Part 404 – Pest Management

Subpart A – General

404.0 Purpose.

404.1 Background.

404.2 Authorities.

Part 404 – Pest Management

Subpart A – General

404.0 Purpose.

This directive sets forth Natural Resources Conservation Service (NRCS) policy and requirements for pest management. This pest management policy applies only to pests that are living organisms (e.g., weeds, insects, diseases, animals, etc.).

404.1 Background.

(a) A memorandum of understanding between the Cooperative State Research, Education and Extension Service (CSREES) (formerly the Cooperative Extension Service) and the 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 Pest Management (595) conservation practice standard located in Section IV of the local Field Office Technical Guide (FOTG). NRCS Technical Guides policy and responsibilities concerning soil, water, air, plants and animals are contained in Title 450, GM, Part 401, Technical Guides, Subpart A, Policy and Responsibilities.

404.2 Authorities.

The following laws and initiatives require U.S. Department of Agriculture 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:

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

(b) Inter-Departmental Clean Water Action Plan, February 14, 1998 (i.e., signed by the U.S. Department of Agriculture and the U.S. Environmental Protection Agency);

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

(d) Food Quality Protection Act of 1996;

(e) U.S. Environmental Protection Agency's Pesticide Environmental Stewardship Program of 1994;

(f) U.S. Department of Agriculture's 1993 Integrated Pest Management (IPM) Initiative;

(g) 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;

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

(i) Clean Water Act of 1972, as amended; and

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

404.3 Definitions.

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

(b) Biological Pest Control – The process of conserving, augmenting, 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, and other living organisms.

(c) Conservation Management Unit (CMU) – A field, group of fields, or other land units of the same land use and having similar treatment needs and planned management. A CMU is a grouping by the planner to simplify planning activities and facilitate development of a Resource Management System (RMS). A CMU has definite boundaries, such as fence lines, drainageways, or changes in vegetation.

(d) Chemical Pest Control – The use of pesticides such as herbicides, insecticides, or fungicides to reduce a pest population or its impacts.

(e) Cultural Pest Control – The use of farming practices other than chemical and biological controls to reduce a pest population or its impacts. Cultural controls include such techniques as rotating crops, using pest-free seed and transplants, using pest-resistant varieties, using good sanitation practices, burning, and all forms of mechanical pest control.

(f) Environmental Risk – The potential to impact the ecosystem negatively.

(g) Genetically Modified Organism (GMO) – A living entity that has been modified or transformed with the application of recombinant deoxyribonucleic acid (DNA) technology, commonly referred to as genetic engineering.

(h) Integrated Pest Management (IPM) – A sustainable approach to pest control that combines the use of Prevention, Avoidance, Monitoring, and Suppression strategies (PAMS), to maintain pest populations below economically damaging levels, to minimize pest resistance, and to minimize harmful effects of pest control on human health and environmental resources. IPM suppression systems include biological controls, cultural controls, and the judicious use of chemical controls.

(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 Control – A component of cultural pest control that utilizes physical methods to reduce a pest population or its impacts. Mechanical controls include cultivation, hoeing, hand weeding, mowing, pruning, and vacuuming, etc.

(k) Mitigation – The process of minimizing the potential for harmful impacts of pest management activities on soil, water, air, plant, and animal resources through the application of conservation practices and/or management techniques.

(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 the "M" in the PAMS approach to IPM.

(m) National Agriculture Pesticide Risk Analysis (NAPRA) – A detailed pesticide environmental risk analysis tool, designed for use by NRCS specialists and their technology partners. NAPRA *quantitatively* evaluates the potential for pesticides to be transported by water and adversely affect non-target organisms, by modeling crop management techniques under specific weather and soil conditions. 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. NAPRA can be used to refine Windows Pesticide Screening Tool (WIN-PST) results and quantify mitigation techniques needed to meet RMS water quality criteria.

(n) Pest – A weed, insect, disease, animal, and other organism (including invasive and non-invasive species) that directly or indirectly causes damage or annoyance by destroying food and fiber products, causing structural damage, or creating a poor environment for other organisms.

(o) Pest Management – Controlling organisms that cause damage or annoyance. NRCS defines pest management as utilizing environmentally sensitive prevention, avoidance, monitoring and suppression strategies to manage weeds, insects, diseases, animals and other organisms (including invasive and non-invasive species) that directly or indirectly cause damage or annoyance.

(p) Pest Management Component of a Conservation Plan – A portion of the conservation plan that is developed by implementing the Pest Management (595) conservation practice standard. The pest management component, at a minimum, contains the five elements identified in the plans and specifications section of the standard and in section 404.30(b) of this Part.

(q) Pest Management Environmental Risk Analysis – An evaluation of the potential for pest management (including the use of GMO's) to impact the ecosystem negatively.

(r) 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 regulator, defoliant, or desiccant.

(s) Plant Regulator – Any substance or mixture of substances intended, through physiological action, for accelerating or retarding the rate of growth or rate of maturation, or for otherwise altering the behavior of plants or the produce thereof.

(t) Prevention – Preventing pest populations (e.g., using pest-free seeds and transplants, cleaning tillage and harvesting equipment between fields, and scheduling irrigation to avoid situations conducive to disease development, etc.). Prevention is the 'P' in the PAMS approach to IPM.

(u) Resource Assessment – Analyzing soil, water, air, plants and animals information, and human considerations to determine resource vulnerability, current conditions, and trends.

(v) Resource Management System (RMS) – A combination of conservation practices and resource management for the treatment of all identified resource concerns for soil, water, air, plants, and animals that meets or exceeds the quality criteria in the FOTG for resource sustainability.

(w) Resource Vulnerability – Degree of susceptibility to injury based on a combination of intrinsic site characteristics and extrinsic management factors. For example, groundwater resource vulnerability is determined by intrinsic site characteristics, such as climate, soil properties, and depth to groundwater; and extrinsic management factors, such as crop selection, pesticide application, and water management.

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

(y) 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 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 of "Extra High," "High," "Intermediate," "Low," or "Very Low." WIN-PST provides environmental risk information that a planner can use to formulate appropriate mitigation techniques that meet RMS water quality criteria.

(z) Third Party Vendor – An individual in either the public or private sector who has been certified by an approved, independent certification organization or natural resource conservation agent as being qualified to provide certain types of conservation assistance and who participates in the USDA-Approved Vendor Process, outlined in the NRCS Conservation Programs Manual, Part 504, Conservation Assistance from Third Party Vendors.

Subpart B – Policy

404.10 Pest Management.

404.11 Certification.

Part 404 – Pest Management

Subpart B – Policy

404.10 Pest Management.

(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 and other non-NRCS employees will use these pest management requirements when assisting clients with conservation activities for which NRCS has technical responsibility.

(b) Pest management is an important component of the Resource Management System (RMS) planning process.

(c) NRCS roles in pest management are:

(1) Evaluating environmental risks associated with probable pest management recommendations;

(2) Developing appropriate mitigation alternatives to minimize environmental risks;

(3) Assisting clients to adopt IPM that helps protect natural resources; and

(4) Assisting clients to develop and implement an acceptable pest management component of their overall conservation plans.

(d) Mitigation techniques will be planned and implemented to reduce the environmental risks of pest management activities, in accordance with quality criteria in the local FOTG.

(e) NRCS, Third Party Vendors, and other non-NRCS employees will incorporate IPM that strives to balance economics, efficacy, and environmental risk into planning alternatives where it is available. If commodity-specific IPM information is not available, NRCS, Third Party Vendors, and other non-NRCS employees will encourage the use of general IPM methods and principles, including pest prevention, avoidance, monitoring, and suppression strategies.

(f) NRCS pest management activities must be in compliance with the National Environmental Policy Act of 1969, as amended.

(g) The pest management component of a conservation plan is to be developed in compliance with all applicable Federal, Tribal, State, and/or local regulations. Federal, Tribal, State and/or local regulations take precedence over NRCS policy when they are more restrictive.

(h) NRCS State Conservationists/Directors of the Pacific Basin and Caribbean Areas will supplement this guidance, as necessary, to make it applicable to local conditions and provide a review copy to their Regional Conservationists.

404.11 Certification.

Certification is not required to develop or revise pest management components of NRCS conservation plans, however, all persons who approve pest management components of NRCS conservation plans must be certified specialists in pest management in accordance with Title 180, GM, Part 409, Conservation Planning Policy.

Subpart C – Responsibilities

404.20 Department of Agriculture.

404.21 NRCS National Headquarters Office.

404.22 NRCS Regional Offices.

404.23 NRCS State Offices (or equivalent).

404.24 NRCS Field Service Centers (or equivalent).

Part 404 – PEST MANAGEMENT

Subpart D – Pest Management And Technical Assistance

404.30 Pest Management Component of the Conservation Plan.

(a) The pest management component of the conservation plan is an integral part of the overall RMS plan for the CMU. Provisions of the pest management component will recognize other requirements of the conservation plan and make it possible for clients to comply with both pest management provisions and all other provisions of the conservation plan.

(b) The pest management component of the conservation plan is to be developed in accordance with criteria in the Pest Management (595) conservation practice standard in the local FOTG. As a minimum, the following items are to be included in the pest management component of the conservation plan:

(1) Plan map and soil map of the managed site, if applicable (use RMS plan maps, if available);
(2) Location of sensitive resources and setbacks, if applicable (use RMS plan maps, if available);
(3) Environmental risk analysis, with approved tools and/or procedures, for probable pest management recommendations by crop, if applicable, and by pest;
(4) Interpretation of the environmental risk analysis and identification of appropriate mitigation techniques; and
(5) Operation and maintenance requirements.

(c) The pest management component of a conservation plan is to be developed to accommodate the client's management system, including organic agriculture and sustainable agriculture.

(d) Clients, including those who participate in cost share programs that contain pest management provisions, or their representatives, must document the implementation of the Pest Management (595) conservation practice standard contained in the local FOTG. Records will be reviewed by NRCS periodically to ensure they are in accordance with the pest management component of the clients' conservation plan. Also, clients should review and update their pest management plans periodically in order to incorporate new IPM technology, respond to cropping system and pest complex changes, and avoid the development of pest resistance.

(e) Certified conservation planners must approve revisions to the pest management component of the conservation plan.

404.31 Pesticide Management Application.

(a) Risks to beneficial insects (e.g., honeybees, parasitic wasps, lady beetles, etc.) must be considered when developing the pest management component of the conservation plan.

(b) For animal agriculture (including aquaculture), risks to water quality, to animals being raised, and to consumers of those animals or animal products must all be considered when developing the pest management component of the conservation plan.

(c) NRCS does not develop pesticide recommendations or change label instructions or recommended specifications for pesticide application.

(d) It is the clients' or their representatives' responsibility to ensure that all pesticides included in the pest management component of their conservation plans are currently registered for use at their location by the U.S. Environmental Protection Agency. 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.

(e) Clients are to be instructed to pay special attention to all environmental hazards and site-specific application criteria listed on the pesticide label and contained in Extension and crop consultant recommendations (e.g., ground water advisory statements, application setbacks, application rate limitations on highly erodible land, soil type exclusions, etc.).

(f) Records of restricted-use pesticide application, in accordance with the U.S. Department of Agriculture, Agricultural Marketing Service's Pesticide Record Keeping Program, must be maintained for at least two years. State-specific requirements for pesticide record-keeping may be more restrictive.

(g) NRCS employees must adhere to all Worker Protection Standard safety measures associated with pest management during the development of the conservation plan and throughout its implementation.

(h) Federal and State (or equivalent) level restrictions on the use of certain pesticides in designated areas (e.g., public wellhead protection areas, adjacent to sensitive crop areas, adjacent to endangered species habitat, etc.) must be followed.

(i) 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.

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

404.32 Social and Economic Considerations.

The pest management component 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.

404.33 Environmental Justice.

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

404.34 Cultural Resources.

NRCS General Manual, Title 420, Part 401, Cultural Resources Policy, lists the Pest Management (595) conservation practice under "Conservation Practices Not Considered as Undertakings" and states that "Such practices do not require cultural resources considerations."

404.35 Pest Management Environmental Risk Analysis.

(a) Environmental risks of pest management must be evaluated for all resource concerns identified in the conservation planning process, including the negative impacts of pesticides in ground and surface water on humans and non-target plants and animals. The pest management component of the conservation plan must be designed to minimize negative impacts of pest control on all identified resource concerns.

(b) Offsite effects of pest management must be evaluated with appropriate tools and/or procedures. WIN-PST and NAPRA are nationally supported for evaluating offsite pesticide movement through runoff and leaching. WIN-PST is designed for general field office use and provides qualitative environmental risk analysis that is adequate for most situations. NAPRA is more sensitive to pesticide application techniques than WIN-PST and provides quantitative results. NAPRA was designed to be use 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. States (or equivalent) utilizing pesticide environmental risk screening tools other than WIN-PST and NAPRA, need to coordinate their use with NWCC Pest Management Specialists and the National Pest Management Specialist of ECS to ensure that the technology being applied is consistent with WIN-PST and NAPRA. The risk of environmental degradation by other pest management methods and management techniques (i.e., tillage, burning, biological predation, etc.) must also be assessed with appropriate analysis tools such as the Revised Universal Soil Loss Equation (RUSLE), the Wind Erosion Equation (WEQ), or the Soil Conditioning Index (SCI). 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 404.35(c) below.

(c) When pest management alternatives have significant potential to impact identified resources negatively, appropriate mitigation techniques must be planned and implemented to address identified risks to humans and non-target plants and animals. Mitigation techniques include conservation practices (e.g., Filter Strip, Conservation Crop Rotation, Irrigation Water Management, etc.) and management techniques (e.g., application method, application timing, product choice, etc.). For example, utilizing pesticides that have "Extra High," "High," or "Intermediate" WIN-PST soil/pesticide human risk ratings in the drainage area of a drinking water reservoir would require an

appropriate set of mitigation techniques. State (or equivalent) standards will identify appropriate mitigation techniques for major pest management risks by loss pathway to each resource concern.

SUBPART D – PEST MANAGEMENT AND TECHNICAL ASSISTANCE

404.30 Pest Management Component of the Conservation Plan.

404.31 Pesticide Management Application.

404.32 Social and Economic Considerations.

404.33 Environmental Justice.

404.34 Cultural Resources.

404.35 Pest Management Environmental Risk Analysis.

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Subpart D – Pest Management And Technical Assistance

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