

GENERAL MANUAL : TITLE 190 - ECOLOGICAL SCIENCES : PART 404 –PEST
MANAGEMENT - Part 404 –Pest Management

Part 404 –Pest Management

Subpart A - General

404.0 Purpose.

This directive sets forth Natural Resources Conservation Service (NRCS) policy for pest management. This pest management policy applies to all pests.

404.1 Background.

(a) A memorandum of understanding between the Cooperative State Research, Education and Extension Service (CSREES) (formerly the Cooperative Extension Service) and NRCS (formerly the Soil Conservation Service), dated June 3, 1988, (Title 460, General Manual (GM) Part 401, Water Quality Policy) outlined various roles and responsibilities for CSREES and NRCS. (See section 404.20 of this Part for details.) Extension refers to the local component of CSREES.

(b) Pest management policy is applied through the conservation planning process.

404.2 Authorities.

The following laws and initiatives require United States, Department of Agriculture (USDA) component agencies to reduce both the use and the risks of pesticides and to promote sustainable agriculture that reduces contamination of the Nation's natural resources:

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(a) Food, Agriculture and Energy Act of 2008

(b) Executive Order 13112 of February 3, 1999, Invasive Species;

(c) Inter-Departmental Clean Water Action Plan, February 14, 1998 (i.e., signed by the USDA, and the Environmental Protection Agency (EPA);

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(d) Safe Drinking Water Act of 1996, as amended;

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(e) Food Quality Protection Act of 1996;

(f) EPA's Pesticide Environmental Stewardship Program of 1994;

(g) USDA's 1993 Integrated Pest Management (IPM) Initiative;

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(h) Cooperative Forestry Assistance Act of 1978, as amended and

(i) Section 404.4 of the Secretary's Memorandum No. 1929, dated December 12, 1977, which provides the Department's policy statement on management of pest problems;

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(j) Endangered Species Act of 1973, as amended;

(k) Clean Water Act of 1972, as amended;

(l) National Environmental Policy Act of 1969, as amended.

404.3 Definitions.

(a) Avoidance - Avoiding pest impacts (e.g., using pest-resistant varieties, crop rotation, rotational grazing trap crops, etc.). Avoidance is the "A" in the Prevention, Avoidance, Monitoring, and Suppression (PAMS) approach to IPM.

(b) Biological Pest Suppression - The process of conserving, augmenting, managing, or introducing beneficial living organisms to reduce a pest population or its impacts. It includes the use of insects,

nematodes, mites, plant pathogens, plants, vertebrates (including herbivores), and other living organisms. Biological pest suppression is usually an activity in the PAMS approach to IPM.

(c) Biological Pest Suppression Recommendation – A specific written or spoken instruction that includes specifics on approved suppression agents, methods of release and management.

(d) Chemical Pest Suppression - The use of pesticides such as herbicides, insecticides, or fungicides to reduce a pest population or its impacts. Chemical pest suppression is an activity in the PAMS approach to IPM.

(e) Chemical Pest Suppression Recommendation – A specific written or spoken instruction that includes pesticide formulation, application rate, timing, and method of application.

(f) Cultural Pest Suppression - The use of practices other than chemical or biological suppressions to reduce a pest population or its impacts. Cultural suppression includes such techniques as rotating crops, using pest-free seed and transplants, using pest-resistant varieties, using good sanitation practices, burning, trapping, and all forms of mechanical pest suppression. Cultural pest suppression is an activity in the PAMS approach to IPM.

(g) Environmental Risk - The potential to negatively impact ecosystem values and functions.

(h) Integrated Pest Management (IPM) - Integrated pest management is a sustainable approach to manage pests that combines the use of PAMS strategies to maintain pest populations below economically damaging levels, to minimize pest resistance, and to minimize harmful effects of pest suppression on human health and environmental resources. IPM suppression systems may include biological suppression, cultural suppression, and/or the judicious use of chemical suppression.

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(i) Invasive Species - A species that is: 1) non-native (or alien) to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health (Executive Order 13112).

(j) Mechanical Pest Suppression - A form of pest suppression that utilizes physical methods to reduce a pest population or its impacts. Mechanical suppressions include cultivation, hoeing, hand weeding, mowing, pruning, root plowing, roller chopping, vacuuming, etc. Mechanical pest suppression is an activity in the PAMS approach to IPM.

(k) Mitigation – The process of minimizing the potential for harmful impacts of pest management activities on soil, water, air, plant, and animal resources and humans through the application of conservation practices (e.g., Filter Strip, Conservation Crop Rotation, Residue Management, Irrigation Water Management, etc.) and/or management techniques (e.g., application method, application timing, use of pheromones, etc.).

(l) Monitoring - Identifying the extent of pest populations and/or the probability of future populations (e.g., pest scouting, soil testing, weather forecasting, etc.). Monitoring is also conducted after suppression actions to determine the effectiveness of the treatment. Monitoring is the "M" in the PAMS approach to IPM.

(m) National Agriculture Pesticide Risk Analysis (NAPRA) - A detailed pesticide environmental risk analysis tool that quantitatively evaluates the potential for pesticides to be transported by water and adversely affect non-target organisms. Results include the probabilities of pesticide leaching below the root zone and runoff beyond the edge of the field to exceed toxicity thresholds for humans, fish, crustaceans, and algae based on local crop management techniques, weather, and soil conditions. NAPRA

can be used to refine Windows Pesticide Screening Tool (WIN-PST) results and evaluate mitigation techniques.

(n) Organic crop – An agricultural commodity that is organically produced consistent with section 2103 of the Organic Foods Production Act of 1990 (7 U.S.C. 6052).

(o) Pest - A plant, animal, or other organism (including invasive and non-invasive species) that directly or indirectly causes damage or annoyance by destroying food and fiber products, causes structural damage or creates a poor environment for other organisms.

(p) Pest Suppression Reference – Written recommendations by the Extension Service, Agricultural Research Service (ARS) and other reputable sources that publish peer-reviewed documents which include, but are not limited to, bulletins, IPM guides, manuals, crop protection guides, brochures, fact sheets, computer software, and web-based materials.

(q) Pesticide - A substance or mixture of substances intended for preventing, destroying, repelling, or mitigating pests; or a substance or mixture of substances intended for use as a plant growth regulator, defoliant, or desiccant. Pesticide applications are suppression activities in the PAMS approach to IPM.

(r) Pest Management – For the intent and purpose of this agency, is the evaluation of environmental risks associated with a client's probable pest suppression strategies and the assistance to clients to mitigate the identified environmental risks. Pest Management may also include assistance to clients to suppress weeds (on non cropland) to ensure successful implementation and/or maintenance of conservation practices.

(s) Pest Management Environmental Risk Analysis – An evaluation of the potential for a client's pest management activities to have a negative impact on the offsite ecosystem. This is usually accomplished with the WIN-PST tool at the field office level or alternatively, with NAPRA.

(t) Prevention - is the practice of keeping a pest population from infesting a field or site. Preventative techniques include, but are not limited to, using pest-free seeds and transplants, cleaning tillage harvesting and other equipment between fields and/or farms, feeding weed free roughage to livestock, applying management techniques that maintain or improve plant community resilience and resistance to pests, and scheduling irrigation to avoid situations conducive to disease development, etc. Prevention is the 'P' in the PAMS approach to IPM.

(u) Specialty Crop –Fruits and vegetables, tree nuts, dried fruits, and nursery crops (including floriculture), as per Specialty Crop Competitiveness Act of 2004, Public Law 108-465-Dec. 21, 2004.

(v) Suppression - Suppressing a pest population or its impacts using cultural, biological, or chemical pest suppression. Suppression is the "S" in the PAMS approach to IPM.

(w) Windows Pesticide Screening Tool (WIN-PST) - A basic screening tool for pesticide environmental risk analysis, designed for use by NRCS field office staff, crop consultants, certified crop advisors, and other partners. WIN-PST qualitatively evaluates the potential for pesticides to be transported by water from the area of application and adversely affect some non-target organisms. WIN-PST considers the influence of climate, irrigation, residue management, and pesticide application method and rate class on the potential for pesticide leaching below the root zone and runoff beyond the edge of the field. It also incorporates long-term pesticide toxicity to humans and aquatic life in its overall risk ratings. WIN-PST provides environmental risk information that a planner can use to formulate appropriate mitigation techniques that meet water quality criteria in Section III of the Field Office Technical Guide (FOTG).

Subpart B - Policy

404.10 Pest Management and Technical Assistance.

(a) Guidance and requirements in this Subpart are applicable to all NRCS technical assistance that involves pest management. All NRCS employees will follow these requirements when providing such technical assistance. Third Party Vendors/Technical Service Providers and other non-NRCS employees will use these pest management requirements when assisting clients with conservation activities for which NRCS has technical responsibility.

(b) NRCS roles in pest management are:

- (1) Evaluate environmental risks associated with a client's probable pest suppression strategies;
- (2) Provide technical assistance to clients to mitigate the identified environmental risks of pest suppression strategies through mitigation practices and activities; and
- (3) Assist clients to adopt IPM techniques that protect natural resources.
- (4) Additionally, NRCS will inventory and assess weeds in non-cropland and may provide assistance to clients to suppress weeds to ensure successful implementation and/or maintenance of conservation practices.

(c) Technical Assistance

(1) NRCS pest management assistance applies to all land uses, all crops including organic and specialty crops and all pests including invasive species.

(2) NRCS shall not develop chemical pest suppression recommendations or change pesticide label instructions for clients. NRCS shall not develop biological pest suppression recommendations except for biological weed suppression utilizing grazing animals. NRCS may provide clients with the most current biological and chemical pest suppression references.

(3) References will be based on reputable scientific research that is peer reviewed from Universities, Extension, Agricultural Research Service (ARS), and non-profit non-government organizations (NGO) such as biological and agricultural research centers, stations and foundations. The recommendations in these references must be in accordance with all Federal, State, Tribal, local laws, and regulations.

(4) NRCS may assist clients to develop appropriate cultural and mechanical methods of pest suppression.

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(5) NRCS shall evaluate the environmental risks of cultural, biological, and chemical pest management suppression techniques selected by the clients.

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(6) When chemical methods of pest suppression are chosen by the client that pose a significant risk to an identified natural resource, NRCS shall assist clients to adopt and implement a conservation system that addresses the appropriate pesticide loss pathways that have been identified as impacting the resource.

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(7) NRCS will provide assistance to clients to develop appropriate mitigation for all identified risks. When clients request assistance with IPM techniques that include pesticides, NRCS will provide an evaluation and interpretation of the pesticide risks; however, NRCS cannot recommend specific pesticides.

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(8) NRCS shall cooperate with the appropriate Federal, State, Tribal, and local agencies when assisting clients with pest management.

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(9) NRCS shall cooperate with Animal and Plant Health Inspection Service (APHIS) and appropriate State agencies when assisting clients with pests (e.g., invasive species), which may require quarantine or eradication to suppress the spread of the pest.

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(10) NRCS pest management activities must be in compliance with all Federal, State, Tribal, and local environmental laws, regulations, or ordinances.

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(11) NRCS shall assist clients to assess pest management risks to beneficial animals (e.g., native pollinators, honeybees, parasitic wasps, lady beetles, etc.) and to develop appropriate mitigation.

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(12) NRCS shall not provide assistance in suppressing pests on animals (e.g., fly suppression for livestock, worm suppression for goats). With regards to suppressing pests on animals only the roles in 404.10 (b) (1)-(3) apply to NRCS involvement.

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(13) It is the clients', or their representatives', responsibility to ensure that all pesticides applied are currently registered for their intended use at their location by the U.S. Environmental Protection Agency and that the application of the pesticides are not further restricted by state or other local laws or ordinances. The product label must contain specific instructions for the proposed use; or, the proposed use must be permitted by special local needs registration or emergency exemptions from registration.

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(14) On NRCS-operated properties, such as Plant Material Centers, personnel who apply or supervise the application of approved pesticides must follow all label instructions and be trained and certified according to State regulations, and wear the appropriate Personal Protective Equipment.

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(15) NRCS will cooperate with Federal and State (and equivalent) conservation agencies and the private sector to identify research needs for pest management and mitigation that reduce environmental risks.

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404.11 Certification.

NRCS personnel and partners providing conservation planning and practice application assistance for pest management must meet certification requirements established by the State Conservationist in accordance with GM 180.409.11.

Subpart C - Responsibilities

404.20 Department of Agriculture.

(a) Responsibilities, as described in a June 3, 1988, memorandum of understanding between CSREES and NRCS (i.e., Title 460, GM, Part 401, Water Quality Policy), are as follows:

- (1) CSREES agrees to provide assistance to NRCS in support of the development and use of site-specific information and to address water quality issues;
- (2) CSREES and NRCS agree to cooperate in encouraging each State's (or equivalent) Extension and NRCS organizational unit to develop guidelines and appropriate pesticide components for use in landowners'/operators' conservation plans; and
- (3) NRCS agrees (as outlined in a Department of Agriculture companion document to the June 3, 1988, memorandum of understanding between CSREES and NRCS) to:

- (i) ". . . provide site-specific resource data and planning assistance with regard to pesticide use and impacts of water quality to pesticide users and others making land use and management decisions;" and
- (ii) ". . . assist landowners with the implementation of acceptable pesticide management practices."

(b) Additionally, to meet the requirements of the Food Quality Protection Act of 1996, NRCS is committed to promoting IPM that provides both economic and environmental benefits.

404.21 NRCS National Headquarters Office.

(a) The Deputy Chief for Science and Technology, under the direction of the Chief, is responsible for providing national leadership for policy and procedures for NRCS pest management and identifying pest management research and technology development needs.

(b) The Director of the Ecological Sciences Division is responsible for developing, implementing, and evaluating NRCS pest management policy and procedures.

(c) The National Pest Management Specialist of the Ecological Sciences Division provides national leadership for pest management policy, environmental risk technologies, and training.

(d) The National Water Quality and Quantity Team provides technology development and technical assistance for pest management environmental risk analysis technologies including WIN-PST and NAPRA.

(e) The Director of the Soil Survey Division is responsible for maintaining the soil database to support interpretations for pesticide leaching, solution runoff, and adsorbed runoff loss potentials.

404.22 NRCS National Technology Support Centers (NTSC's)

NTSC's Directors will provide technical assistance to State Conservationists/Directors of the Pacific Island and Caribbean Areas for pest management assistance in their respective areas.

404.23 NRCS State Offices (or equivalent).

State Conservationists/Directors of the Pacific Islands and Caribbean Areas are responsible for:

(a) Targeting pest management technical assistance to specific resource concerns and locations within their respective States/Areas (e.g., watersheds with pesticide-impaired sources of drinking water, pesticide Total Maximum Daily Load requirements, air quality non-attainment areas, or highly vulnerable areas that may contribute to future pest suppression-related contamination, increase risk of fire, and livestock production reduction).

(b) Supplementing the pest management guidance and requirements in appropriate directives, as necessary, making it applicable to local conditions and providing a copy to the Director, Ecological Sciences Division.

(c) Ensuring that appropriate training is provided to all NRCS personnel who provide pest management technical assistance and establishing a process to provide continuing education to maintain employee certification as outlined in GM 180, Part 409.11.

(d) Making certain that all NRCS personnel who provide pest management technical assistance to the public meet the applicable requirements for their positions and the State or local testing requirements as required by law.

(e) Working in consultation with respective State Technical Committees to address State-specific pest management issues.

(f) Utilize appropriate technology to evaluate pest management environmental risks (e.g., WIN-PST and/or NAPRA for risks to water quality). Environmental risk assessment tools other than WIN-PST or NAPRA

must be reviewed by the National Pest Management Specialist, to ensure consistency with WIN-PST and NAPRA.

(g) Providing assistance, training and technical tools (with support of NTSC) to NRCS Field Service Centers so that they are able to provide assistance to clients to recognize, inventory, assess, and suppress weeds in non-cropland.

404.24 NRCS Field Service Centers (or equivalent).

(a) NRCS field service center technical leaders (e.g., District Conservationists and Team Leaders) are responsible for providing local leadership in implementing the pest management policy.

(b) NRCS field service center (or equivalent) employees are responsible for:

(1) Evaluating environmental risks associated with the client's pest suppression choices involving pesticides and soil disturbing activities as per 404.40, Pest Management Environmental Risk Analysis of this policy.

(2) Providing technical assistance to clients to mitigate identified environmental risks of pest suppression strategies with conservation practices (NRCS FOTG practices) and/or Prevention, Avoidance or Monitoring activities recognized by the local land grant university or Regional IPM center as being a viable IPM technique.

(3) Assisting clients in adopting IPM techniques that protect natural resources in addition to those techniques used solely for the mitigation purposes above. When the client works with qualified individual(s) (e.g., University Extension, Certified Crop Advisor/Pesticide Control Advisor, etc.) to evaluate and select IPM techniques, the field office staff should document which IPM techniques were adopted and what resources benefited from their adoption.

(4) Providing assistance to clients to recognize, inventory, assess, and suppress weeds in non-cropland. The field office staff will bring to the client's attention any population of weeds in non-cropland that can prevent the successful establishment of a conservation practice or degrade the resource base so that the land cannot support its intended use. Additionally, field office staff may refer the client to qualified individuals (e.g., University Extension, Certified Crop Advisor/Pesticide Control Advisor, etc.) for weed suppression recommendations or provide the client with pest suppression references consistent with section 404.10 (c) (2) to address identified weed concerns.

(5) Identifying pest management needs and informing State Conservationists/ Directors of the Pacific Island and Caribbean Areas, or designee(s), of these needs, as appropriate.

404.30 Social and Economic Considerations.

The pest management practices of the conservation plan must be designed and implemented at an appropriate level of complexity to address social and economic constraints, resource limitations, management capabilities, pest management philosophies, and other social and cultural issues. Social considerations include public health and safety and other societal goals, as well as social, family and religious values, ethnicity, risk tolerance or aversion, land tenure, and time availability. Economic considerations include size of farm, type of farming system (e.g., high versus low technology, high versus low intensity cropping systems, etc.), available capital, and land tenure.

404.31 Environmental Justice.

The pest management practices of a conservation system will not create undue hardship on socially disadvantaged or other economically limited communities or individuals.

404.40 Pest Management Environmental Risk Analysis.

(a) Environmental risks of pest management activities must be evaluated in the conservation planning process, including:

1. the potential impacts of pesticides in ground and surface water on humans and non-target plants and animals (see (b) below);
2. the potential impacts of mechanical pest suppression techniques on on-site soil loss and potential offsite resource effects (see (b) below);
3. the potential impacts of biological pest suppression techniques on natural resources (use land grant University publications or other appropriate literature); and
4. the potential impacts of cultural pest suppression techniques (e.g., burning) on natural resources specifically Air and Soil Quality resources.

(b) Offsite effects of pest management will be evaluated with appropriate tools and/or procedures. WIN-PST and NAPRA are nationally supported for evaluating offsite pesticide movement through runoff and leaching.

(c) WIN-PST is designed for general field office use and provides qualitative environmental risk analysis that is adequate for most situations. WIN-PST is the official tool for field office use.

(d) NAPRA is more sensitive to pesticide application techniques than WIN-PST and provides quantitative results. NAPRA was designed to be used by State specialists to quantify mitigation benefits in high-risk areas that are identified with field office use of WIN-PST. NAPRA can also be used to refine high-risk WIN-PST results.

(e) States (or equivalent) utilizing pesticide environmental risk screening tools other than WIN-PST and NAPRA, need to coordinate their use with the Director of the Ecological Science Division (ESD) and the National Pest Management Specialist of ESD to ensure that the technology being applied is consistent with WIN-PST and NAPRA.

(f) The risk of environmental degradation by other pest management methods and management techniques (e.g., tillage, burning, biological predation, etc.) must also be assessed with appropriate analysis tools such as the currently NRCS approved erosion prediction technologies (see GM 450.402.A and 402.B).

(g) If an appropriate analysis tool or procedure is not available for a proposed pest management method, environmental risk analysis is left to the professional judgment of the planner. Analysis inputs and results should be documented in the conservation plan to justify the need for mitigation described in section 404.40 (c) below.

(h) When pest suppression activities have significant potential to impact identified resources negatively, appropriate mitigation shall be discussed with the client for their decisions. Mitigation includes conservation practices (e.g., Filter Strip, Conservation Crop Rotation, Residue Management, Irrigation Water Management, etc.) and management techniques (e.g., application method, application timing, etc.). The client-selected Mitigation techniques and conservation practices will be planned and documented in the Conservation Plan.

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