me. R. § 7.60, listed in *Halting the Invasion,* is no longer the primary relevant regulation for wildlife importation permitting.
[7] Code Me. R. §§ 09-137-7.00, 9-137-7.01, 9-137-7.51; Me. Rev. Stat. tit. 12, § 10105 (2009) (formerly Me. Rev. Stat. tit. 12, § 7735, repealed in 2004).
[8] Code Me. R. § 09-137-7.07.
[9] Code Me. R. § 09-137-7.51. The health certification should contain information on point or origin, destination, and appropriate test results on or statements about possible diseases.
[10] Code Me. R. §§ 09-137-7.20, 7.30, 7.40, 7.60.
[11] Code Me. R. § 09-137-7.08.
[12] Code Me. R. § 09-137-7.08.
[13] Code Me. R. § 09-137-7.08.
[14] Code Me. R. § 09-137-7.08.
[15] Code Me. R. § 09-137-7.04.
[16] Code Me. R. § 09-137-7.33
[17] Code Me. R. § 09-137-7.06.
[18] Code Me. R. § 09-137-7.03.
[19] Code Me. R. § 09-137-7.03.
[20] *See* Maine Dep't of Inland Fisheries and Wildlife Webpage, Commissioner's Office, http://www.maine.gov/ifw/commissioners_office/index.htm (last viewed Aug. 6, 2009).
[21] Me. Rev. Stat. tit. 12, §10105 (2009) (formerly Me. Rev. Stat. tit. 12, § 7735, repealed in 2004).
[22] Me. Rev. Stat. tit. 12, §§ 12510, 12511.
[23] Me. Rev. Stat. tit. 12, § 12556 (2005) (formerly Me. Rev. Stat. tit. 12, § 7613, repealed in 2004).
[24] Me. Rev. Stat. tit. 12, § 12509.
[25] Me. Rev. Stat. tit. 12, § 12509, Code Me. R. § 09-137-2.03.
[26] Me. Rev. Stat. tit. 12, §12610.
[27] Me. Rev. Stat. tit. 12, § 10105. Added by 2005 Me. Laws ch. 470, § 1; 2007 Me. Laws ch. 73, § 1.
[28] Code Me. R. § 13-188-002.10.
[29] Me. Rev. Stat. tit. 12, § 12507.
[30] Me. Rev. Stat. tit. 12, § 6072, Code Me. R. § 13-188-24.03.
[31] Code Me. R. § 13-188-002.37.
[32] Code Me. R. § 13-188-024.
[33] Me. Rev. Stat. tit. 38, § 1862(1).
[34] Maine Department of Environmental Protection, *Courtesy Boat Inspections*, *at* http://www.maine.gov/dep/blwq/topic/invasives/inspect.htm.
[35] Maine Department of Environmental Protection, *Invasive Aquatic Plants Cost Share Grants*, *at* http://www.maine.gov/dep/blwq/docgrant/invasive/index.htm.
[36] Me. Rev. Stat. tit. 12, § 13068-A (formerly Me. Rev. Stat. tit. 12, § 7801, repealed in 2004).
[37] Me. Rev. Stat. tit. 38, § 419-C.
[38] *Id*.
[39] Me. Rev. Stat. tit. 38, § 349.
[40] *Id.*
[41] Me. Rev. Stat. tit. 38, § 1863.
[42] Me. Rev. Stat. tit. 12, § 102026. 60% of the fees go to the Fund and 40% go to Lake and River Protection Fund.

[43] Me. Rev. Stat. tit. 12, § 13058(3).
[44] Me. Rev. Stat. tit. 12 § 10257.
[45] Me. Rev. Stat. tit. 12, § 13058.
[46] Me. Rev. Stat. tit. 12, § 13058.
[47] Me. Rev. Stat. tit. 12, § 13072.
[48] *See* Me. Rev. Stat. tit. 12, § 13068-A.
[49] Me. Rev. Stat. tit. 38, § 1864.
[50] *Id.*
[51] Me. Rev. Stat. tit. 38, § 1865 (formerly within § 1864).
[52] Me. Rev. Stat. tit. 38, §§ 464, 465, 465-A.
[53] MDA, Report to the Second Regular Session of the 123rd Legislature: Resolve 2007, Chapter 21 (2008), *available at* http://www.maine.gov/agriculture/pi/horticulture/InvasivePlants.htm.
[54] Me. Rev. Stat. tit. 12, § 544.
[55] Maine Natural Areas Program, *Invasive Plants*, *at* http://www.maine.gov/doc/nrimc/mnap/features/invasives.htm.
[56] Me. Rev. Stat. tit. 7, § 2101.
[57] Me. Rev. Stat. tit. 7, § 2105.
[58] Me. Rev. Stat. tit. 38, § 480-U.
[59] Me. Rev. Stat. tit. 38, § 480-D.
[60] Code Me. R. § 06-096-305.
[61] 2005 Me. Laws ch. 147.

Maryland

Maryland has made limited changes to its invasive species programs since 2002. It has not amended its coordination programs or developed management plans for any taxa. Most of the state laws and regulations relating to invasive species also have remained static in recent years. However, Maryland has strengthened its legislative tools for the control of aquatic invasive species. In particular, the state introduced new provisions for control of "nonnative aquatic organisms." As a result, the Department of Natural Resources now has a tiered listing system for non-native species and has new inspection authorities to prevent adverse impacts on state waters. Other changes include repeal of the Ballast Water Management provisions in 2005 and specific regulations for non-native aquatic species. The state has not significantly amended its laws or regulations for plants or plant pests and diseases, although it has issued a quarantine for emerald ash borer.

I. Invasive Species Councils and Plans

The Maryland Invasive Species Council[1], which was established in 2000, continues in its mission to provide leadership on invasive species issues and to encourage "efforts that prevent the introduction of, and manage the impact of, invasive species on Maryland ecosystems."[2] However, this open membership organization is not authorized by statute. There is no statewide comprehensive plan to address invasive species. However, the state has established a multi-agency Emergency Response Plan for Invasive Forest Pests, last revised in 2005.[3]

II. Wildlife

Maryland law now requires the Department of Natural Resources (MDNR) to create a program to control mute swans.[4] The Department has issued a new Regulation that restricts the possession and prohibits the trade of mute swans.[5] It is a violation of the Regulation to release any mute swan to the wild. A permit for the possession of a mute swan may be granted through 8/31/09.[6] Permittees must render mute swans incapable of flight, addle or destroy their eggs, mark them with a leg band and submit an annual report.[7] Permitees also must notify the Department within 48 hours of learning of any escape to the wild.[8]

In lieu of or in addition to any other penalty, an administrative penalty of up to $10,000 may now be imposed for violating any of the provisions which relate to the regulation of livestock and poultry.[9] All such penalties are to be distributed to a new Animal Health Fund,[10] which has been established for the purpose of defraying the cost of issuing orders, conducting site visits and animal testing to prevent the spread of contagious or infectious diseases.[11] An injunction may now be sought for the violation (or anticipated violation) of a quarantine order, or any of the provisions relating to the regulation of diseased livestock and poultry.[12] Provision has also been made for the regulation of poultry to control avian influenza.[13]

A new Regulation provides that a person may not transport a live cervid (deer, moose, elk) into or out of the State or transport, move, or possess a live cervid within the State, except for

transportation for zoological purposes or possession in accordance with a game husbandry license.[14]

III. Aquatic Life

A. Aquatic Wildlife

There have been significant additions to the legislation and regulations governing the control of non-native aquatic organisms. In particular, the Department of Natural Resources is authorized to promulgate regulations to prohibit the importation, possession, or introduction into State waters of a non-native aquatic organism "in order to prevent an adverse impact on an aquatic ecosystem or the productivity of State waters"[15] and to "manage the sale, transport, purchase, importation, possession…, and introduction of nuisance organisms."[16] "Nonnative" means "other than naturalized."[17] "Nuisance organism" is defined as "a nonnative aquatic organism that will foreseeably alter and threaten to harm the ecosystem or the abundance and diversity of native or naturalized fish and other organisms."[18] New powers of inspection have been provided to allow for the inspection of property to determine if a "state of nuisance" exists and to seize and dispose of a nuisance organism that has created, or will foreseeably create, a state of nuisance.[19] A procedure provides for the summary abatement of a declared state of nuisance (where it presents an imminent danger to the healthy balance of an ecosystem)[20] or for the service of a notice on the person determined to have caused the state of nuisance requiring them to take steps to abate it.[21] A person who violates any of these provisions is guilty of a misdemeanor and is subject to imprisonment for a period not exceeding 30 days, a fine not exceeding $2,500, or both.[22]

Legislation has been enacted enabling the adoption of regulations to limit or prohibit the importation, use, catching, or possessing of the green crab, the Japanese shore crab and the Chinese mitten crab, "which are determined to be harmful to the ecology and natural resources of the state."[23]

The legislature also enacted a new statute prohibiting the introduction of a non native oyster without a permit.[24] Violation is a misdemeanor punishable by a term of imprisonment of up to 2 years, a fine not exceeding $25,000 or both.[25] In addition, the court may impose a civil penalty of up to $25,000 and, at its discretion, the actual costs associated with remediation of the introduction.[26] MDNR may not introduce, or issue a permit to another person for the introduction of a non-native oyster unless certain scientific standards are met, and the proposal has been reviewed by an independent oyster advisory panel.[27] Public hearings must be conducted prior to any decision by MDNR to introduce, or permit the introduction of, a non-native oyster.[28]

A person may not introduce into State waters any transgenic aquatic organism.[29] New Regulations also prohibit the release into state waters of certain non-native fish and aquatic plant species (list "A" species).[30] Subject to limited exceptions, a permit is required to import, transport, purchase, possess, propagate, or sell list "A" species or to transport other named non-native fish and aquatic plant species (list "B" species).[31] Such permits will be granted only

if satisfactory proof is presented that the organism is free of a communicable disease.[32] Permitted non-native aquatic organisms must be held only in a secure facility from which escape into state waters is not possible.[33]

Under a new Regulation, a person may not place or attempt to place upon or into State waters a watercraft or associated equipment with attached or contained aquatic plants, zebra mussels, or other prohibited species of non-native organisms.[34] Water taken from waters infested by prohibited non-native species may not be diverted, appropriated, or transported on public roads except: in an emergency declared by appropriate local or State authorities, such as a fire emergency; as specified in water appropriation or public waters work permits; or under a permit issued by the Secretary of Natural Resources.[35]

Except as authorized by 50 C.F.R. Part 16, a person may not import, transport, or introduce into the State any live fish or viable eggs of snakehead fish of the Family Channidae.[36] In addition, a person may not sell or breed live snakehead fish of the Family Channidae in the State[37] and, unless a permit has been issued for the possession of a live snakehead for scientific purposes, the possession of the viable eggs or live fish of the blotched snakehead or northern snakehead species is prohibited.[38]

Finally, in 2009, the legislature created a new section standardizing MDNR's authority to revoke or suspend licenses and permits issued under section 4 ("Fish and Fisheries") of the natural resources law.[39] The legislature simultaneously repealed other sections that previously dealt with revocation of licenses or permits.[40]

B. Bait

In 2008, the Maryland legislature enacted a new section requiring MDNR to promulgate regulations defining which species may be harvested, imported, transported, sold, or used as bait.[41] The law also repealed the provision requiring live bait dealers in Montgomery, Frederick or Washington counties to be licensed.[42]

Subsequently, MDNR issued emergency regulations, now permanent, pertaining to the catch, possession and use as bait of crayfish. This regulation prohibits a person who is fishing in the Middle Potomac River, Upper Potomac River, and Susquehanna River basins from catching and possessing "any species of crayfish unless the head is immediately removed behind the eyes upon capture," using "any species of crayfish as bait unless the head is removed behind the eyes," possessing "any species of crayfish while fishing unless the head is removed behind the eyes," or catching and possessing "an egg-bearing female with egg attached to the underside of the abdomen."[43] The rusty crayfish (*Orconectes rusticus*) was also placed on the prohibited species list prior to its discovery in the state in 2007.[44]

C. Fee Fishing

There have been no significant relevant changes to Maryland laws or regulations relating to invasive species and fee fishing.

D. Aquatic Plants

See above discussion under "Aquatic Wildlife" for general authorities. Under the new Regulations (prohibited/restricted species), List "A" includes giant salvinia and green caulerpa seaweed and list "B" includes Brazilian elodea, hydrilla, parrot feather, and water chestnut.[45]

E. Ballast Water

As a consequence of the U.S. Coastguard's modification to their regulations to require all ships that cross their boundaries (including ships originating from domestic ports) to file ballast water management reports, the Ballast Water Management provisions were repealed in 2005.[46]

IV. Plants

There have been no significant relevant changes to Maryland laws or regulations relating to invasive plant species.

V. Plant Pests and Diseases

The Maryland Department of Agriculture issued a quarantine order for emerald ash borer in 2004 and updated it in 2007 and 2008.[47] There have been no other relevant changes to Maryland laws or regulations relating to plant pests and diseases since 2002.

VI. Insects

There have been no significant relevant changes to Maryland laws or regulations relating to insect species.

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[1] http://mdinvasivesp.org
[2] *Id.*
[3] Maryland Department of Agriculture, *Maryland's Emergency Response Plan for Invasive Forest Pests*, *at* http://www.mda.state.md.us/plants-pests/forest_plan/title.html.
[4] Md. Code Ann., Nat. Res. § 10-211.
[5] Md. Regs. Code tit. 8, § 03.09.13.
[6] *Id.*
[7] *Id*.
[8] *Id.*
[9] Md. Code Ann., Agric. § 3-116.
[10] *Id.*
[11] Md. Code Ann., Agric. § 3-117.
[12] Md. Code Ann., Agric. § 3-119.
[13] Md. Code Ann., Agric. §§ 3-801-805.
[14] Md. Regs. Code tit. 8, § 03.09.12.
[15] Md. Code Ann., Nat. Res. § 4-205.1.
[16] *Id*.
[17] *Id.*
[18] *Id.*
[19] *Id.*
[20] *Id.*

[21] *Id.*
[22] *Id.*
[23] Md. Code Ann., Nat. Res. § 4-816.
[24] Md. Code Ann., Nat. Res. § 4-1008.
[25] *Id*.
[26] *Id.*
[27] *Id.*
[28] *Id.*
[29] Md. Regs. Code tit. 8, § 02.19.03.
[30] Md. Regs. Code tit. 8, § 02.19.04.
[31] *Id.*
[32] *Id*.
[33] *Id.*
[34] Md. Regs. Code tit. 8, § 02.19.05.
[35] *Id.*
[36] Md. Regs. Code tit. 8, § 02.19.06.
[37] *Id.*
[38] *Id.*
[39] Md. Code Ann., Nat. Res. § 4-220.
[40] Md. Acts 2009, ch. 207 (S.B. 164).
[41] Md. Code Ann., Nat. Res. § 4-219.
[42] Md. Code Ann., Nat. Res. § 4-11A-19.
[43] Md. Regs. Code tit. 8, § 02.11.04.
[44] Md. Regs. Code tit. 8, § 02.19.04.
[45] Md. Regs. Code tit. 8, § 02.19.04.
[46] Md. Code Ann., Env. § 5-5A.
[47] Maryland Department of Agriculture, Quarantine Order of the Secretary of Agriculture, State of Maryland, to Prevent the Spread of the Emerald Ash Borer in this State, Quarantine Order #08-01, *Available at* http://www.mda.state.md.us/pdf/eab_quarantine_1_8-26-08.pdf.

New Jersey

New Jersey has made no significant changes to its laws and regulations related to invasive species in recent years. However, it has issued some guidance and other policies relating to plants and plant pests and diseases. More importantly, New Jersey established a comprehensive invasive species council by executive order in 2004. The council completed a comprehensive invasive species management plan for the state in 2009. In the next few years, this plan may yield legal and regulatory developments.

I. Invasive Species Councils and Plans

In 2004, Governor McGreevey signed executive order 97, which established the New Jersey Invasive Species Council (NJISC) as a multi-stakeholder entity co-chaired by the Department of Environmental Protection (NJDEP) and Department of Agriculture (NJDA) and also including the Department of Transportation (NJDOT) and the Commerce and Economic Growth Commission. Executive order 97 requires NJISC to carry out several tasks, most notably including completion of a comprehensive New Jersey Invasive Species Management Plan by 2005. In addition, the council was tasked with carrying out specific listed tasks and other reasonable measures "necessary to prevent the introduction of invasive species and to eliminate or minimize invasive species already established in the state."[1]

NJISC carried out a planning process to create the management plan as directed by the executive order. The plan is now in its third draft and has been delivered as recommendations to the governor. To date, it has not been adopted or released to the public. The plan is anticipated to recommend significant changes to New Jersey's invasive species programs, including development of a general definition of invasive species and introduction of clean listing mechanisms.

In addition, NJDEP published *An Overview of Nonindigenous Plant Species in New Jersey* in 2004. The report identifies nonindigenous plant species that are or may become invasive in New Jersey. It provides "background on the numbers and origins of nonindigenous species in New Jersey, discusses problems caused by harmful invasive species, describes current state and federal programs, and examines methods of control and prevention." It includes fact sheets for 27 species of particular concern.

II. Wildlife

New Jersey has not established new laws or regulations relevant to invasive wildlife.

III. Aquatic Life

New Jersey has not established new laws or regulations relevant to aquatic life.

IV. Plants

New Jersey has not established new legislation or regulations to govern plants. However, several new policies have been established; while this report is intended to summarize laws and regulations, we note these policies due to the limited changes to New Jersey's legal authorities since 2002.

In 2004, NJDEP established a new policy directive 2004-02, which restricts planting on state lands under NJDEP jurisdiction. The directive is intended "to guide Department employees in planning and implementing planting, landscaping and land management activities on Department lands and waters" and on "lands and waters affected through programs administered by the Department (emphasis omitted)." Substantively, the directive establishes a list of "Invasive Nonindigenous Plant Species" and prohibits the intentional introduction, release, and/or planting in lands and waters administered by the department for planting, landscaping, habitat restoration, or reforestation, including by Department employees, consultants, or contractors. Exceptions are available at the Commissioner's discretion. In addition to prohibiting release, the directive requires Department employees to discourage the use of listed plant species during the course of their official duties.[2]

In 2005, NJDEP's Forest Stewardship Program[3] voted to address invasive species in all forest stewardship plans and established guidelines for consideration of these species, including a list of covered plants. This decision requires all qualifying forest plans to address the presence of invasive species "as a component of site ecology," to include quantitative data, and to address the effects of forest management practices on the invasive species. Forest management practices cannot contribute to the establishment or expansion of listed invasive species.

NJDA's species-specific control and management programs, including its active biological control program, continue as required for specific species. NJDA has declared purple loosestrife a prohibited noxious-weed seed and developed an active purple loosestrife control program based on two beetles reared by the NJDA Beneficial Insects Rearing Laboratory for use in biological control. This program ended in 2004 but, as of 2006, NJDA continued to provide beetles for state use and commercial sale. The Department maintains ongoing surveillance and eradication programs for giant hogweed and mile-a-minute weed.

V. Plant Pests and Diseases

New Jersey has not altered its laws or regulations governing plant pests or diseases. Its programs have evolved to address new specific pest and disease threats, however.

NJDA has addressed the Asian Longhorned Beetle (ALB) (*Anoplophora glabripennis*) through a control program and quarantine carried out in cooperation with other state and federal partners.[4] Ongoing survey programs for plant pests and diseases include ALB, Emerald Ash Borer (*Agrilus planipennis*), Sirex woodwasp (*Sirex noctilio*), and sudden oak death (*Phytophthora ramorum*).

VI. Insects

New Jersey has not established new laws or regulations governing non-native insects. However, in 2007, New Jersey established the Center for Vector Biology at Rutgers University. The Center conducts basic and applied research, including surveillance of mosquito populations for the West Nile Virus and Eastern Equine Encephalitis.[5]

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[1] *See* State of New Jersey, Exec. Order 97 (Feb. 27, 2004), *available at* http://www.nj.gov/infobank/circular/eom97.htm

[2] NJDEP, Policy Directive 2004-02: Subject: Invasive Nonindigenous Plant Species, *available at* http://www.nj.gov/dep/commissioner/policy/pdir2004-02.htm

[3] The Forest Stewardship Program is a federally-funded, state-managed program to encourage management of privately owned forest lands for non-commodity benefits. *See* NJDEP, *NJ Forest Stewardship Program, at* http://www.nj.gov/dep/parksandforests/forest/stw_inc_prog.html

[4] *See* Read D. Porter, STRATEGIES FOR EFFECTIVE STATE EARLY DETECTION/RAPID RESPONSE PROGRAMS FOR PLANT PESTS AND PATHOGENS (Environmental Law Institute 2007).

[5] *See* Rutgers Center for Vector Biology, *About the Center, at* http://www.rci.rutgers.edu/~vbcenter/about.php

New Mexico

New Mexico has made significant regulatory and non-regulatory changes to its invasive species programs. With respect to interagency coordination, New Mexico created an aquatic invasive species advisory council with a mandate to create a state aquatic invasive species management plan. That plan is now complete, as is the separate management plans for exotic riparian trees, completed in 2005. Legislative developments in New Mexico have been more limited but have been significant in key areas. Most notably, the legislature enacted a new law governing aquatic invasive species, prompted by discovery of Dreissenid mussels in nearby waters. The new law defines aquatic invasive species, prohibits their spread, and authorizes state agencies to regulate and inspect recreational vessels and to monitor for the presence of these species. Other legal and regulatory amendments in New Mexico include an update to the noxious weed law (including a new watch list) and minor changes relating to game animals, bait dealers, and certain species of wildlife and plant pests.

I. Invasive Species Councils and Plans

In October, 2008, New Mexico finalized its Aquatic Invasive Species Management Plan.[1] The Plan characterizes New Mexico's invasive species policies and concludes that: "[v]arious agencies and organizations are currently addressing AIS on a "single-species" basis. These efforts, however, are not coordinated and are woefully inadequate in scope and degree to address the risks AIS pose to the public, our economy, and natural ecosystems." The management plan therefore recommended creation of a New Mexico Aquatic Invasive Species Advisory Council (AISAC) authorized by executive order. To date, however, no executive order has been issued and AISAC remains an ad-hoc group. Its members include state and federal agencies, tribes, municipalities, water management districts, and private sector representatives. AISAC was created during the development of the management plan and published the final draft.[2]

Two informal coordinating bodies were identified in 2002 addressing weed issues in New Mexico. The Interagency Weed Action Group (IWAG) remains active in New Mexico, having published a strategic plan for management of exotic riparian trees in 2005.[3] The New Mexico Noxious Weed Advisory Group (NWAG) has not produced additional materials since publication of the New Mexico Strategic Plan for Managing Noxious Weeds in 2001. However, the New Mexico Department of Agriculture's Noxious Weed List Advisory Committee recently completed reviewing petitions for new listings on the state noxious weed list.[4] In addition, a number of cooperative weed management areas (CWMAs) have been created since 2002. CWMAs are "partnerships of federal, state, and local agencies, tribes, individuals, and interest groups to manage noxious weeds or invasive plants in a defined area."[5] Sixteen CWMAs currently exist, 11 of which have dedicated staff.[6]

II. Wildlife

In 2005, New Mexico enacted House Bill 203, which altered several provisions of the game and fish code. In particular, the bill amended section 17-1-14 of the New Mexico statutes by authorizing the Department of Game and Fish (DGF) to adopt rules to control, eradicate, or prevent the spread of contagious disease, pest, or parasite to or among game animals, with specific reference to chronic wasting disease. DGF's rules should include provisions for notice to DGF of the diagnosis or suspected presence of a contagious disease; for examination of suspected infected game animals by the state veterinarian; for the quarantine, treatment, or destruction of infected game animals; and for indemnification and destruction of protected game animals.[7]

In April, 2009, Governor Richardson signed legislation for feral hog control. The Act is intended to prevent the spread of disease to livestock and wildlife. It prohibits individuals from importing into the state, transporting within the state, holding for breeding, releasing, or selling live feral hogs or operating a commercial feral hog hunting enterprise. Violation of these prohibitions is a misdemeanor and can result in a fine of up to $1,000 and imprisonment for not more than 1 year.[8]

III. Aquatic Life

A. General Authority

New Mexico enacted a new Aquatic Invasive Species Control Act in April, 2009, to address the rapid expansion of Dreissenid mussels in the Colorado River watershed. DGF and the Department of Envergy, Minerals, and Natural Resources (through the State Parks Division) are authorized to issue regulations to implement the Act.[9] DGF can enter into cooperative agreements with federal, state, county, or municipal authorities and with private entities in control of water bodies potentially affected by AIS.[10]

Aquatic invasive species (AIS) are defined as "quagga mussels and zebra mussels and other exotic or nonnative aquatic animals, including invertebrates" other than protected species, or "any plant or animal species whose introduction into an aquatic ecosystem is determined to cause or be likely to cause harm to the economy, environment or human health or safety."[11] Infested water means "a geographic region, water body or water supply system or facility that . . . [DGF] identifies as carrying or containing" AIS.[12] A water body is a natural or impounded surface water, including streams, rivers, springs, lakes, reservoirs, ponds, wetlands, tanks, and fountains.[13]

The Act authorizes the director of DGF, after consultation with the secretary of energy, minerals, and natural resources and with the concurrence of the director of NMDA, to designate AIS, infested waters, and specific requirements for decontamination of conveyances and equipment. These designations must be based on "a determination of credible scientific evidence."[14] It is unlawful for a person to knowingly possess, import, export, ship, or transport an aquatic invasive species into, within, or from the state; to knowingly release, place, plant, or cause to be released into a water body.[15]

The law requires officers to take action to prevent equipment or conveyances suspected of harboring aquatic invasive species from entering state water bodies.[16] DGF and State Parks Division personnel are authorized to operate invasive species check stations at the entrance to and exit from state-controlled water bodies, or, pursuant to a cooperative agreement, at county, municipal, federal, or private water bodies. Law enforcement officers may impound a conveyance or equipment upon refusal to submit to an inspection and the officer has reason to believe than an aquatic invasive species may be present or if the conveyance or equipment is warning tagged and the owner cannot provide evidence of decontamination. They may affix warning tags to equipment or a conveyance where an aquatic invasive species has been found, or upon exit of a conveyance or equipment from a designated infested water.[17]

Prior to entering any water body in New Mexico, the owner or person in control of any warning-tagged conveyance or equipment – or any conveyance or equipment that has been in an infested water body in New Mexico or elsewhere – must have that conveyance or equipment decontaminated and provide certification that the conveyance or equipment is free from infestation, or otherwise demonstrate compliance with the decontamination requirement.[18] It is unlawful to remove a warning tag, introduce any tagged item into a water body without decontamination, or knowingly introduce into a water body an item that has been exposed to an infested water body or a water body in any other state known to contain AIS, without decontamination.[19] Knowing or willful violation of any provision is a petty misdemeanor on the first offense, and subsequent violations are misdemeanors.[20] In practice, most states do not certify watercraft; as a result, enforcement agents ask to inspect such vessels prior to entry into any waterbody in the state.

DGF is required to coordinate the monitoring of water bodies for the presence of AIS, including of privately controlled waters to which the director has authorized access or which the department has received permission to monitor.[21]

B. Bait Dealers and Commercial Fishing

DGF updated its bait dealer licensing requirements in 2006. It is unlawful to release live fish or bait into New Mexico waters without a permit from DGF.[22] All bait dealers must be licensed and they must list all sources of minnows for bait in their license application.[23] Only listed species of fish, amphibians, and crayfish may be sold as bait.[24] When purchasing live bait from an out-of-state source, dealers must comply with the requirements that apply to importation of wildlife.[25] Licensed bait dealers are required to allow DGF to inspect their inventory upon request.[26]

IV. Plants

New Mexico DGF created a new section in its regulations concerning the use of wildlife management areas. It is now unlawful to use or possess any hay or feed in such areas unless certified as weed-free.[27]

As noted above, NMDA has also updated its noxious weed list, and in addition to the two pre-existing categories of noxious weeds ("A" weeds and "B" weeds), it established a "watch list" containing plant species with the potential to be problematic. The state intends that placing species on the watch list will increase awareness of the species and promote the data collection and reporting necessary to determine whether the plant should be listed.[28]

V. Plant Pests and Diseases

In 2005, New Mexico enacted the Cotton Boll Weevil District Monitoring Act, which amended existing law regarding boll weevil control.[29] The law now provides for NMDA to provide technical support and advice in the formulation of plans to monitor for boll weevils, as well as plans for boll weevil control and eradication.[30] The law also amended authority for boll weevil control committees, and allows them to conduct programs to monitor, suppress, or eradicate weevils within their control districts, to cooperate with federal and state personnel, to contract for services and enter into cooperative agreements, to publish information and conduct seminars, to levy and collect special assessments, and to borrow money or accept funds.[31] Control committees must notify the organic commodity commission when a control district is established and include an organic cotton producer in the committee, if one is operating within the district.[32]

VI. Insects

New Mexico has not altered its laws relating to invasive insects.

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[1] AISAC, New Mexico Aquatic Invasive Species Management Plant (2008).
[2] *Id*.
[3] U.S. Forest Service & New Mexico Energy, Minerals, & Nat'l Res. Dep't, Forestry Division, Strategy for Long-Term Management of Exotic Trees in Riparian Areas for New Mexico's Five River Systems, 2005-2014 (2005).
[4] *See* NJDA, Memorandum to General Public from I. Miley Gonzalez, New Mexico Noxious Weed List Update (2009), *available at* http://nmdaweb.nmsu.edu/animal-and-plant-protection/noxious-weeds/weed_memo_list.pdf.
[5] NJDA, Cooperative Weed Management Area (CWMA) Fact Sheet (2006), *available at* http://nmdaweb.nmsu.edu/animal-and-plant-protection/noxious-weeds/cwma_fact_sheet.pdf.
[6] NMDA, New Mexico's Cooperative Weed Management Areas (2009), *available at* http://nmdaweb.nmsu.edu/animal-and-plant-protection/noxious-weeds/cwmalist.pdf
[7] HB 203; N.M. Stat. Ann. § 17-1-14(B)(15).
[8] SB 504 (2009).
[9] N.M. Stat. 17-4-35; HB 467(J) (2009)
[10] HB 467(K)
[11] HB 467(L)(1).
[12] HB 467(L)(7).
[13] HB 467(L)(12).
[14] HB 467(A).
[15] HB 467(G)(1)-(2).
[16] HB 467(C)
[17] HB 467(F)
[18] HB 467(B)
[19] HB 467(G)

[20] HB 467(H).
[21] HB 467(I).
[22] N.M. Admin. Code 19.31.9.15.
[23] N.M. Admin. Code 19.31.9.13.
[24] N.M. Admin. Code 19.31.9.14.
[25] N.M. Admin. Code 19.31.9.15, *citing* N.M. Admin. Code 19.35.7.
[26] N.M. Admin. Code 19.31.9.15.
[27] N.M. Admin. Code 19.34.3.13.
[28] *See* NJDA, Memorandum to General Public from I. Miley Gonzalez, New Mexico Noxious Weed List Update (2009), *available at* http://nmdaweb.nmsu.edu/animal-and-plant-protection/noxious-weeds/weed_memo_list.pdf.
[29] HB 751 (2005); N.M. Stat. 76-6A-3 et seq.
[30] N.M. Stat. 76-6A-4.
[31] N.M. Stat. 76-6A-11.
[32] N.M. Stat. 76-6A-11.

Oregon

Oregon has made a number of recent changes to its invasive species legal authorities. The state has strengthened the powers of its legislatively-authorized, comprehensive invasive species council, including a new comprehensive definition of "invasive species" and through the creation of a new Invasive Species Control Account to support council activities. Other notable legal developments include consolidation and strengthening of the state's quarantine and pest control provisions for wildlife, inspects, and plants. Legislation also was enacted to prevent the spread of aquatic invasive species. This legislation includes a new definition of aquatic invasive species, new authorities governing recreational and commercial watercraft, and new prohibitions on the spread of aquatic invasive species. In addition, the state has enacted new a ballast water law that includes prohibitions on discharge without exchange, reporting requirements, and a task force to recommend actions on the issue. With respect to plants, the state has extended to all noxious weeds the provisions that formerly only applied to the control of tansy ragwort. Plant pest has been newly defined and the state has new prohibitions on the spread of such species, as well as a new emergency response fund. Other amendments have occurred for specific species and uses for wildlife, fish, plants, and plant pests.

I. Invasive Species Councils and Plans

The powers of the Invasive Species Council have been strengthened. It is now specifically authorized to enter into contracts and other agreements on matters pertaining to invasive species.[1] The Invasive Species Council may also adopt rules or perform other acts it considers reasonable for carrying out its powers, duties and functions.[2] Membership of the Invasive Species Council has been expanded to 15 and now includes the Director of the Oregon Department of Environmental Quality (or an authorized representative).[3] The new provisions also clarify that The Oregon Department of Agriculture is the fiscal agent of the Invasive Species Council.[4]

In recognition of the increasing threat posed by harmful non-native species to both the environment and the economy of the state, a new "Invasive Species Control Account" has been established.[5] The Invasive Species Council is authorized to expend moneys from the account to provide funding to eradicate or control new infestations and infections of invasive species.[6] "Invasive species" are defined for this purpose as "nonnative organisms that cause economic or environmental harm and are capable of spreading to new areas of the state."[7] "Invasive species" does not include humans, domestic livestock or non-harmful exotic organisms.[8] Funding may be provided for, amongst other things, surveys, inspections, enforcement, diagnosis, rapid response planning and coordination, eradication or control, treatment and disposal of infested or infected materials, and cleaning and disinfecting of infested or infected premises or vessels.[9]

II. Wildlife

A. General

The quarantine provisions in relation to animals, fowls, bees, fruits, vegetables, plants, parts of plants or seeds have been amended with effect from January 1, 2010.[10] After that date, the Director of Agriculture is authorized to adopt rules declaring a quarantine if he or she believes that any animals, fowls, bees, fruits, vegetables, plants, parts of plants or seeds within any area or section are diseased or infested with a pest or weed *and* that such disease or infestation is likely to spread and become detrimental to plant or animal life or public health.[11] Quarantines may prohibit the movement of diseased or infested animals, fowls, bees, fruits, vegetables, plants, seed or of weeds or weed seeds, as well as infested or infected articles that could spread the disease or infestation.[12] The Director of Agriculture must hold at least one public hearing before declaring a quarantine under this provision.[13] However, a quarantine may take immediate effect in an emergency if postponement of the effective date of the quarantine would seriously prejudice the health, safety or welfare of the public or of the affected parties.[14] To declare an emergency quarantine, the Director of Agriculture must issue a written order, which may remain in effect for up to 180 days, upon a determination that:

(a) a disease or an infestation has a significantly adverse effect on plants, animals, fowls, or bees;

(b) the disease or infestation is not widely prevalent or distributed within the state;

(c) the disease or infestation exists in another state, territory or country or in any locality within the state;

(d) following the procedure for declaring quarantine by rule would create a serious danger of the disease or infestation spreading within the state during the time required by the procedure.[15]

The Department of Agriculture (DOA) now may pre-approve and issue permits for shipments of articles subject to a quarantine if the articles are subject to appropriate mitigation tactics or strategies that can be enforced at the point of origin.[16]

B. Feral Swine

A new Act relating to feral swine comes into effect in January, 2010.[17] The new law states that a person may not knowingly allow feral swine to roam on his or her land and must take action to remove them, consistent with Oregon Fish and Wildlife Commission rules.[18] Landowners must also inform the Department of Fish and Wildlife (DFW) within 10 days after discovering feral swine on their land.[19] It is illegal to offer for sale or to sell a hunt for feral swine on public or private lands. Violations may be subject to a civil penalty of up to $1,000, or to conviction for a Class A misdemeanor.[20]

III. Aquatic Life

A. Aquatic Invasive Species

New provisions relating to aquatic invasive species were introduced in 2009.[21] "Aquatic invasive species" now are defined as "any aquatic species of wildlife or any freshwater or marine invertebrate, as specified by the State Fish and Wildlife Commission by rule, or any aquatic noxious weeds as specified by the State Department of Agriculture by rule".[22] DFW, after consultation with the State marine Board, DOA, and the State Police, must report biennially to the Legislative Assembly on efforts to prevent aquatic invasive species from entering the State.[23]

Several provisions relate to recreational vessel contamination. DFW, the State Marine Board, and DOA are authorized to operate check stations for the purpose of inspecting recreational or commercial watercraft for the presence of aquatic invasive species and to decontaminate, or recommend the decontamination of, any such watercraft.[24] "Recreational or commercial watercraft" means any boat, any equipment used to transport a boat and any auxiliary equipment for a boat, including attached or detached outboard motors.[25]

A person who knowingly transports aquatic invasive species on or in a recreational or commercial watercraft is subject to a civil penalty of up to $6,250 or between $5,000 and $15,000 for a second or subsequent violation within a five year period.[26] However, no penalty may be levied against a person who (a) transports aquatic invasive species in ballast water; (b) complies with all instructions for the proper decontamination of the watercraft; or (c) transports aquatic invasive species to DFW or DOA (or another designated destination) in a manner designated by the Commission for the purpose of identifying or reporting an aquatic invasive species.[27]

With effect from January 1, 2010, it is necessary to obtain an aquatic invasive species prevention permit from the State Marine Board before operating on state waters any motor boat, or a manually-propelled boat 10 feet or more in length.[28] Breach of this provision is a Class D violation.[29] The State Marine Board is required to adopt rules to implement and administer this permitting provision, including by providing for exemptions for certain boats.[30] The statute also provides for the establishment of a new Aquatic Invasive Species Prevention Fund to administer the aquatic invasive species permit program and to prevent and control aquatic invasive species.[31]

Also from January, 2010, a person may not launch a boat into state waters if it has (a) any visible aquatic species on its exterior hull or attached to any motor, propulsion system or component, anchor or any other attached apparatus outside of the hull, or on the trailer or other device used to transport the boat; or (b) has any aquatic invasive species within its bilge, live well, motor well or other interior location.[32] For these purposes, "aquatic invasive species" means "any aquatic life or marine life determined by the State Fish and Wildlife Commission by rule to be invasive or any aquatic noxious weed determined by the State Department of Agriculture to be invasive".[33] Breach of this provision is a Class B violation.[34] The State Fish and Wildlife Commission, in consultation with DOA, may by rule allow the presence of certain

aquatic species on or within a boat for activities including, but not limited to, hunting and photography.[35]

B. Ballast Water Management

In addition to provisions for recreational vessels, Oregon has introduced a ballast water program.[36] It is now unlawful to discharge ballast water in state waters unless:

> (a) the owner or operator has conducted a complete open sea or coastal exchange of ballast water prior to entering state waters;
>
> (b) the owner or operator reasonably believes that an open sea or coastal exchange would threaten the safety of the vessel or is not feasible due to vessel design or equipment failure **and** the vessel discharges only the amount of ballast that is operationally necessary; or
>
> (c) the ballast water is discharged in a manner consistent with standards and procedures adopted by the Environmental Quality Commission.[37] Such rules and standards must minimize the risk of introducing aquatic invasive species into the waters of the state and be based on the availability of treatment technology.[38]

Owners or operators of vessels regulated under the ballast water program are required to report ballast water management information to the Department of Environmental Quality, which may verify compliance either by relying on testing by others (e.g. the United States Coast Guard) or by boarding and inspecting vessels and collecting samples of ballast water.[39]With effect from January 1, 2010, an increased civil penalty of up to $25,000 may be imposed on the owner or operator of a vessel for failure to comply with the ballast water provisions.[40]

Finally, Oregon has created a "Shipping Transport of Aquatic Invasive Species Task Force"[41] to study and make recommendations to combat the shipping-related introduction of "aquatic non indigenous species" into state waters, identify sources of funding to support and maintain the ballast water program, and change to the ballast water program. For these purposes, "aquatic non indigenous species" means "any species or other viable biological material that enters an ecosystem beyond its historic range".[42]

C. Fish

Oregon has amended the offence provision relating to the release (or attempted release) of live fish without a permit.[43] As of 2010, if the violation is committed intentionally or knowingly, it is a Class C Felony. If it is committed recklessly or with criminal negligence, such a violation is a Class A misdemeanor.[44] Upon conviction for an offence of releasing (or attempting to release) live fish without a permit, the Fish and Wildlife Commission must revoke all angling licenses and tags issued to the defendant. A person who has been convicted of an offence of releasing (or attempting to release) live fish without a permit may not apply for, obtain or possess any angling license or tag within the following 5 years.[45] The Commission may seek damages for

the control or eradication of illegally released live fish. Any such damages will be the amount necessary to return the body of water to its condition prior to the violation.[46]

IV. Plants

The provisions relating to the control and eradication of tansy ragwort have been amended and extended to include any noxious weed, effective January 1, 2010.[47] "Noxious weed" means "a terrestrial, aquatic or marine plant designated by the State Weed Board[48] "as among those representing the greatest public menace and as a top priority for action by weed control programs".[49] DOA also now is specifically authorized to implement an integrated weed management approach that focuses on the prevention of noxious weeds through techniques including: surveillance and monitoring; early detection; eradication or other rapid response techniques; mechanical control; the selective use of pesticides and cultural practices; modified land management; biological controls; and control practices selected and applied to achieve desired weed management objectives in a manner that minimizes risks to human health, non-target organisms, native fish and wildlife habitat, watersheds and the environment.[50]

The Oregon "Adopt a Highway" program has been extended, effective January 2010, to include the removal of noxious weeds in addition to litter clean up work.[51] For this purpose, "noxious weeds" means "any weed the State Department of Agriculture designates by rule as a noxious weed".[52]

In addition to these amendments, see above under "Wildlife" for a summary of the amended quarantine provisions in relation to animals, fowls, bees, fruits, vegetables, plants, parts of plants or seeds[53] and see below under "Plant and Plant Pests" for a summary of the new provisions for the control of "plant pests", which are defined to include "noxious weeds".[54]

V. Plant Pests and Diseases

New provisions have also been introduced, effective in January, 2010, to control "plant pests." Plant pest is defined as a disease, microscopic organism, insect, nematode, arthropod, parasite, noxious weed or biotic agent capable of having a significant adverse effect on the environmental quality of the state, or of causing a significant level of economic damage in the state (including damage to agricultural, horticultural or forest plants, crops, commodities or products).[55] DOA may adopt rules requiring the use of measures to control the spread of a specific plant pest that is not the subject of a quarantine if (1) failure to control the plant pest will have an identifiable effect on plants, with a resulting unacceptable level of economic impact in the state; and (2) the measures required are of a type proven effective to achieve the control levels determined by the department for the plant pest.[56] DOA also may conduct research to prevent the introduction or spread of plant pests into or within the state.[57]

A person may not possess (or knowingly move) a plant pest within the state unless they possess a plant protection and quarantine permit authorizing the possession or movement (issued either by United States Department of Agriculture's Animal and Plant Health Inspection Service

or DOA).[58] DOA may not issue a permit unless it determines that the proposed possession or movement will not create a hazard to the State's agricultural, forest or horticultural interests or to environmental quality.[59] If the department issues a permit to move a plant pest, the permittee must ensure that a copy is affixed to, or accompanies, its container.[60] Breach of the requirement for a permit is a Class A violation.[61] A civil penalty of up to $10,000 may be imposed for violation of the conditions of a permit or any State Department of Agriculture rules made as mentioned in the paragraph above.[62]

The Legislative Assembly has declared that a plant pest possessed or moved without a permit (or a plant, crop or agricultural, horticultural or forest commodity or product that is infested with or harbors a plant pest) is a public nuisance and may be subject to abatement by the State Department of Agriculture.[63]

In addition, the legislature established a Plant Pest and Disease Emergency Response Fund.[64] DOA, after consultation with the State Nursery Research and Regulatory Committee, may use fund moneys to respond to pest and disease emergencies to the extent necessary to protect the industries represented by licensed nursery stock growers and dealers.

Finally, see "Wildlife" for a summary of the amended quarantine provisions relating to animals, fowls, bees, fruits, vegetables, plants, parts of plants or seeds.[65]

VI. Insects

Oregon has not amended its provisions governing insects, with the exception of the provisions discussed previously relating to amended quarantine provisions for animals, fowls, bees, fruits, vegetables, plants, parts of plants and seeds.[66]

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[1] Or. Rev. Stat. §561.685 as amended by House Bill 2213, §1.
[2] *Id*.
[3] Or. Rev. Stat. §561.687 as amended by House Bill 2213, §2.
[4] Or. Rev. Stat. §561.691 as amended by House Bill 2213, §4.
[5] House Bill 2020, §1 and §2.
[6] House Bill 2020, §2.
[7] *Id.* and Or. Rev. Stat. §561.685.
[8] *Id.*
[9] House Bill 2020, §2.
[10] Or. Rev. Stat. 561.510 as amended by House Bill 2212, §18.
[11] *Id*.
[12] *Id*.
[13] *Id.*
[14] *Id*.
[15] Or. Rev. Stat. 561.560 as amended by House Bill 2212, §19.
[16] House Bill 2212, §2.
[17] House Bill 2221.
[18] *Id.* §3.
[19] *Id.*
[20] *Id.* §2.

[21] House Bill 2220.
[22] *Id*. §1(1).
[23] *Id.* §3.
[24] *Id.* §2.
[25] *Id.* §1(2).
[26] *Id*. §4(1).
[27] *Id.* §4(2).
[28] *Id.* §7 and §13(1).
[29] *Id.* §11.
[30] *Id*. §10.
[31] *Id.* §11.
[32] House Bill 2583, §2(2).
[33] *Id*. §2(1).
[34] *Id*. §3(3).
[35] *Id.*§2(3).
[36] Or. Rev. Stat. 783.635 as amended by House Bill 2714. See also Department of Environmental Quality rules relating to ballast water management at OAR 340-143.
[37] *Id*. §1(1).
[38] *Id*. §1(4).
[39] Or. Rev. Stat. 783.640 as amended by House Bill 2625 (effective from 1/1/10).
[40] Or. Rev. Stat. 783.640 as amended by Senate Bill 105, §16 and Or. Rev. Stat. 468.140 as amended by Senate Bill 105, §9.
[41] House Bill 2625. §3.
[42] *Id.*, §3(10).
[43] Or. Rev. Stat. 498.222 as amended by Senate Bill 571.
[44] *Id*. §1(4).
[45] *Id*. §1(5).
[46] *Id*. §1(6).
[47] Or. Rev. Stat. 452.610-630 as amended by House Bill 2212, §12. Note also that the ragweed provisions (Or. Rev. Stat 452.510 to 590) have been repealed with effect from 1/1/10.
[48] Under ORS 561.680
[49] House Bill 2212, §12(1).
[50] *Id.* §14(2).
[51] Or. Rev. Stat. 366.158 as amended by House Bill 2424.
[52] *Id.* §1(1)(a),
[53] Or. Rev. Stat 561.510 as amended by House Bill 2212, §18.
[54] House Bill 2212, §4.
[55] House Bill 2212, §4.
[56] *Id.* §5
[57] *Id.* §7.
[58] *Id.* §6(1).
[59] *Id.* §6(2).
[60] *Id.* §6(3).
[61] *Id.* §9(3).
[62] *Id*. §10.
[63] *Id.* §8.
[64] Or. Rev. Stat. 571.038.
[65] Or. Rev. Stat 561.510 as amended by Oregon House Bill 2212, §18.
[66] Or. Rev. Stat 561.510 as amended by §18, Oregon House Bill 2212.

Rhode Island

Since 2002, Rhode Island has developed new and amended laws and regulations relating to several types of invasive species. With respect to interagency coordination, an ad hoc interagency working group has completed an aquatic invasive species management plan. Legal and regulatory amendments include minor amendments to wildlife possession and nuisance species regulations and substantial change to the regulations governing animal diseases, including strengthening quarantine and identification requirements. New authorities governing aquatic species include a new law specifically targeted at non-native, freshwater aquatic plants and creation of a new aquaculture biosecurity board to assist the state in preventing aquaculture disease and harm from non-indigenous species. Specific provisions have also been adopted to address particular issues applicable to wildlife, aquatic life, and plant pests and diseases. Rhode Island has not significantly altered its invasive plant provisions since 2002.

I. Invasive Species Councils and Plans

In 2007, the Department of Environmental Management (DEM), the Coastal Resources Management Council (CRMC), and other partners developed the Rhode Island Aquatic Invasive Species Management Plan.[1] A Rhode Island Aquatic Invasive Species Working Group (AISWG) was created to develop and implement the plan and is co-chaired by the Coastal Resources Management Council and the Department of Environmental Management (DEM). The rest of the Working Group is made up of the University of Rhode Island, Save the Bay, Inc., Narragansett Bay Estuary Program, U.S. Coast Guard, Aqua-Life Aquarium, Rhode Island Natural History Survey, National Oceanic and Atmospheric Administration, USDA, Rhode Island National Wildlife Refuge Complex, and Ocean State Aquaculture Association.[2] It has not been statutorily authorized. The plan recommends actions for the state government and others, and provides a framework for coordinating the overall efforts concerning aquatic invasive species. The plan was approved by the federal Aquatic Nuisance Species Task Force.

In addition to the RIAISWG and its management plan, Rhode Island continues to maintain a comprehensive Invasive Species Council as an outreach program of the Natural History Survey, Agriculture Experiment Station, and University of Rhode Island Cooperative Extension. It is not authorized by statute and has not updated its list of invasive plant species since 2001.[3]

II. Wildlife

A. Non-Native Wildlife

DEM has amended its regulation governing import and possession of native wildlife.[4] As previously, it is illegal to import, receive, or possess a native animal, exotic animal, member of a target species[5], or hybrid without a permit. Approval from the US Department of Agriculture is no longer sufficient for a permit to import, receive, or possess native wildlife, and appropriate Federal permits now are required before DEM will issue a permit.[6] Second, DEM may now consider the education and experience of an applicant for a permit.[7] Third, the permit requires animals to be kept in conditions that are consistent with standards maintained by the American

Association of Zoological Parks and Aquariums or by *Wildlife in Education – Guide for the Care and Use of Program Animals* (Standards Manual).[8] Finally, it is unlawful to administer a drug to any wildlife without prior written authorization from DEM, except in accordance with a permit.[9] The regulations also altered the procedures for appealing a finding of violation or denial of a permit.[10]

B. Nuisance Species

As previously, engaging in the business of nuisance wildlife control is illegal without a wildlife control specialist permit.[11] In 2007, DEM amended the nuisance wildlife control permit regulations. Any person with a current pesticide applicator's license no longer requires a wildlife control permit to control mice, Norway rats, English sparrows, pigeons, or starlings.[12]

C. Miscellaneous Animals

1. Ferrets

Since 1997, Rhode Island has specifically restricted ferrets. These provisions were not considered in *Halting the Invasion*, so we include them here for completeness. Ownership, possession, or importation of a common European ferret (*Mustela putorius*) in or into Rhode Island requires a permit issued by DEM. A permit for personal possession must be obtained within the first two weeks of possession.[13] Ferrets must bear certification of neuter or spay,[14] and if three months or older, certification of a current rabies vaccination administered by a veterinarian in the state of origin.[15] A permit for distribution must be obtained prior to possession. Only pet distributors licensed by DEM and who maintain a log on forms designated by the Division of Agriculture may apply for a distribution form. A *Ferret Permit Application* and, if applicable, a rabies vaccination certificate must accompany each ferret distributed.[16] Ferrets must be kept under control at all times, including under harness and leash or in a cage when outdoors. Releasing ferrets to the wild is prohibited. The use of ferrets for hunting game is also prohibited.[17]

D. Animal Diseases

In 2008, DEM significantly amended its regulation governing veterinary standards for animal importation. As previously, no domestic animal can be legally imported unless accompanied by both an import permit and a Certificate of Veterinary Inspection.[18] Domestic animals include but are not limited to goats, cattle, swine, sheep, equines, camelids, poultry, ratites, and farmed cervids.[19] DEM altered several details of the requirements for obtaining such a certificate. The new regulation includes new definitions for brucellosis identification and "identification" of individual animals. Identification methods range from physical description to microchips.

It is now illegal to import an animal originating from a state or region under state or federal quarantine for contagious disease. Previously, the regulation applied solely to direct import from quarantine areas.[20] New sections have been implemented detailing the requirements for import permits for each shipment of animals and identifying exceptions to this requirement.[21] New provisions require identification of each imported animal to receive a veterinary

certificate.[22] Animals imported without a certificate because they are intended for immediate slaughter must now be slaughtered within 72 hours, rather than 7 days, and the waybill for such animals must identify them.[23] Any person who violates the regulations is now responsible for all costs and fees associated with quarantine, examination, and testing, and the imported animals are subject to forfeiture.[24]

Veterinary inspection and identification are now required for all dogs and cats imported for any reason, including, but not limited to, commercial, research, wholesale, retail, animal rescue, adoption, foster, exhibition, and education. The standards for rabies vaccination have been altered for dogs and cats and for cattle.[25] Veterinary certificates for sheep must include a "Scrapie Statement" by the accredited veterinarian affirming that the sheep do not have symptoms or known exposure to scrapie or to the progeny of scrapie-infected animals.[26] In addition, no sheep from a flock epidemiologically linked to a flock quarantined for scrapie can be imported.[27] A new exemption from rabies vaccination for lambs is included.[28] A new section for avian influenza was created to require all poultry of any age and hatching eggs to test negative for influenza, if originating in a state or region where avian influenza has been reported. Avian influenza testing can be required at any time.[29] A new rabies exception was created for importation of foals.[30] Additional regulations detail requirements for importation of equids from countries affected by contagious equine metritis; these standards have been unchanged since 2001.[31]

The importation of exotic species of cervids now requires a permit from DEM Division of Agriculture and must comply with all statutory requirements governing animals and animal husbandry.[32] A new requirement has been added requiring all cervids to comply with current state and federal importation requirements concerning chronic wasting disease (CWD) control and eradication. Cervids must be imported from herds monitored for CWD.[33] In addition, in 2005, DEM issued an emergency rule to address CWD in the state.[34] A permit is required to transport any live or captive cervid within the state.[35] It is illegal to release to the wild any captive or wild cervid[36] or to import or possess the brain, eyes, spinal cord, lymph nodes, tonsils, or spleen of any cervid taken in or originating from a CWD-endemic area or from captive or captive-bred cervids obtained from outside Rhode Island.[37] These parts may, however, be imported or possessed as specimens in a permitted laboratory research study[38] and, along with carcasses, may be transported through Rhode Island on their way to another state.[39] Certain parts of dead cervids may be legally imported or possessed.[40] Imported cervid parts and carcasses much be labeled with certain information.[41]

DEM representatives may enter the premises of any persons importing cervids to inspect vehicles. The Department will immediately seize carcasses or parts that are imported or possessed in violation of these regulations, and will immediately seize, quarantine, and euthanize any cervid that is imported or possessed in violation of cervid regulations. Any person possessing cervids suspected of having CWD must comply with any measures deemed necessary to prevent or mitigate the disease's spread or introduction. Department staff may euthanize, by any means, any wildlife that is at large and suspected of infection with or having been exposed to CWD.[42]

III. Aquatic Life

A. Aquaculture

In 2001, the legislature created a Biosecurity Board within CRMC. The Board is composed of seven members designated by CRMC and meets quarterly. By statute, members include, among others, a certified veterinarian specialized in aquatic diseases, a medical doctor, and a representative of the Rhode Island Marine Fisheries Council.[43] The Board is responsible for advising and assisting CRMC in carrying out the state aquaculture laws. The law directs the board to review federal agency regulations regarding aquaculture disease and the importation of non-indigenous and genetically-modified species, to recommend inspections as necessary to ensure compliance with public health standards, and to maintain current understanding of aquaculture diseases and management practices.[44]

CRMC also amended its regulations governing aquaculture licensing in 2002, 2003, 2006, and 2007.[45] As a result of these amendments, applicants who propose to introduce non-indigenous species into an aquaculture setting are required to design a protocol that the Biosecurity Board must review.[46] Protocols must ensure that no accidental releases occur into the state's waters before the introduction is permitted.[47] Permits can be revoked if there is a release of non-indigenous species that takes place during the permitted period.[48]

DEM has also implemented new requirements. Aquaculturists must now notify DEM in writing of every shipment of animals imported for culture at least five working days prior to entry. Each shipment must bear a certificate of disease inspection from a recognized laboratory appropriate to the species received. In consultation with the Biosecurity Board, the Director may waive the certificate requirement, or establish specific requirements governing shipments.[49]

Finally, the fine for any person who possesses, imports, or transports any species used in aquaculture without a permit or who conducts aquaculture activities in violation of an aquaculture permit has been increased to $1,000.[50]

B. Aquatic Plants

The legislature has created new laws regarding aquatic plants. It is illegal to import, transport, disperse, distribute, introduce, sell, purchase, or possess any species of non-native freshwater invasive aquatic plants, as defined by DEM.[51] DEM has not created a list of invasive aquatic species by regulation to date, but it did release a list of aquatic invasive plant species detected in Rhode Island as of July, 2009. This list consists of: curly-leaf pondweed, yellow iris, fanwort, inflated bladderwort, variable watermilfoil, Eurasian watermilfoil, Najas minor, water chestnut, and water hyacinth.[52] DEM is authorized to promulgate rules and regulations governing aquatic invasive plant species. Violation of the aquatic plant rules is a misdemeanor punishable by a fine of up to $500, imprisonment for up to 90 days, or both.[53]

C. Other

Effective in 2002, CRMC promulgated a regulation governing evaluation of all proposed projects that may impact freshwater wetlands in their natural character, function, value, area, riverbanks, and flood plains. Among other factors, CRMC will evaluate possible introduction of exotic and/or invasive species.[54]

D. Restoration

In order to access the Coastal and Estuary Habitat Restoration Program and Trust Fund, qualified entities may apply for grant moneys for projects that restore coastal and estuarine habitats.[55] Restoration activities may include control of exotic, non-native or invasive species of plants or animals.[56]

IV. Plants

Rhode Island has not amended its laws or regulations governing invasive plants.

V. Plant Pests and Diseases

A. General Authority

DEM has established standards and regulations for commercial applicators seeking to engage in: agricultural pest control (both plant and animal); forest pest control; ornamental and turf pest control; aquatic pest control; right-of-way pest control; industrial, institutional, structural, and health-related pest control; public health pest control; regulatory pest control; demonstration and research pest control; seed treatment; and wood preservation.[57] It has also created regulations for using[58] and transporting[59] pesticides and for storing and displaying pesticides and pesticide residues.[60]

B. Specific Plant Pests

The legislature has declared the Asian longhorned beetle (*Anoplophora glabripennis)* and the emerald ash borer (*Agrilus planipennis*) to be a public nuisance.[61] It has authorized DEM to regulate the importation and transportation of these pests, but the Department has not yet promulgated any such regulations. By statute, "regulated articles" include: (i) unprocessed wood products larger than half an inch in diameter taken from quarantined areas; (ii) any article found to be infested by the Asian longhorned beetle or emerald ash borer if a state or federal inspector notifies the person in possession of the article that it is infested; and (iii) any article that the federal Animal and Pant Health Inspection Service or DEM designate as regulated.[62] Violation of the quarantine and transport rules or regulations is punishable by a civil penalty of up to $25,000 for each offense.[63]

C. Specific Plant Diseases

1. <u>White Pine Blister Rust</u>

DEM has expanded the parameters of the quarantine on White Pine Blister Rust. Plants belonging to the genus *Ribes* may not be transported within or imported to Rhode Island

without a permit, except as allowed by state and federal laws and regulations. A separate permit is required to plant members of the genus *Ribes*. The cultivated black currant (*Ribes nigrum L.*) or any variety thereof is a public nuisance. Plants, roots, scions, seeds, and cuttings may not be possessed, transported, planted, propagated, sold, or offered for sale, and may be destroyed by DEM. Flowering currants (*Ribes aureum* and *Ribes odoratum*) may not be planted.[64]

DEM has declared a number of towns and parts of towns to be White Pine Blister Rust control areas. It is illegal to possess or plant plants, roots, scions, seeds, or cuttings of the genus *Ribes* in these areas. Outside these areas, the Director may declare any stand of five-leafed pines larger than one acre a White Pine Blister Rust control area. It is illegal to possess or plant plants, roots, scions, seeds, or cuttings of the genus *Ribes* within 900 feet of such areas. Nurseries growing five-leafed pine as nursery stock may safeguard their stock by applying to DEM to have the nursery declared a White Pine Blister Rust control area.[65]

Violation of the White Pine Blister Rust quarantine is a misdemeanor and may result in a fine of up to $100.[66]

D. Pest control compact

The Rhode Island legislature enacted the Interstate Pest Control Compact into law in 2006.[67]

VI. Insects

Rhode Island has not amended its insect regulations since 2002.[68]

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[1] DEM Office of Water Resources, *Aquatic Invasive Species*, *available at* http://www.dem.ri.gov/programs/benviron/water/quality/surfwq/aisindex.htm.
[2] Rhode Island Aquatic Invasive Species Management Plan (2007), *available at* http://www.dem.ri.gov/programs/benviron/water/quality/pdf/aisplan.pdf.
[3] *See* Rhode Island Natural History Survey, *Invasives: List*, *available at* http://www.rinhs.org/what-we-do/invasives/ri-invasive-species-resources/invasive-list/.
[4] DEM, Rules and Regulations Governing Importation and Possession of Native Wildlife (No. 4229) (2006).
[5] "Target Species" are those species that are the most common carriers of rabies. These include raccoons, skunks, bats, groundhogs, and foxes. *Id*.
[6] *Id*. at § 10.2.1.
[7] *Id*. at § 10.2.2.
[8] *Id*. at § 10.3.2.
[9] *Id*. at § 10.4.5.
[10] *Id*. at § 8.
[11] DEM, Rules and Regulations Governing Nuisance Wildlife Control Specialists (No. 4693), at § 6.12 (2007).
[12] *Id*. at §§ 6.1, 6.11(b).
[13] DEM, R.I. Ferret Regulations (No. 715), at § 6.1.0 (2001). This rule predates *Halting the Invasion* but was not included in the original publication. We include it here for completeness.
[14] *Id*. at § 3.4.
[15] *Id*. at § 3.3.
[16] *Id*. at § 2.0.
[17] *Id*. at § 4.0.
[18] DEM, Rules and Regulations Governing the Importation of Animals (No. 5243), at § 6.01 (2008).

[19] *Id*.
[20] *Id* at § 6.02.
[21] *Id*. at §§ 6.04-6.10.
[22] *Id*. at §§ 7.01, 7.02(i)
[23] *Id*. at §§ 7.04, 7.05(i).
[24] *Id*. at § 16.00.
[25] *Id*. at § 8.00.
[26] *Id*. at § 12.01.
[27] *Id*. at § 12.04.
[28] *Id*. at § 12.06.
[29] *Id*. at § 14.03.
[30] *Id*. at § 15.03.
[31] DEM, Rules and Regulations Relating to the Importation of Equines from Contagious Equine Metritis Affected Countries (No. 904) (2001).
[32] *Id*. at 10.00. *See also* R.I. Gen. Laws tit. 4.
[33] DEM, Rules and Regulations Governing the Importation of Animals (No. 5243), at § 10.05 (2008).
[34] DEM, Rules and Regulations Governing the Importation, Feeding, and Baiting of Cervids in Rhode Island (No. 3572), at §§ 10.1.1-10.1.2 (2005).
[35] *Id*. at § 1.4.
[36] *Id*. at § 2.1.
[37] *Id*. at § 4.1.
[38] *Id*. at § 4.1.1.
[39] *Id*. at § 4.1.2.
[40] *Id*. at §§ 5.1, 5.2.1-5.2.8.
[41] *Id*. at § 6.1.
[42] *Id*. at §§ 7.1-7.5.
[43] R.I. Gen. Laws § 20-10-1.1 (2009).
[44] R.I. Gen. Laws § 20-10-1.2 (2009).
[45] For the current iteration of these regulations, CRMC, Rhode Island Coastal Resources Management Program – Redbook: Section 300.11 – Aquaculture (No. 4468) (2002)
[46] *Id*. at § 300.11(C).
[47] *Id.* at § 300.11(E).
[48] *Id.*
[49] DEM, Aquaculture of Marine Species in Rhode Island Waters (No. 2058), at § 5.2 (2002).
[50] R.I. Gen. Laws § 20-10-16.
[51] R.I. Gen. Laws § 20-1-26.
[52] DEM, "Aquatic Invasive Species Recorded in Rhode Island," (2009), *available at* http://www.dem.ri.gov/programs/benviron/water/wetlands/pdfs/invasive.pdf
[53] R.I. Gen. Laws § 20-1-26.
[54] CRMC, Rules and Regulations Governing the Protection and Management of Freshwater Wetlands in the Vicinity of the Coast (No. 1061), at § 10.03 (2002)
[55] R.I. Gen. Laws § 46-23.1-5.
[56] R.I. Gen. Laws § 46-23.1-2.
[57] DEM, Rules and Regulations Relating to Pesticides (No. 3636), at §§ 10, 19 (2006).
[58] *Id*. at § 19.
[59] *Id*. at § 25.
[60] *Id*. at § 24.
[61] R.I. Gen. Laws § 2-17-21; 2009 R.I. Pub. Laws 155.
[62] R.I. Gen. Laws § 2-17-23.
[63] R.I. Gen. Laws § 2-17-22.
[64] DEM, Rules and Regulations Governing the Suppression of White Pine Blister Rust, at § 6 (2004).

[65] *Id*.
[66] *Id*.
[67] R.I. Gen. Laws § 2-16-1.
[68] *Halting the Invasion* did not address DEM regulations on the quarantine of out-of-state honey bees to prevent entry of the varroa mite into Rhode Island. It is illegal to import honey bees, including domestic bees used for pollination or honey production in multiple states, unless precautions have been taken to prevent the introduction of varroa mites (*Varroa jacobsoni*), as directed by the DEM Division of Agriculture. DEM, Rules and Regulations for Out of State Honey Bee Quarantine to Prevent Entry of Varroa Mite into Rhode Island (No. 999), at § 4 (2001).

Tennessee

Tennessee has made targeted statutory, regulatory changes to its invasive species programs since 2002. Its interagency coordination efforts now included establishment of a new aquatic invasive species task force in 2005 to create a state aquatic invasive species management plan. That plan was completed in 2007. Legal authorities have been amended in several respects. Most notably, the state has amended its list of restricted wildlife species, including by designating as restricted all species of freshwater aquatic life unless otherwise excepted. Similarly, the definition of pest plants was expanded and the list revised. Other changes primarily have been aimed at prevention or control of harm from to specific species of wildlife, animal diseases, and plant pests and diseases.

I. Invasive Species Councils and Plans

As in 2002, Tennessee lacks a comprehensive invasive species council or comprehensive invasive species management plan. However, it has taken steps to develop an aquatic invasive species task force and to draft an aquatic nuisance species management plan that would qualify the state for federal funding.

In 2005, Tennessee established the Tennessee Aquatic Nuisance Species Task Force. The Task Force is led by the Tennessee Wildlife Resources Agency and includes members from other state and federal agencies, including the Tennessee Valley Authority, the Tennessee Department of Agriculture, the Tennessee Department of Environment and Conservation, U.S. Department of Agriculture, and the U.S. Army Corps of Engineers, as well as private sector representatives.[1] The Task Force finalized the Tennessee Aquatic Nuisance Species Management Plan in 2007, after approximately two years of work.[2] The plan is intended to comply with the requirements of the federal Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990.[3] The plan was submitted to the federal Aquatic Nuisance Species Task Force for review and was approved in 2008.[4]

In addition to the Aquatic Nuisance Species Task Force, the state has created several initiatives focused on specific species of concern. First, at the Governor's direction, the state created a Hemlock Wooly Adelgid Task Force in 2005. In 2006, the Task Force released a strategic action and management plan to address the species; according to the state Department of Environment and Conservation (TDEC), implementation of the plan to date has resulted in providing state funding to ramp up the production of bioagents at the biocontrol lab at University of Tennessee in Knoxville, the release of those bioagents on state owned land, and the chemical treatment of hemlock trees on state owned land.[5]

Tennessee has also worked on an interagency level to promote early detection and rapid response. In 2009, 14 agencies and organizations signed an MOU formalizing the purpose of the initiative, establishing a Cooperative Weed Management Area (CWMA) encompassing the entire state, and creating the Tennessee Invasive Plant Steering committee (TIPS) to direct the CWMA's activities. The committee includes representatives from each of the member agencies

and organizations. The initiative is intended to implement a statewide approach through interagency cooperation for early detection and rapid response of invasive plant species not yet introduced or widely established in the state. The CWMA was established to enhance opportunities for federal funding and its strategic management plan is in the process of being developed.[6]

Finally, in 2009, Tennessee created an initiative to prevent the introduction and spread of White Nose Syndrome (WNS). The task force directing the initiative is composed of state agencies, academia, the U.S. Fish and Wildlife Service, and The Nature Conservancy. The task force's activities to date include research on WNS and development of the "White-nose Syndrome Cooperative Monitoring and Response Plan for Tennessee," which identifies protocols for implementing bat census and monitoring. The State has also closed public access to caves on state owned lands to prevent the potential introduction of the disease by humans.[7]

II. Wildlife

The Tennessee Wildlife Resources Agency (TWRA) is responsible for managing the state's fish and wildlife and their habitats, enforcing hunting laws, and conducting outdoor education.[8] It has authority over all wildlife within the state.

A. Non-native Wildlife

Possession of an imported organism defined as fish or wildlife by the state or country of origin is illegal if the organism was knowingly taken or transported from the state or country of origin illegally. A violation is a Class A misdemeanor.[9]

TWRA added several animals to its list of Class V species: (a) Nandaya or Black-Hooded parakeets (*Nandayus nenday*); (b) Quaker or Monk parakeets (*Myiopsitta monachus*); and (c) all non-native freshwater aquatic life except for certain listed species.[10] In addition, TWRA issued a rule clarifying that hybrids of two species from different classes of animals are considered members of the least restrictive class involved, unless otherwise specified.[11]

Finished products and parts of non-native species legally obtained in the state of origin and the meat of non-native wildlife (except fish) that are commercially raised may be bought or sold in Tennessee. The buyer must maintain records for the latter showing species, origin of shipment, and processor.[12]

B. Game Animals

Non-native game birds may be released with TWRA's advance approval,[13] and do not require a possession permit.[14] In addition, in 2001, TWRA repealed its rule stipulating that dealers in artificially propagated game birds must obtain a permit from the Agency.[15]

C. Animal Diseases

As a result of a new rule adopted in 2005, it is now illegal to import, transport, or possess in Tennessee a cervid carcass or carcass part from any area that TWRA has determined has a

known case of chronic wasting disease except: (a) boneless meat; (b) antlers, antlers attached to cleaned skull plates, or cleaned skulls (free of any meat or tissues); (c) cleaned teeth; (d) finished taxidermy and antler products; and (e) hides and tanned products.[16] In addition, as of 2002, it is illegal to import members of family Cervidae from geographic areas where Chronic Wasting Disease (CWD) has ever been diagnosed in wildlife. Imported animals must have originated from a herd that has participated in an approved CWD surveillance program without diagnosis since January 1, 2000.[17]

Also in 2005, TWRA promulgated a new rule requiring that livestock entering fairs and exhibitions be accompanied by an official veterinary health certificate with individual identification.[18] A person sponsoring a poultry exhibition must notify the Tennessee Department of Agriculture (TDA) at least thirty days prior.[19] All holding cells located on fair and exhibition grounds shall be thoroughly cleaned and disinfected with a USDA-approved disinfectant between each scheduled fair or exhibition. The manager must remove any animal showing clinical signs of infectious or communicable disease from the fair or exhibition premises.[20]

As of 2002, members of family Equidae may enter Tennessee without a current Equine Infectious Anemia test if they are consigned to an approved livestock market sale and if they are shipped directly to the market bearing a transportation document.[21] As of 2006, a health certificate need not accompany any goat imported into Tennessee to be slaughtered immediately at an approved slaughterhouse or to be sold at an approved livestock market for sale to a slaughterhouse.[22] Finally, an emergency rule concerning vesicular stomatisis has been enacted twice since 2002. The rule states that horses, cattle, swine, sheep, goats, and members of family Cervidae may not enter Tennessee from an area that has been quarantined for vesicular stomatitis. If such animals are imported from a non-quarantined area of an affected state, they must bear a Certificate of Veterinary Inspection issued within seven days of entering the state that indicates their place of origin. An emergency rule is currently effective through December 12, 2009.[23]

III. Aquatic Life

As noted above, all freshwater aquatic life has been designated as Class V wildlife unless specifically excepted. Species excepted from Class V include goldfish, triploid grass carp, all species of salmon, species approved for fish farming, and fish, crustaceans, and mollusks held in aquaria. However, the following species are regarded as Class V even if held in aquaria: zebra mussels (*Dreissena polymorpha*); black Carp (*Mylopharyngodon piceus*); blueback herring (*Alosa aestivalis*); ruffe (*Gymnocephalus cernua*); bighead carp (*Aristichthys nobilis*); silver carp (*Hypophthalmichthys molitrix*); snakeheads (all members of family Channidae); New Zealand mud snail (*Potamopyrgus antipodarum*); round goby (*Neogobius melanostomus*); rudd (*Scardinius erythrophthalmus*); and swamp eels (all members of family Synbranchidae).
A rule permits the purchase and sale of the meat of legally-obtained non-native fish, reptiles, mollusks, commercially-raised striped bass (*Morone saxatilis*) X white bass (*Morone chrysops*) hybrid, and commercially raised trout.[24]

IV. Plants

TDA is responsible for promoting local produce, food, and fiber, while conserving natural resources.[25] It has authority over all plants within the state. Several changes have occurred with respect to pest plants.[26] The definition of pest plants was expanded in 2007 to include propagative parts of plants that are "injurious to the agricultural, horticultural, silvicultural, or other interests of the state."[27] The pest plant list was also amended. In its original form, the list contained only purple loosestrife and tropical soda apple; the amended list includes 11 additional species.[28] Finally, the Commissioner now may issue permits to propagate, collect, and sell designated pest plants for research purposes, so long as the plants are neither sold nor released into the environment.[29]

Effective January, 2002, the rule concerning the responsibility of railroad companies to remove weeds adjacent to rights of way, yards, and terminals was relocated.[30]

V. Plant Pests and Diseases

A. General

Several provisions applicable to plant pests and diseases have been relocated since 2002. The rule making it illegal to move any material capable of harboring "insect pests, pest plants, and/or plant diseases" into Tennessee without a permit from TDA was moved,[31] as was that making it illegal to sell material that is apparently infested with any such pest or disease.[32]

B. Nurseries

As for its general authorities, TDA has relocated many of the rules relevant to nurseries, including the rule requiring nursery stock and other rooted plants or propagating materials to be inspected and certificated as apparently free of "insect pests, pest plants, and/or plant diseases" before they may be sold or transported into or within Tennessee.[33] In addition, certification fees were increased.[34] The Department of Agriculture Commissioner authority to seize infected or infested plant material moved into, within, or out of Tennessee has been relocated.[35]

The rule directing the Commissioner to inspect every nursery, greenhouse, range from which plants are collected, plant dealer, and landscaper at least once per year for injurious pests has been relocated.

C. Specific Quarantines

The quarantines against the soybean cyst nematode and the Japanese beetle were repealed in 2002 and 2009, respectively.[36]

D. Specific Plant Diseases

1. Sudden Oak Death

Sudden Oak Death (*Phytophthora ramorum*) has been quarantined.[37] Violation of the quarantine is a Class C misdemeanor.[38] TDA has created a list of regulated articles that may only be moved out of a quarantine area within Tennessee if accompanied by a certificate, except under certain circumstances.[39] A certificate-holder who wishes to move a regulated article within the state must notify an inspector as far in advance as possible, but no fewer than 14 days before the desired movement.[40] Any inspector may expand the list of regulated articles if she or he determines that an article poses a risk of spreading Sudden Oak Death.[41]

There is a list of quarantined areas, to which the TDA Commissioner may add any area smaller than an entire county, but must provide advance notice to the owner of any regulated items within the new quarantine area.[42] TDA has also created a list of treatments that may be used to eradicate Sudden Oak Death.[43]

Nurseries that ship regulated articles of nursery stock intrastate must be inspected for symptoms of *P. ramorum* annually and at random. If a nursery contains 100 or fewer regulated articles, an inspector will inspect each regulated article. If a nursery contains more, an inspector will randomly inspect 100 regulated articles and at least 2 percent of those remaining. The inspector must collect at least one sample per symptomatic plant she or he finds and send them to a laboratory for testing. If the inspector finds fewer than 40 symptomatic plants, she or he must collect samples from non symptomatic regulated articles of the nursery stock so that the total number of sampled plants is at least 40. If any regulated articles within a nursery are found to be infected with *P. ramorum*, the nursery will be prohibited from moving regulated articles intrastate until an inspector determines that the nursery is free of *P. ramorum*.[44]

Shipments of regulated articles of nursery stock intended for intrastate movement must be inspected for symptoms of *P. ramorum*. If a shipment contains 100 or fewer regulated articles, an inspector will inspect each regulated article. If a shipment contains more than 100 regulated articles, the inspector will randomly inspect 100 regulated articles and at least 2 percent of those remaining. If the inspector finds symptomatic plants she or he will collect at least one sample per symptomatic plant and one sample per regulated article of nursery stock that is near or has had physical contact with a symptomatic plant, and send the samples to a laboratory for testing. The intrastate shipment may only proceed if the samples are found to be found free of *P. ramorum*. If any samples are found to be infected with *P. ramorum*, the nursery from which they originated is prohibited from moving regulated articles intrastate until an inspector has determined that the nursery is free of *P. ramorum*.[45]

E. Pest Control Compact

The termination date for the Interstate Pest Control Compact was extended from 2007 to 2014.[46]

VI. Insects

The areas regulated by the red and black imported fire ant quarantine have been modified.[47]

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[1] Tennessee Aquatic Nuisance Species Task Force, TENNESSEE AQUATIC NUISANCE SPECIES MANAGEMENT PLAN (2007).
[2] Aquatic Nuisance Species Task Force, *State ANS Management Plans*, *at* http://www.anstaskforce.gov/stateplans.php (last visited August 8, 2009).
[3] *Id*.
[4] Aquatic Nuisance Species Task Force, Minutes of the 2008 Fall Meeting: October 28-29 2008 (2008), *available at* http://www.anstaskforce.gov/Meetings/2009_May/Fall_2008_ANSTF_Meeting_Summary.pdf.
[5] Personal communication (on file with author).
[6] Personal communication (on file with author).
[7] Personal communication (on file with author).
[8] "About the Tennessee Wildlife Resources Agency," Tennessee Wildlife Resources Agency. http://www.tennessee.gov/twra/aboutagency.html.
[9] Tenn. Code §70-4-131.
[10] *See infra*.
[11] Tenn. Comp. R. & Regs. tit. 1660, ch. 1-18-.03. This rule predates *Halting the Invasion* but is included here for completeness.
[12] Tenn. Comp. R. & Regs. tit. 1660, ch. 1-17-.01. This rule predates *Halting the Invasion* but is included here for completeness.
[13] Tenn. Comp. R. & Regs. tit. 1660, ch. 1-18-.01.
[14] Tenn. Comp. R. & Regs. tit. 1660, ch. 1-18-.02. This rule predates *Halting the Invasion* but is included here for completeness.
[15] Rule 1660-01-02.01
[16] Tenn. Comp. R. & Regs. tit. 1660, ch. 1-15-.02.
[17] Tenn. Comp. R. & Regs. tit. 80, ch. 2-1-.12.
[18] Tenn. Comp. R. & Regs. tit. 80, ch. 2-3-.01. Tenn. Comp. R. & Regs. tit. 80, ch. 2-3-.01 was repealed.
[19] Tenn. Comp. R. & Regs. tit. 80, ch. 2-3-.05.
[20] Tenn. Comp. R. & Regs. tit. 80, ch. 2-3-.01.
[21] Tenn. Comp. R. & Regs. tit. 80, ch. 2-1-.06.
[22] Tenn. Comp. R. & Regs. tit. 80, ch. 2-1-.09.
[23] Tenn. Comp. R. & Regs. tit. 80, ch. 2-1-.17.
[24] Tenn. Comp. R. & Regs. tit. 1660, ch. 1-17-.01. This rule predates *Halting the Invasion* but is included here for completeness.
[25] "Welcome," Tennessee Department of Agriculture. http://www.tennessee.gov/agriculture/
[26] Note that in *Halting the Invasion*, pest plants were considered under the Plant Pests and Diseases section. We include them under the more natural "Plants" heading but note that some laws and TDA regulations that apply to pest plants may be discussed in the subsequent discussion.
[27] Tenn. Comp. R. & Regs. tit. 80, ch. 6-24-.01.
[28] Tenn. Comp. R. & Regs. tit. 80, ch. 6-24-.02.
[29] Tenn. Comp. R. & Regs. tit. 80, ch. 6-24-.03.
[30] The rule moved from Tenn. Comp. R. & Regs. tit. 1220, ch. 3-1-.10 to Tenn. Comp. R. & Regs. tit. 1680-12-2-.04.
[31] Tenn. Comp. R. & Regs. tit. 80, ch. 6-1-.18.
[32] Tenn. Comp. R. & Regs. tit. 80, ch. 6-1-.19, originally at Tenn. Comp. R. & Regs. tit. 80, ch. 6-1-.15.
[33] Tenn. Comp. R. & Regs. tit. 80, ch. 6-1-.03.
[34] Tenn. Comp. R. & Regs. tit. 80, ch. 6-21-.01.
[35] Tenn. Comp. R. & Regs. tit. 80, ch. 6-1-.14.
[36] Tenn. Comp. R. & Regs. tit. 80, ch. 6-10, 6-11
[37] Tenn. Comp. R. & Regs. tit. 80, ch. 6-26-.01.
[38] Tenn. Comp. R. & Regs. tit. 80, ch. 6-26-.12; Tenn. Code §43-6-112.
[39] Tenn. Comp. R. & Regs. tit. 80, ch. 6-26-.05.
[40] Tenn. Comp. R. & Regs. tit. 80, ch. 6-26-.08.
[41] Tenn. Comp. R. & Regs. tit. 80, ch. 6-26-.03.

[42] Tenn. Comp. R. & Regs. tit. 80, ch. 6-26-.04.
[43] Tenn. Comp. R. & Regs. tit. 80, ch. 6-26-.10.
[44] Tenn. Comp. R. & Regs. tit. 80, ch. 6-26-.11.
[45] Tenn. Comp. R. & Regs. tit. 80, ch. 6-26-.11.
[46] Tenn. Code § 4-29-235.
[47] Tenn. Comp. R. & Regs. tit. 80, ch. 6-19-.03.