



## **SAN JUAN SOIL & WATER CONSERVATION DISTRICT**

### **REQUEST FOR PROPOSALS (RFP)**

2026 AERIAL HERBICIDE TREATMENT

Tebuthiuron 20P Aerial Application

#### **RFP No.**

26-27-002

Issue Date: August 14, 2026

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Proposal Due Date: September 08, 2026 by 4PM

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Proposal Opening: September 09, 2026

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Contract Award: September 09, 2026

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Project Completion Deadline: November 30, 2026

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No Pre Bid Conference

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## 1. INTRODUCTION

The San Juan Soil & Water Conservation District (SJSWCD or District), a governmental subdivision of the State of New Mexico and a public body politic and corporate, is acting as the contracting entity for the Bureau of Land Management (BLM), Farmington Field Office. The District invites competitive sealed proposals from qualified and responsible Offerors to perform the 2026 Aerial Herbicide Treatment using Tebuthiuron 20P.

The contemplated work consists of aerial application of Tebuthiuron 20P over a minimum of approximately 4,285 acres within San Juan and Rio Arriba Counties, New Mexico, together with all mobilization, labor, aircraft, equipment, herbicide, materials, licensing, safety, documentation, daily or on-call GIS deliverables, reporting, and project closeout required by this RFP and Appendix A.

## 2. PROCUREMENT AUTHORITY

This procurement is conducted pursuant to the New Mexico Procurement Code, Sections 13-1-28 through 13-1-199 NMSA 1978; applicable provisions of 1.4.1 NMAC; the Soil and Water Conservation District Act; applicable federal requirements, including the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards at 2 CFR Part 200; applicable BLM and Department of the Interior requirements; and the terms and conditions of the funding award.

The District intends to award a contract to the responsible Offeror whose proposal is determined to be most advantageous to the District, considering the evaluation factors and relative weights stated in this RFP. The District shall not evaluate a proposal using a factor or criterion that is not disclosed in this RFP.

The Procurement Code, Sections 13-1-28 through 13-1-199 NMSA 1978, imposes civil, misdemeanor and felony criminal penalties for its violation. In addition, New Mexico criminal statutes impose felony penalties for bribes, gratuities and kickbacks.

## 3. PROCUREMENT SCHEDULE AND POINT OF CONTACT

| Procurement Event                     | Date/Time             |
|---------------------------------------|-----------------------|
| RFP Issue Date                        | 08/13/2026            |
| Deadline for Written Questions        | 08/18/2026            |
| District Response/Addendum, if issued | 08/21/2026            |
| Proposal Due Date and Time            | 09/08/2026            |
| Proposal Opening/Receipt Review       | 09/09/2026            |
| Evaluation Period                     | 09/09/2026 10 AM-Noon |
| Notice of Intent to Award             | 09/10/2026            |
| Anticipated Contract Award            | 09/10/2026            |
| Earliest Authorized Start Date        | 10/01/2026            |

| Procurement Event           | Date/Time  |
|-----------------------------|------------|
| Project Completion Deadline | 11/30/2026 |

The dates listed above are subject to change by written addendum. The District reserves the right to modify the procurement schedule when determined necessary and permitted by law.

### **3.1 Procurement Officer**

Procurement Officer: Jaimie Scott, District Manager

San Juan Soil & Water Conservation District

301 McWilliams Road, Aztec, New Mexico 87410

Telephone: (505) 234-6040

Email: [business@sanjuanswcd.com](mailto:business@sanjuanswcd.com)

All communication concerning this procurement shall be directed in writing to the Procurement Officer. Offerors shall not contact District Board members, BLM personnel, Evaluation Committee members, District employees, consultants, or project representatives concerning this procurement except as expressly authorized by the Procurement Officer. Unauthorized contact, lobbying, or an attempt to influence the procurement may result in rejection of the proposal.

## **4. CONDITIONS GOVERNING THE PROCUREMENT**

### **4.1 Written Questions, Interpretations and Addenda**

Only interpretations, corrections, amendments, or clarifications issued in writing by the Procurement Officer through a formal addendum shall be binding. Oral explanations, representations, or instructions shall not modify this RFP. Offerors are responsible for obtaining, reviewing, and acknowledging all addenda before submitting a proposal.

### **4.2 Offeror's Duty to Examine the Solicitation**

Each Offeror is responsible for examining the entire RFP, Statement of Work, maps, appendices, proposed contract, site and access conditions, landing-facility requirements, pesticide label, applicable laws, BLM requirements, and all other information necessary to prepare its proposal. Submission of a proposal constitutes acknowledgment that the Offeror has reviewed and accepts the solicitation requirements, except for exceptions expressly identified in the proposal and accepted by the District in writing.

### **4.3 Proposal Preparation Costs**

All costs incurred in preparing, submitting, presenting, clarifying, or negotiating a proposal shall be borne solely by the Offeror. The District shall not reimburse proposal preparation, travel, site visit, interview, demonstration, negotiation, or other pre-award costs.

### **4.4 Proposal Validity**

Proposals shall remain valid and irrevocable for ninety (90) calendar days following the proposal due date unless the District agrees otherwise in writing.

#### **4.5 Late, Modified or Withdrawn Proposals**

An Offeror is solely responsible for ensuring timely delivery. A proposal received after the stated deadline may be rejected. Proposal modifications or withdrawals must be made in writing by an authorized representative and received before the proposal deadline, except as otherwise permitted by the Procurement Code.

#### **4.6 Right to Reject, Cancel, Amend or Reissue**

The District reserves the right to reject any or all proposals, in whole or in part; cancel this RFP; reissue or amend the solicitation; waive permissible minor informalities or irregularities; request clarification; conduct discussions or negotiations; reject a nonresponsive proposal or nonresponsive Offeror; or take any other lawful action determined to be in the District's best interest. The District shall have no liability arising from rejection, cancellation, amendment, reissuance, or failure to make an award except as provided by law.

#### **4.7 Award Without Discussions**

The District may evaluate proposals and make an award without discussions or negotiations. Offerors should submit their most favorable technical and cost proposal initially. If discussions are conducted, similarly situated Offerors shall receive fair and equal treatment.

#### **4.8 No Guarantee of Award, Acreage or Work**

Issuance of this RFP does not commit the District to award a contract. The stated acreage is an estimate based on the current treatment polygons and does not guarantee that all acreage will be authorized, treated, accepted, or paid. Additional acreage may become available only through a lawful written contract amendment or other written authorization. Payment shall be limited to work properly authorized, successfully completed, documented, inspected, and accepted.

#### **4.9 Availability of Funding**

Any award and resulting contract are contingent upon the availability and continued authorization of sufficient federal and District funding. The District may reduce the scope, suspend work, terminate the contract, or decline to proceed if funding is unavailable, withdrawn, reduced, or not authorized. The District is not obligated to pay for unauthorized work.

#### **4.10 No Contract or Authority to Proceed**

No contract shall exist and no work may begin until a written contract has been executed by the Contractor and all authorized District representatives. All required approvals have been obtained, and the District has issued written authorization to proceed. A notice of intent to award, selection announcement, oral direction, or Board action does not independently authorize performance. Work undertaken before written authorization is at the Contractor's sole risk.

#### **4.11 Public Records and Confidential Information**

Proposals and procurement records shall be handled in accordance with the Procurement Code and the New Mexico Inspection of Public Records Act. An Offeror requesting confidential treatment must identify the specific material, state the legal basis for nondisclosure, and submit it in a readily separable manner. Marking an entire proposal confidential is not acceptable. The District cannot guarantee nondisclosure of information subject to public inspection by law.

#### **4.12 Conflicts of Interest and Ethics**

Offerors shall disclose all actual, potential, or apparent conflicts of interest involving the Offeror, its owners, employees, affiliates, subcontractors, District supervisors or employees, BLM personnel,

consultants, or project representatives. Failure to disclose may result in rejection, cancellation of award, termination, or other lawful remedies.

#### **4.13 Campaign Contribution Disclosure**

Each Offeror shall submit the completed Campaign Contribution Disclosure Form included in Appendix H. Failure to submit a complete disclosure may result in rejection or other remedies authorized by Section 13-1-191.1 NMSA 1978. No prospective contractor, family member, or representative shall give a campaign contribution or other thing of value to an applicable public official or the official's employees during the pendency of this procurement.

#### **4.14 Debarment and Eligibility**

By submitting a proposal, the Offeror certifies that it and its principals are not suspended, debarred, proposed for debarment, declared ineligible, or voluntarily excluded from federal or state transactions. The District may verify eligibility through SAM.gov and other applicable databases before award and throughout the contract term.

#### **4.15 Collusion and Independent Pricing**

By submitting a proposal, the Offeror certifies that its proposal and prices were independently developed without collusion, consultation, communication, or agreement with another Offeror for the purpose of restricting competition. Suspected collusion, price fixing, bid rigging, or other anticompetitive conduct may result in rejection and referral to appropriate authorities.

#### **4.16 Applicable Preferences**

Any New Mexico statutory preference shall be applied only upon timely submission of a valid certificate and only to the extent permitted by the federal funding award, 2 CFR Part 200, and other applicable law. When federal requirements prohibit or restrict a geographic preference, no conflicting preference will be applied. A business shall not receive more than one preference for the same proposal unless expressly authorized by law.

#### **4.17 Reservation of Governmental Protections**

Nothing in this RFP or resulting contract shall be construed as a waiver of any immunity, limitation of liability, defense, privilege, or protection available to the District, its Board, officers, employees, or agents under the New Mexico Tort Claims Act or other applicable law.

### **5. PROJECT DESCRIPTION**

The objective of the 2026 Aerial Herbicide Treatment project is to control and manage sagebrush and restore native rangelands toward ecological conditions more representative of the potential natural community. The current treatment area is approximately 32 miles southeast of Bloomfield, New Mexico, and consists of approximately nineteen (19) polygons totaling approximately 4,285 acres within the Superior Mesa and Ice Canyon project areas.

The treatment polygons and acreage may be adjusted for field conditions, resource protection, funding, or other approved project needs. Any change must be approved in writing by SJSWCD and BLM. The Contractor shall strictly observe all approved boundaries and shall not perform unauthorized treatment, herbicide application, or ground disturbance.

## 5.1 Project Contacts

| San Juan Soil & Water Conservation District                      |                                                                    |
|------------------------------------------------------------------|--------------------------------------------------------------------|
| Geoff Hensgen, Project Coordinator                               | Gester Garcia, Weed Coordinator                                    |
| 703-509-3147                                                     | 505-801-0534                                                       |
| <a href="mailto:geoff@sanjuanswcd.com">geoff@sanjuanswcd.com</a> | <a href="mailto:gestergarcia@gmail.com">gestergarcia@gmail.com</a> |
| 301 McWilliams Road<br>Aztec, NM 87410                           |                                                                    |

## 6. SCOPE OF WORK

Appendix A - BLM Statement of Work is incorporated into this RFP and contains the technical requirements, specifications, deliverables, restrictions, and performance expectations. The Contractor shall provide all labor, supervision, licensed personnel, aircraft, equipment, Tebuthiuron 20P, materials, supplies, mobilization, landing-facility coordination, documentation, reporting, GIS deliverables, and incidental services necessary to complete the work.

### 6.1 Principal Requirements

1. Complete aerial treatment of the approved project polygons totaling approximately 4,285 acres using Tebuthiuron 20P at 0.30 pounds of active ingredient per acre.
2. Follow the pesticide label, BLM MS-9011 Chemical Pest Control Manual, BLM H-9011-1 Chemical Pest Control Handbook, and all applicable requirements.
3. Use properly licensed pesticide applicators and agricultural pilots or remote pilots, as applicable.
4. Coordinate with the BLM Project Manager and SJSWCD so that required monitoring, inspections, and project communications are in place before application begins.
5. Strictly observe treatment boundaries and avoid unauthorized mortality or treatment outside approved areas.
6. Do not conduct unauthorized ground disturbance or cross-country vehicle travel off established roads.
7. Document daily application quantities, acres treated, dates, times, weather and environmental conditions, and all required Pesticide Application Record information.
8. Provide daily, or on-call at the Project Manager's request, GIS data showing treatment lines, flight lines, acreage treated, and product lot/batch information.
9. Comply with applicable National Defense Authorization Act and Department of the Interior. Coordinate and assume responsibility for access to appropriate landing facilities or airstrips used for the work. Treat only the approved Superior Mesa, Ice Canyon, and other expressly authorized polygons shown in the final GIS data and project maps.
10. Complete all authorized and accepted work by the deadline stated in the final procurement schedule, contract, or written notice to proceed.

### 6.2 Period of Performance

Work may begin only after execution of the contract, satisfaction of all pre-work requirements, and written authorization to proceed. The anticipated start date, field performance period, final completion

deadline, and invoicing deadline will be established in the final procurement schedule, resulting contract, written notice to proceed, or a written addendum.

## 7. PROPOSAL REQUIREMENTS AND SUBMISSION INSTRUCTIONS

### 7.1 Required Proposal Organization

Offerors shall organize proposals in the following order and clearly label each section:

| Proposal Section              | Required Contents                                                                                                                        |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Cover Letter               | Authorized signature; legal name; contact information; acknowledgment of addenda.                                                        |
| 2. Technical Approach         | Understanding of the project, treatment method, compliance approach, quality control, and risk management.                               |
| 3. Company Qualifications     | Business qualifications, licenses, organizational capacity, and relevant experience.                                                     |
| 4. Similar Project Experience | Comparable aerial pesticide projects, acreage, location, customer, performance period, and results.                                      |
| 5. Work Plan and Schedule     | Workforce, equipment, sequence, acres per day, mobilization, coordination, records, GIS, safety, contingencies, and completion schedule. |
| 6. Key Personnel              | Project manager, applicators, agricultural pilots/remote pilots, GIS staff, qualifications, licenses, and responsibilities.              |
| 7. Equipment                  | Aircraft and support equipment, registration, capabilities, application system, calibration, and availability.                           |
| 8. Insurance and Licenses     | All documentation required by Section 10 and Appendix I.                                                                                 |
| 9. References                 | Completed reference information required by Appendix F.                                                                                  |
| 10. Cost Proposal             | Completed Appendix E with per-acre price, subtotal excluding NMGR, NMGR separately stated, and total.                                    |
| 11. Required Certifications   | Conflict disclosure, debarment, campaign contribution, W-9, federal forms                                                                |
| 12. Exceptions                | Specific exceptions to the RFP or Sample Contract; state 'None' if no exceptions are requested.                                          |



## 7.2 Work Plan and Project Schedule

The Offeror shall prepare and submit its own written Work Plan and Project Schedule. At a minimum, it shall address:

1. Proposed approach and sequence of work.
2. Anticipated mobilization, start, treatment, demobilization, and completion dates.
3. Estimated number of treatment acres completed per day.
4. Proposed workforce, staffing assignments, and key personnel responsibilities.
5. Aircraft, loading, transport, application, calibration, and support equipment.
6. Herbicide delivery, storage, handling, loading, spill prevention, and application procedures.
7. Coordination with SJSWCD, the BLM Project Manager, inspectors, and ground monitors.
8. Daily Pesticide Application Records and documentation of acres, weather, quantities, and lot/batch numbers.
9. GIS data collection, quality control, shapefile preparation, and delivery.
10. Safety, emergency response, incident reporting, and protection of sensitive resources.
11. Contingency procedures for weather, aircraft malfunction, supply delays, and other unforeseen conditions.
12. A schedule demonstrating completion by the deadline ultimately established by the District in writing.

## 7.3 Submission Instructions

Proposals shall be submitted in the number, format, and delivery method stated in the public notice or a written addendum. The outside of each sealed package shall identify the Offeror, the assigned RFP number, project title, and proposal due date and time. Electronic proposals are permitted only if expressly authorized in writing by the District.

Offerors shall submit technical and cost information in the manner required by this RFP. NMGR shall be stated separately. For evaluation consistency, the District may evaluate the proposed treatment subtotal excluding NMGR while remaining responsible for payment of applicable tax as stated in the resulting contract.

## 8. MANDATORY REQUIREMENTS - PASS/FAIL

The Procurement Officer shall initially review each proposal for timeliness, signature, material completeness, responsiveness, and compliance with the mandatory requirements. Failure to satisfy a mandatory requirement may result in rejection as nonresponsive.

| Mandatory Requirement                                   | Evaluation |
|---------------------------------------------------------|------------|
| Proposal received by the stated deadline                | Pass/Fail  |
| Proposal signed by an authorized representative         | Pass/Fail  |
| Required proposal sections and completed forms included | Pass/Fail  |
| Completed Work Plan and Project Schedule                | Pass/Fail  |
| Completed Cost Proposal Form                            | Pass/Fail  |

| <b>Mandatory Requirement</b>                                                                         | <b>Evaluation</b> |
|------------------------------------------------------------------------------------------------------|-------------------|
| Current NMDA Commercial Pesticide Applicator License                                                 | Pass/Fail         |
| Current individual applicator/agricultural pilot licenses, as applicable                             | Pass/Fail         |
| Required FAA pilot, aircraft, Part 137, exemption and authorization documents                        | Pass/Fail         |
| Required insurance documentation                                                                     | Pass/Fail         |
| Debarment and Conflict-of-Interest Certifications                                                    | Pass/Fail         |
| Campaign Contribution Disclosure                                                                     | Pass/Fail         |
| Acceptance of the completion deadline established in the final contract or written notice to proceed | Pass/Fail         |

The District may waive a minor informality when permitted by law and when the waiver does not prejudice another Offeror or affect price, quantity, quality, delivery, or another material requirement.

## **9. EVALUATION OF PROPOSALS**

### **9.1 Evaluation Committee**

An Evaluation Committee shall be appointed before the proposal due date in accordance with applicable procurement requirements. Committee members shall independently evaluate responsive proposals using only the disclosed factors and weights. Subject-matter experts may advise the Committee but shall not score proposals unless properly appointed as Committee members.

### **9.2 Evaluation Criteria**

| <b>Evaluation Factor</b>                                          | <b>Maximum Points</b> |
|-------------------------------------------------------------------|-----------------------|
| Technical Approach and Understanding of the Statement of Work     | 25                    |
| Similar Aerial Herbicide Application Experience                   | 20                    |
| Qualifications of Key Personnel, Applicators, and Pilots          | 15                    |
| Work Plan, Equipment, Staffing, and Project Schedule              | 15                    |
| Safety, Regulatory Compliance, Documentation, and Quality Control | 10                    |
| Past Performance and Contractor References                        | 5                     |
| Cost Proposal                                                     | 10                    |
| MAXIMUM BASE SCORE                                                | 100                   |

### **9.3 Cost Evaluation**

The Cost Proposal shall be evaluated for completeness, mathematical accuracy, reasonableness, and consistency with the Statement of Work. The per-acre price must include all labor, supervision, aircraft costs, equipment, mobilization, landing-facility coordination, Tebuthiuron 20P, materials, documentation, reporting, GIS deliverables, insurance, overhead, and incidentals. The District may reject a materially incomplete, unbalanced, mathematically inconsistent, or unreasonable proposal.

### **9.4 Clarifications, Discussions and Responsibility**

The District may request written clarification when permitted by law. A clarification shall not materially alter a proposal or provide an unfair competitive advantage. Discussions or negotiations may be conducted with Offerors whose proposals are potentially acceptable for award.

Before award, the District shall determine whether the recommended Offeror is responsible, including whether it has adequate resources, personnel, equipment, experience, performance, integrity, legal qualifications, licenses, insurance, and capacity to perform.

### **9.5 Award Recommendation**

The award shall be made to the responsible Offeror whose proposal is determined to be most advantageous to the District, taking into consideration the evaluation factors stated in this RFP. The Evaluation Committee's findings and recommendation shall be documented in a written evaluation report. Final award is subject to available funding, required approvals, and execution of a written contract by the San Juan Soil & Water Conservation District.

## **10. INSURANCE, LICENSING AND REGULATORY REQUIREMENTS**

Before contract execution and before beginning work, the selected Offeror shall provide documentation satisfactory to the District demonstrating compliance with Appendix I and all applicable insurance, licensing, pesticide, and aviation requirements.

### **10.1 Required Insurance**

1. Aircraft liability insurance covering the actual herbicide application operation, including bodily injury, property damage, pesticide application, drift, overspray, and applicable chemical liability.
2. Commercial general liability insurance meeting the limits stated in Appendix I.
3. Commercial automobile liability covering owned, hired, and non-owned vehicles used for the project.
4. Workers' compensation insurance as required by New Mexico law and employers' liability coverage.
5. Additional insured, waiver, notice, and endorsement requirements stated in Appendix I or the Sample Contract.

Required insurance limits are minimum requirements and do not limit the Contractor's responsibility or liability. District review or acceptance of a certificate does not constitute approval of policy terms or a determination that coverage is sufficient.

### **10.2 Required Licenses and Aviation Documentation**

1. Current NMDA Commercial Pesticide Applicator License and applicable license categories.
2. Current licenses for each operator, applicator, agricultural pilot, or technician performing work.

3. NMDA equipment inspection or licensing documentation applicable to the aircraft application system.
4. FAA aircraft registration and Remote ID compliance, as applicable.
5. FAA pilot or Remote Pilot Certificate for each required pilot.
6. FAA Part 137 Agricultural Aircraft Operator Certificate.
7. Applicable FAA exemption decision, operational authority, airspace authorization, waiver, or Certificate of Waiver or Authorization.
8. Current herbicide label, Safety Data Sheet, and evidence that the product and proposed use are lawful.

District review does not relieve the Contractor of its independent duty to identify and comply with all applicable legal and regulatory requirements. Licenses, insurance, registrations, certificates, exemptions, and authorizations must remain effective throughout performance.

## **11. CONTRACT AWARD AND GENERAL CONTRACT REQUIREMENTS**

### **11.1 Notice of Intent and Contract Execution**

A notice of intent to award is not a contract and does not authorize performance. The selected Offeror shall timely provide all requested responsibility documentation and execute the final contract. If the selected Offeror fails to do so, the District may withdraw the proposed award and proceed as permitted by law.

### **11.2 Sample Contract and Exceptions**

Appendix L contains the Sample Contract. Submission of a proposal constitutes acknowledgment that the Offeror reviewed it. Any requested exception must be specifically identified and explained in the proposal. The District is not obligated to accept an exception. Silence shall constitute acceptance of the Sample Contract terms, subject to final lawful negotiation and approval.

### **11.3 Subcontractors and Assignment**

No subcontractor may perform work without prior written disclosure and approval. The prime Contractor remains fully responsible for all acts, omissions, licensing, insurance, safety, reporting, and compliance of its subcontractors. The contract and Contractor's rights or obligations shall not be assigned, transferred, or delegated without prior written approval.

### **11.4 Independent Contractor**

The Contractor shall act solely as an independent contractor. Nothing in this RFP or resulting contract creates an employment, partnership, joint venture, agency, or fiduciary relationship between the Contractor and the District or BLM. The Contractor has no authority to bind the District or BLM.

### **11.5 Indemnification**

To the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the District, its Board of Supervisors, officers, employees, agents, and representatives from claims, damages, losses, liabilities, penalties, and expenses arising from the Contractor's performance, negligence, willful misconduct, violation of law, pesticide application, chemical drift, bodily injury, property damage, or acts or omissions of its employees or subcontractors, as more fully stated in the final contract.

### **11.6 Records, Monitoring and Audit Access**

The Contractor shall maintain complete project, financial, pesticide-application, flight, personnel, subcontractor, invoice, GIS, and supporting records for the period required by the contract, funding award, and applicable law. The District, BLM, federal awarding agency, New Mexico Office of the State Auditor, and other authorized entities shall have access to applicable records for inspection, copying, monitoring, and audit.

### **11.7 Termination and Remedies**

The final contract shall include termination for cause, termination for convenience, funding contingency, suspension, correction of deficient work, withholding of payment, and other lawful remedies. The Contractor shall not be paid for unauthorized, rejected, undocumented, or noncompliant work.

### **11.8 Order of Precedence**

In the event of a conflict, documents shall control in the following order:

1. Applicable law and mandatory federal award requirements;
2. Formal RFP addenda;
3. Executed contract and approved contract amendments;
4. Appendix A - BLM Statement of Work;
5. The RFP terms and conditions;
6. Other appendices; and
7. The Contractor's accepted proposal, except that an accepted written clarification or negotiated provision shall control to the extent expressly incorporated into the contract.

## **12. PROTEST PROCEDURES**

An Offeror aggrieved in connection with this solicitation or the award may submit a written protest to the District's Central Purchasing Office in accordance with Sections 13-1-172 through 13-1-183 NMSA 1978 and applicable regulations.

A protest must be received within fifteen (15) calendar days after the protestant knew or should have known of the facts or occurrences giving rise to the protest. The protest shall identify the protestant and solicitation, state the grounds, include available supporting documents, and specify the ruling or relief requested.

Protests shall be directed to:

Central Purchasing Office / Procurement Officer

San Juan Soil & Water Conservation District

301 McWilliams Road, Aztec, New Mexico 87410

Email: [business@sanjuanswcd.com](mailto:business@sanjuanswcd.com)

### **13. APPENDICES**

The following appendices are incorporated into or required by this RFP:

1. Appendix A - BLM Statement of Work
2. Appendix B - Acknowledgment of Receipt Form
3. Appendix C - Project Maps
4. Appendix D - Pesticide Application Record (PAR)
5. Appendix E - Cost Proposal Form
6. Appendix F - Reference Questionnaire
7. Appendix G - Conflict of Interest Form and Debarment Certification
8. Appendix H - Campaign Contribution Disclosure
9. Appendix I - Insurance Requirements and Applicator License Documentation
10. Appendix J - W-9
11. Appendix K - Sample Contract

DETAILED SCOPE OF WORK – AERIAL HERBICIDE TREATMENT  
APPENDIX “A”

**Detailed Scope of Work – 2026 Aerial Herbicide Treatment**

**TASK ORDER 1 – 2026 Aerial Treatment**

The San Juan Soil and Water Conservation District (San Juan SWCD) is working cooperatively with the Bureau of Land Management (BLM) Farmington District Office to restore native rangelands to an ecological condition that is more representative of the potential natural community. These treatments will be completed in one general area approximately 32 miles southeast of Bloomfield NM and will be comprised of approximately 19 small polygons. Work will involve aerial application of herbicide for control and management of sagebrush in accordance with the stipulations and specifications listed in the San Juan Soil and Water Conservation District RFP 26-27-002. Funding for these projects is being provided by the United States Department of the Interior (USDI)-Bureau of Land Management through the SWCD. General location maps of the projects are attached. GIS shapefiles will be provided to the awarded contractor. The contractor must provide GIS data daily or on call, of the areas treated at the request of the project manager (treatment lines and flight lines).

Contractor shall complete an aerial application treatment of a minimum of 4,285 acres with Tebuthiuron 20P applied at a rate of 0.30 pounds of active ingredient per acre within San Juan and Rio Arriba Counties, New Mexico.

| Allotment Name | Project Name<br>Salinity & Range Funded | Acres        | Rate              | Notes            |
|----------------|-----------------------------------------|--------------|-------------------|------------------|
| Superior Mesa  | 2026 Superior TEB (8 polygons)          | varies       | 0.3lbai/ac        | Sagebrush        |
| Ice Canyon     | 2026 Ice Canyon TEB (11 polygons)       | varies       |                   |                  |
| <b>Totals</b>  | <b>19 sites</b>                         | <b>4,285</b> | <b>0.3lbai/ac</b> | <b>Sagebrush</b> |

\*Additional acreage may be available by private treaty with individual landowner

**Landing Facilities**—the Contractor must coordinate access to required landing facilities. The Contractor will assume full responsibility and liability for airstrips or landing areas used.

Landing Facilities that have been used in the past:

Lindrith Airpark Strip – Dirt, .3 miles East of Lindrith, (~28mi)      NM N36°17.444', W107°03.225'

Navajo Dam Air Strip - Paved, SW of Navajo Dam, (~26mi)      N36°48.452', W107°39.109'

**Performance Time:**

All work under this task order must be completed by November 31, 2026 and fully invoiced by December 15, 2026. Notice to proceed and project start date are anticipated to be between October 1, 2026 and November 4, 2026.

**IMPORTANT:**

**Special Conditions:** NA



## APPENDIX "B"

### SOLICITATION ACKNOWLEDGMENT OF RECEIPT

#### 2026 Aerial Herbicide Treatment

RFP No. 26-27-002 | 2026 Aerial Herbicide Treatment

#### ACKNOWLEDGMENT

The undersigned acknowledges receipt of the complete Request for Proposals identified above, including the title page, solicitation documents, Appendix A through Appendix K, and all materials issued with the original solicitation package.

**IMPORTANT:** Returning this form is requested to assist the District in maintaining its procurement distribution list. Failure to return the form does not, by itself, disqualify an Offeror. Each Offeror remains responsible for obtaining, reviewing, and acknowledging all addenda and procurement notices issued by the District.

#### OFFEROR INFORMATION

|                            |                      |           |
|----------------------------|----------------------|-----------|
| Legal Name of Firm:        | DBA (if applicable): |           |
| Authorized Representative: | Title:               |           |
| Email:                     | Phone:               |           |
| Mailing Address:           |                      |           |
| City:                      | State:               | ZIP Code: |

#### INTENT TO RESPOND

The firm identified above: ☐ Intends to submit a proposal ☐ Does not intend to submit ☐ Undecided

#### CERTIFICATION AND SIGNATURE

By signing below, the authorized representative certifies that the information provided on this form is accurate and authorizes the District to use the contact information above for correspondence concerning this RFP.

|                                         |        |
|-----------------------------------------|--------|
| Signature of Authorized Representative: | Date:  |
| Printed Name:                           | Title: |

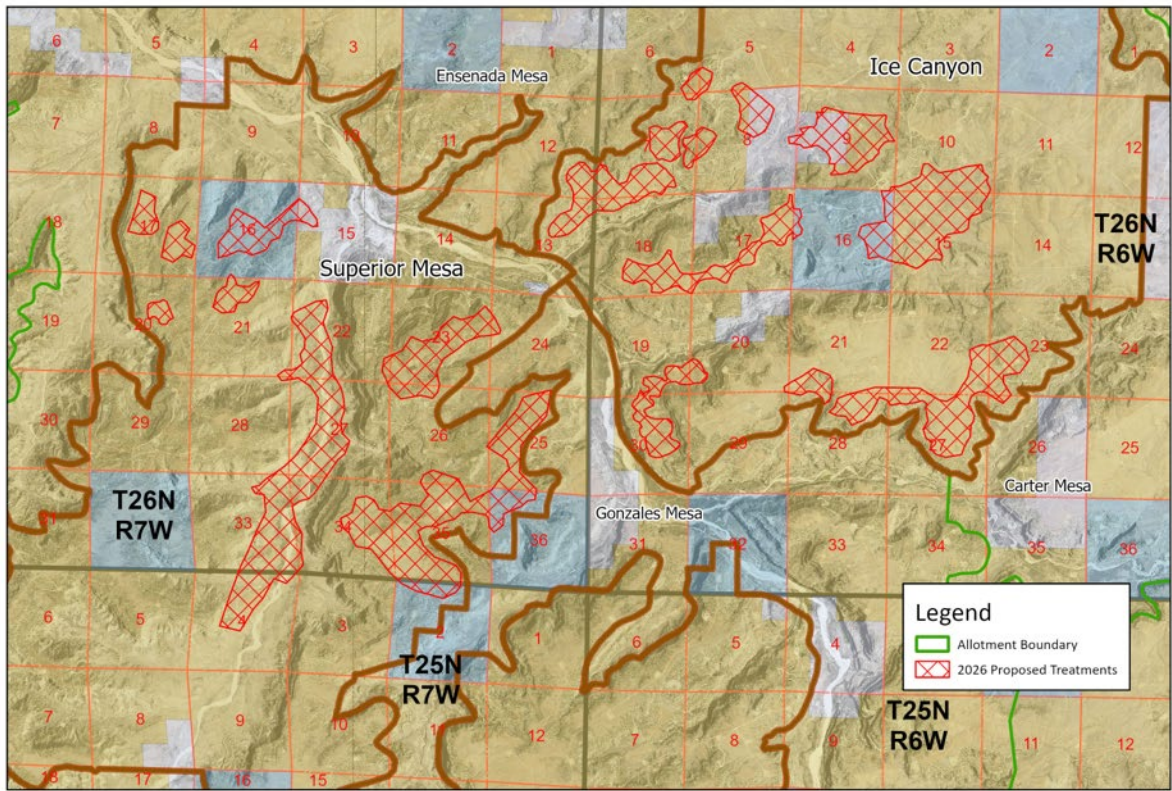
**RETURN COMPLETED FORM TO**  
Jaimie Scott, Procurement Officer / District Manager  
San Juan Soil & Water Conservation District  
301 McWilliams Road, Aztec, NM 87410

**RETURN INFORMATION**  
Email: business@sanjuanswcd.com  
Phone: (505) 234-6040  
Requested return date/time: \_\_\_\_\_



APPENIDX "C"  
PROJECT MAPS

2026 Restore New Mexico Sagebrush Treatments



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

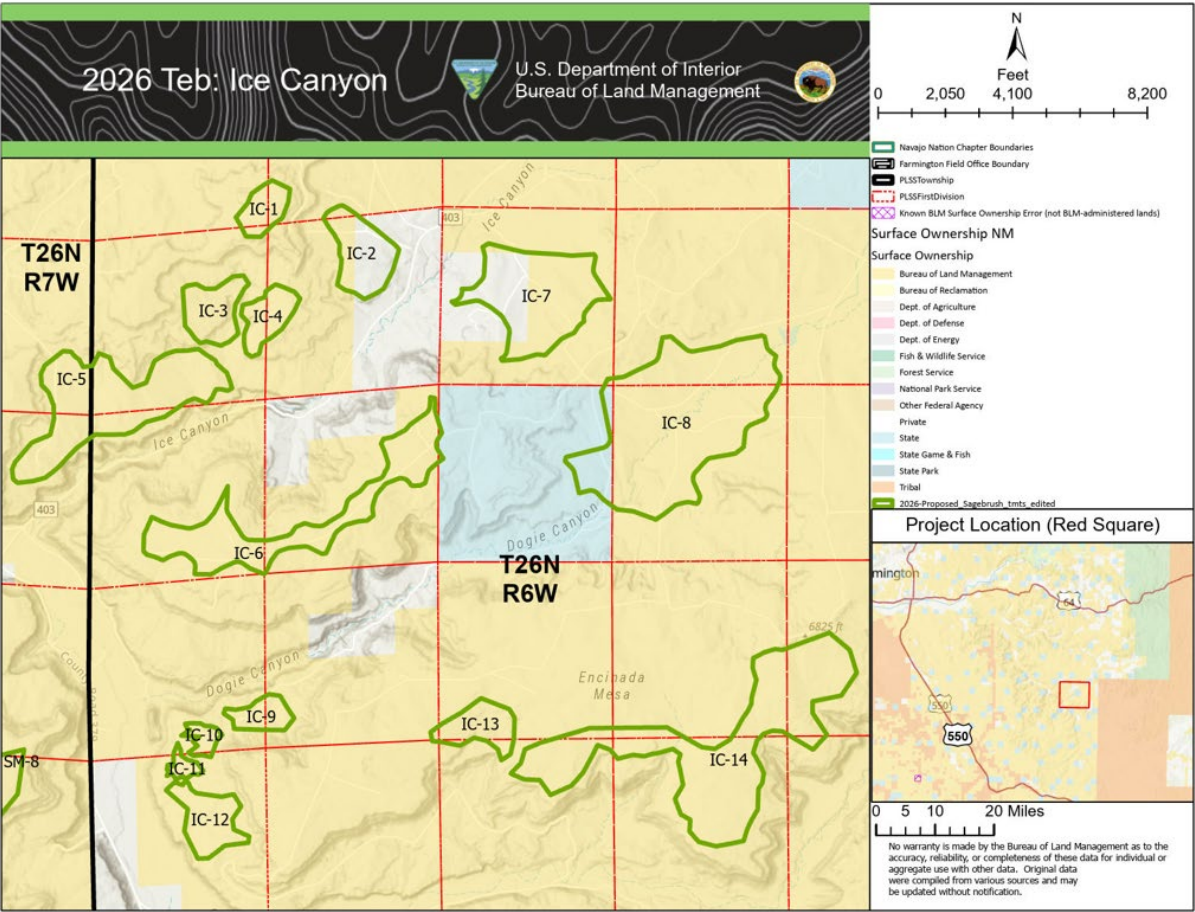


Superior Mesa & Ice Canyon Allotment Boundaries

APPENIDX "C"  
PROJECT MAPS

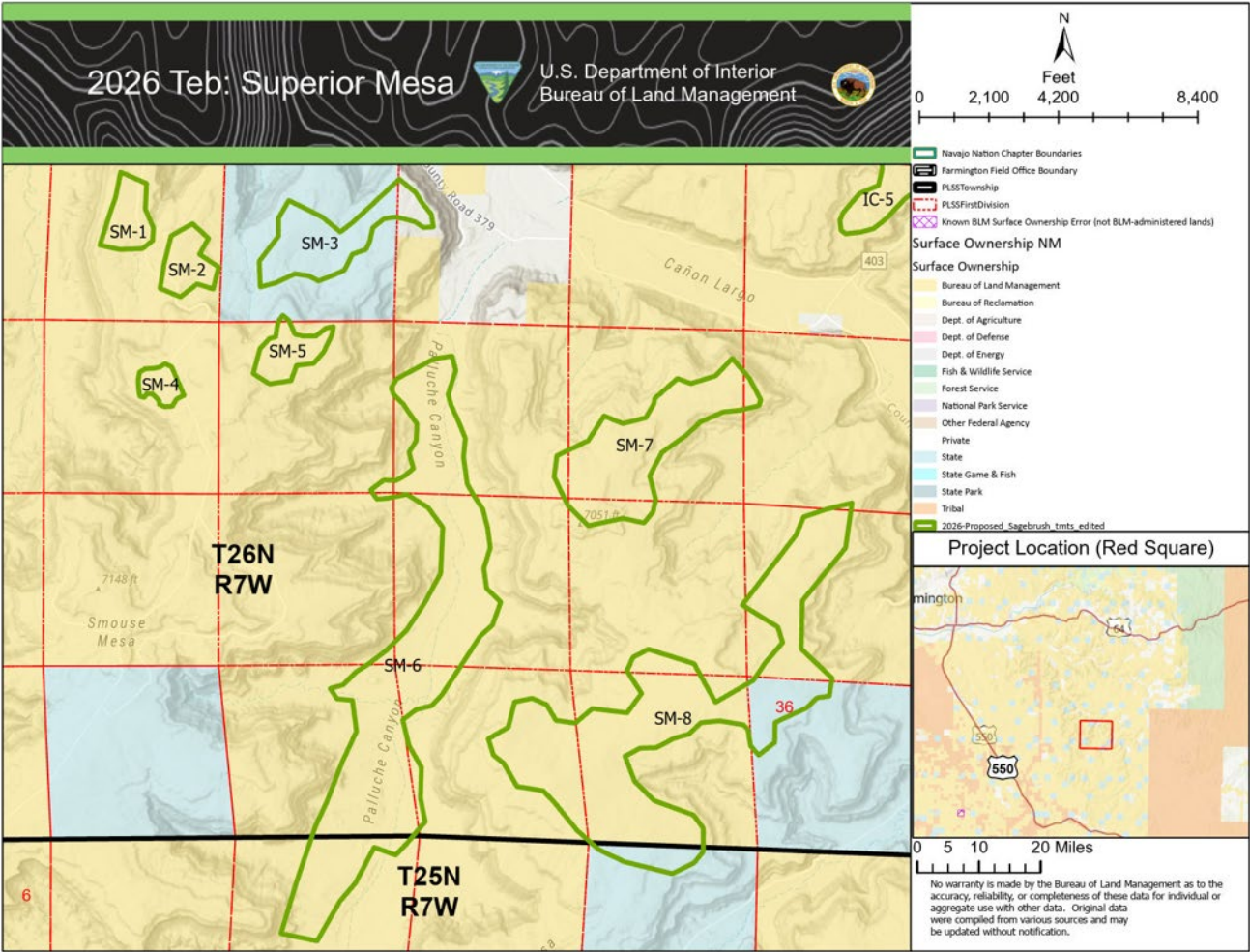
Detail Maps (2 Maps)

2026 Ice Canyon Polygons and 2026 Superior Mesa Polygons





APPENIDX “C”  
PROJECT MAPS



APPENDIX "D"

UNITED STATES DEPARTMENT OF THE INTERIOR

*BUREAU OF LAND MANAGEMENT*

PESTICIDE APPLICATION RECORD

State: \_\_\_\_\_ Date of Application: \_\_\_\_\_  
County: \_\_\_\_\_ Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_  
Field Office: \_\_\_\_\_ Project Name: \_\_\_\_\_  
Location of Treatment Site: \_\_\_\_\_ Treatment Name: \_\_\_\_\_  
\_\_\_\_\_ Operator: \_\_\_\_\_  
\_\_\_\_\_ Pesticide Use Proposal Number: \_\_\_\_\_  
\_\_\_\_\_ NEPA Reference Number: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Additional Application Documentation Information: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**1. APPLICATOR:**

a. Applicator/Employee(s) Name – Name, License #, Certifying State/Organization:

|                      |           |                  |
|----------------------|-----------|------------------|
| _____                | _____     | _____            |
| _____                | _____     | _____            |
| _____                | _____     | _____            |
| _____                | _____     | _____            |
| Name of Applicator's | License # | Certifying State |

**2. APPLICATION:**

a. Delivery Method: \_\_\_\_\_ (Circle One) \_\_\_\_\_ Aerial \_\_\_\_\_ Ground  
b. Equipment Used: \_\_\_\_\_  
c. Treatment Coverage Pattern: \_\_\_\_\_ (Circle One) \_\_\_\_\_ Broadcast \_\_\_\_\_ Banded \_\_\_\_\_ Spot

e. Calibration Rate:      Liquid Sprayer: \_\_\_\_\_, or  
Granular Applicator: \_\_\_\_\_

1. Total Amount Mix Applied on Treatment Site: \_\_\_\_\_

ii. Active Ingredient/Acid Equivalent: \_\_\_\_\_

| Species Code | Species Common Name | Phenology | Species | Estimated Percent Cover |
|--------------|---------------------|-----------|---------|-------------------------|
| _____        | _____               | _____     | _____   | _____                   |

|  |  |  |  |
|--|--|--|--|
|  |  |  |  |
|  |  |  |  |

**7. MONITORING RECORD:**

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|--|
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|  |
|  |
|  |
|  |
|  |

**NOTE:**

- 1. This record is required and is to be completed, except for monitoring, within 24 hours following application of the pesticide.**
- 2. This record must be kept on file/maintained for a minimum of 10 years.**

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## H-9011-1 - CHEMICAL PEST CONTROL

Introduction

This Handbook was prepared by Dr. R. W. Straub, Visiting Professor (Cornell University), Mr. Larry Larson, BLM Medford OR District, and Mr. Mac Wileman, BLM Roswell NM District. This document has been produced through collaboration with personnel from BLM and other government agencies, States, and universities. Portions of specific sections are based on information from Pesticide Application Training Manual, Chemical - Pesticide Program, Cornell University. Contributions from the aforementioned sources are gratefully acknowledged.

Mention of proprietary products does not infer endorsement or recommendation for use by BLM or the parent agencies. References to such products are presented as examples only.



## H-9011-1 - CHEMICAL PEST CONTROL

CHAPTER 1 - CONDUCTING PEST CONTROL PROGRAMSI. Guidelines for Conducting Pest Control Programs

If the Bureau consents to pest control on public lands at the request of individuals or organizations, and the control work is accomplished by another Federal agency, that agency must receive the approval of the Chief, Division of Forestry. (See BLM Manual Section 7261.7). All other pest control programs, including those done under BLM proposals, cooperative projects, on rights-of way, or by lessees and concessionaires, and other activities and authorizations issued pursuant to a permit, must be submitted for review and approval on Pesticide Use Proposal (PUP) (see Illustration 1) in conformance with the procedures below. Those agencies, lessees, cooperators, and other authorized land users may be subject to trespass proceedings by failure to submit such proposals.

A. Review and Coordination

1. The Division of Forestry (Washington Office). The Chief of the Division of Forestry is responsible for coordinating the review and approval of all pesticide-use-proposals not approved by delegated officials. Pesticide-use proposals requiring final approval by the Office of Environmental Review (OEPR) are reviewed by the Chief of the Division of Forestry prior to being forwarded to OEPR (see appendix 2).

2. Office of Environmental Project Review (OEPR). OEPR reviews and approves pesticide-use proposal from all bureaus and agencies within the Department of the Interior. OEPR insures compliance with Departmental policy in addition to ensuring the technical adequacy of pesticide-use proposals.

B. Planning. The Bureau, in addition to conforming with policy, prepares an environmental analysis (EA) for each proposal. If this EA indicates an environmental impact statement (EIS) is necessary, that document must also be prepared.

1. Identifying Objectives and Analyzing Impacts.

a. Weigh the benefits of control against the negative environmental, economic, and social ramifications that may incur.

b. Determine scope of the project and integrate with measures for protecting wildlife and other values.

c. Determine for each target pest the possible courses of action and evaluate relative merits for controlling the pest with the least adverse effect on the environment. This integrated pest management approach must be followed prior to the use of any pesticide.

2. Coordinating with Other Agencies.

a. Specialists of the United States Department of Health and Human Services, the United States Department of Agriculture, the United States Department of the Interior (Fish and Wildlife Service), and the Environmental Protection Agency provide consultation and assistance on problems of medical, agricultural, and environmental importance (i.e., disease and pest control, quarantine control, fish and wildlife protection) upon request. Personnel in State

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## Chapter 1

Offices coordinate and request consultation and assistance as needed from local agency representatives. For further guidance in Animal Damage Control, see BLM Manual Section 6831.

3. Seeking Public Involvement. If an action is controversial, or potentially so, review proposed program with user groups and the general public.

4. Employing Protective Measures. Establish definite boundaries for the treatment area and provide buffer strip along streams, near residences, and other sensitive areas. Width depends on pesticide used, method of application (aircraft, ground, etc.), climatic conditions (wind speed, etc.) And formulation applied (invert emulsion, solution, bait, etc.). Adhere to protective measures described on the label of the pesticide planned for use.

5. Training and Certification.

a. The Federal Insecticide, Fungicide, and Rodenticide Act of 1972, Public Law 92-51 (as amended), requires that all personnel applying restricted-use pesticides be certified in the use of these pesticide or under the direct supervision of certified applicators. Additionally, it will be the policy of the BLM that all nonrestricted pesticides shall be applied by certified applicators or under the direct supervision of a certified applicator. (Appendix I, Plan for Training and Certification of Pesticide Applicators). All personnel involved in planning, reviewing, supervising, or applying pesticides must be adequately trained to handle pesticide and equipment properly. This ensures that control measures are applied with maximum safety, efficiency, and economy. Continued training, periodic examinations, and appropriate certification of personnel are required to safeguard against misuse, prevent contamination of the environment, and protect public lands.

b. Comprehensive training and certification is the responsibility of the Washington Office. The Assistant Director, Renewable Resources has the responsibility for all pesticides used within BLM.

c. Prior to participation in pest control operations, each lead pesticide individual in the District must attend a Pesticide Certification Training School sponsored by the Bureau, except as provided in d.7 and 8.

d. All Federal agencies must closely scrutinize pest control programs to ensure the utilization of new techniques to reduce potential adverse environmental effects of pesticide treatments. The procedure for qualifying and certifying pest control personnel provides a sound method for meeting the training requirements on a regular basis. State Office officials ensure selection of personnel who can be adequately trained to receive pest control certification. Sound candidate evaluation minimizes the high costs of training and personnel turnover. The certification of supervisory and lead operational pest control personnel is accomplished as follows:

(1) Applicant prepares for certification by attending pesticide training.

(2) Applicant successfully completes a comprehensive, written, certification examination.

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(3) Upon completion of the above requirements, Washington Office (WO-230) officials recommend certification of the applicant to the Assistant Director, Renewable Resources.

(4) A certificate of competency valid for a period not exceeding 3 years is awarded.

(5) Recertification requires reexamination and retraining. Retraining may be accomplished by attending EPA approved training programs. The District Manager administers a prepared, written certification examination and forwards test to WO (230) for evaluation.

(6) Certification is issued by Washington Office (230) and a roster of certified pesticide applicator personnel is maintained in the Washington Office. State certification is acceptable only where the State has an EPA approved program, and is valid only in the State issued.

(7) Where more than one certified applicator per District is needed, State certification is acceptable for additional applicators.

(8) For non-Bureau employees, valid State certification is required from the State in which the work is to take place, unless formal reciprocity has been granted by the State.

C. Program Submission and Implementation. Any program involving pesticide use on lands administered by the Bureau is submitted as a pesticide proposal (PUP) for review on a fiscal year basis. To allow time for review and approval for inclusion in the AWP, other submissions may be made on an emergency basis.

1. Submission. All PUP's are submitted on the designated forms.

a. Complete each item in sufficient detail to be clearly understandable to any reviewer.

b. Use the Project Numbering System. Mark all proposals submitted for approval with the fiscal year when application will actually be done, the State abbreviation, District code, and job number. Example 79-OR-03-0001.

c. Attach a current pesticide label for the formulation specified. Only Federal registered pesticides may be used on public lands except as authorized by Public Law 92-516 pertaining to the issuance of State labels. Any pesticide proposal planned under a State registration must include a copy of the State Label.

2. Implementation. Upon compliance with preceding policy and guidelines and final approval of the PUP, the project may be included in the AWP. Approval of the PUPs may be delegated from WO 230 to State and District Offices where trained and certified applicators are designated for such review. In implementing each approved project, the District Manager must assure compliance with directions on the pesticide label, any special provisions for the planned project, and all necessary safety precautions.

3. Reporting Requirements. The Bureau of Land Management Agency Plan for Pesticide Certification requires reporting of all pesticide use.

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Washington Office officials must submit to EOPA an annual report describing the acres, amount, usage, location and use strength for each chemical. Each State Director must submit to WO 230 a report at the end of the FY summarizing the EPA requested data for projects accomplished in their State. Project records must be maintained in each State for 3 years.

D. Pesticide Use Standards. This Manual Section establishes broad principles for the selection and use of controversial materials.

1. Highly Toxic Pesticides. Pesticides vary substantially in toxicity to humans, wildlife and plants. Effects may be immediate or chronic. Even different formulations of the same pesticide vary in degree of hazard. To ensure that pesticides may be safely handled by pest control personnel, and that the environmental impact has been given due consideration, pesticide proposals must be reviewed and approved by the Washington Office, Division of Forestry, prior to application except for State that have been delegated approval authority for certain types of projects.

2. Experimental Uses. Experimental applications of pesticide are permissible if the proposed use has been sanctioned by the appropriate Bureau, Department, or agency. Limit the area of treatment and conduct post-treatment evaluation. Forward an analysis covering effectiveness and adverse side effects, if any, to the Washington Office, Division of Forestry.

3. Protection and Transportation of Pesticides. Mix pesticide in an adequately ventilated area. Label containers properly as to toxic content. Keep pesticide containers in locked storage when not in use. Vehicles suitable for the safe transportation of pesticides, personnel, and supplies are assigned for control operations. These vehicles are provided with lockable pesticide storage to prevent access by unauthorized personnel. Do not transport pesticides in cabs of vehicles. Pesticides stored in the field during operations may require a watchperson.

4. Safety. Take maximum safety measures when handling pesticides. The BLM local office provides protective devices (mask, respirators, gloves, and a daily change of clothing), as specifically required by label. Current recommendation for the use of additional protective devices are furnished by the Washington Office. Clothing worn while doing pesticide work must not be home laundered. Ample shower stalls for personnel must be located in the immediate vicinity of the shop where pesticides are stored and mixed. District resources personnel and/or safety officers inspect stored pesticides at appropriate intervals.

5. Pesticide Spills. Accidental damage to pesticide containers or container deterioration may result in pesticide spills and warehouse contamination. Deactivation of the pesticide and decontamination of the area are required in such cases. Report all pesticide spills to the Safety Officer and District Manager. (See Chapter 2, Spill Contingency Plan).

6. Environmental Precautions. Environmental precautions and recommendations for application of pesticide (i.e. Refer to the label for additional precautions):

- a. Ensure that pesticide use is required for the situation.



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b. Select a chemical which will provide the desired results, but additionally offers the least hazard to the operator and the environment. Avoid materials with long residual periods that may accumulate in the soil or food chain organisms.

c. Treat only the minimum necessary area.

d. Use the minimum amount of chemical to achieve desired results.

e. Treat when the possibility of environmental pollution is least likely while considering the timing for optimum biological effectiveness.

f. Do not spray when wind speed exceeds 6 mph for aerial applications, or as specified on the label.

g. Do not spray when wind is likely to cause excessive contamination to bodies of water or other sensitive areas.

h. Avoid areas where pesticide run-off is likely, such as steep compacted surfaces.

E. Chemical Residue Monitoring. Monitoring is the periodic measurement of chemicals which have been introduced into various facets measurement of chemicals which have been introduced into various facets of the environment. Within this framework, monitoring priorities must be established. It is impossible and unnecessary to measure all chemicals in all parts of the environment. What is measured and how it is measure is dictated by the particular reason for monitoring. Monitoring should measure the impact of chemical application on the quality of the environment and the effectiveness of the control measure. The need for and type of monitoring are dictated by the nature of the critical components of the environment in the treatment area. Thus, a toxic chemical proposed for use in a sensitive area, such as near a residential area, or domestic water supply must be monitored intensively. Chemical residues in air, vegetation, soil, and water may need to be determined. A less toxic chemical used on other areas may require only limited stream monitoring to ensure that significant quantities of the chemical do not enter the stream. An innocuous chemical used on a small remote area may require no monitoring. Unfortunately, there are no standard prescriptions. Each chemical project must be considered on its own.

F. Safety Plan - Pesticide Applications. This plan does not itemize all safety rules applicable to pesticide applications. Project personnel and safety officers must be constantly alert to detect any unsafe practices and immediately take necessary corrective action to remedy the problem. The officer in charge of the project and the District base radio operator keep copies of the safety plan. The designated Contracting Officer's authorized representative, inspector, or project officer in charge, and safety officer enforce the safety rules outlined. Chapter 2 provides information and certain precautions that should be observed when handling chemical toxicants.

G. Threatened and Endangered Species. Before a treatment program may be initiated in a given area, a survey of threatened or endangered species must be made. The BLM Manual Section 6840 encompasses the Bureau's policy for all endangered species.



## H-9011-1 - CHEMICAL PEST CONTROL

Chapter 2 - GUIDELINES AND RECOMMENDATION FOR  
SAFE APPLICATION, MONITORING, AND DISPOSALI. Planning the Use of Pesticides.

The material contained in this Handbook is presented as guidance and reference material for those individuals involved in planning projects which include the use of chemical pesticides. Most of the material has been abstracted from other sources. For the most recent information, contact EPA, universities, and other research institutions.

A. Development of Safety Plan. This Chapter is intended to provide the general guidance in preparation of safety and implementation plans for pesticide application projects. Proper preplanning can significantly increase the safety and effectiveness of project performance.

B. General Pesticide Safety Precautions and Information.

1. Toxicity of Pesticides. Pesticides used to control pests are, by their nature and intent, toxic. Some are very toxic and if improperly used may injure nontarget species including humans. Others are relatively safe, causing only irritation. In any case, it is extremely important that a pesticide user be familiar with the pesticides that are being used and understand the hazards of each.

Pesticides can enter an organism three different ways, i.e., through the mouth (orally), through the skin (dermal) or through the respiratory system (inhalation). An individual can be poisoned by any of the above routes; however, the dermal or inhalation routes have been involved in most accidental poisonings. Inhalation is the primary route of poisoning in fish.

Toxicity refers to how poisonous a substance is to a particular organism. However, toxicity should not be confused with hazard, which is toxicity plus level of exposure.

Toxicity is primarily determined by measuring the effect of a single dose given to an organism (such as rats or fish). The effect of a single dose measured in mortality to the organism is known as acute toxicity. Acute toxicity is the common basis for comparing the relative toxicities of chemicals. Acute oral toxicity and acute dermal toxicity are measured by LD50. LD50 (LD - lethal dose) represent the amount of pesticide that resulted in the death of 50 percent of the test animals (see Glossary for detailed description). Therefore, the lower the LD50, the more toxic the pesticide. Acute inhalation is measured by LC 50 (LC- lethal concentration), but the relative value can be interpreted as LD50, i.e., the lower the LC50, the more toxic the substance.

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To facilitate the relative comparison of acute toxicities and to formalize their relative danger, pesticides have been classified into three categories.

Categories of Acute Toxicity

| Categories                  | Signal Word<br>Required on<br>The Label       | Oral<br>LD 50<br>(mg/kg) | Dermal<br>LD 50<br>(mg/kg) | Inhalation<br>LD 50<br>(mg/l) | Probable Oral<br>Lethal Dose For<br>150 lbs. human |
|-----------------------------|-----------------------------------------------|--------------------------|----------------------------|-------------------------------|----------------------------------------------------|
| I<br>(Highly<br>Toxic)      | DANGER -<br>Skull and<br>Crossbones<br>POISON | 0 – 50                   | 0 – 200                    | 0 – 0.2                       | A few drops to a<br>teaspoon                       |
| II<br>(Moderately<br>Toxic) | WARNING                                       | From 50<br>to 500        | From 200<br>to 2000        | From 0.2<br>to 2.0            | Over one<br>teaspoonful to<br>one ounce.           |
| III<br>(Slightly<br>Toxic)  | CAUTION                                       | From 500<br>to 5000      | From 2000<br>to 20,000     | From 2.0<br>to 20             | Over one ounce to<br>one pint or one<br>pound.     |

The general degree of toxicity for each pesticide can be found by comparing the above rating category with the signal word (Danger, Warning, or Caution) found on the label. The label reflects the highest acute toxicity for that pesticide. For example, if the pesticide has an acute oral toxicity in the slightly toxic category and an inhalation toxicity in the high toxic category, the pesticide label will reflect the highly toxic rating. For more specific acute toxicity ratings, refer to the technical specifications data sheet which can be obtained from the pesticide manufacturer.

Although acute toxicity is the most common measurement of toxicities, it is necessary to consider the effects of repeated small doses over a period of time. The effect of repeated doses on an organism is referred to as chronic toxicity. Chronic toxicity is important when exposure to sublethal doses results in cumulative deposits in an organism which cause long-term problems in a vital body function. Chronic toxicity is difficult to measure, particularly so in humans.

Environmental Effects - To assess the hazard of a pesticide to the environment, one must consider the actual exposure and dose that an organism receives. The acute toxicity of a pesticide is not a good indicator of the hazard it may present. For example, a pesticide that has a relatively low acute toxicity, if used at a high rate, can be much more hazardous than a highly toxic pesticide used at a considerably lower rate. Therefore, the use of relative acute toxicity data to assess environmental hazard is requires knowledge of both the exposure and dose received by the organism.

To establish acceptable levels of environmental contamination, scientists determine the maximum level of toxic exposure that an organism can tolerate without an observable effect. The “no effect” level is usually based on the most sensitive critical function of an organism such as reproduction or birth defects. The “no effect” toxic exposure levels are not the same for all organisms and in the process of developing data, similar organisms have been grouped and the most sensitive organisms used as the base. In any case, the “no effect levels” are levels at which no observable effect has been found in a test organism.

These “no effect levels” form the base for establishing standards for the

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maximum acceptable level of contamination in the environment. A safety factor of 100 to 200 is applied to the no effect levels depending on the size of stream or physical conditions present. These are the standards to be used by land managers to assess the impact of an action. These standards have been established for water quality and the pesticide project planner should refer to the current State and Federal EPA regulations to determine the acceptable limits.

## 2. Storage and Handling.

a. General Safety Guidelines. The following guidelines should be considered in all cases involving the storage and handling of pesticides. The precautions are designed to minimize spills and accidental contamination and allow better response in the case of fire.

(1) Store all pesticides in a secure storage room which is kept locked at all times except when in use. Storage in the field during operations may require a full-time watchperson.

(2) Use locked storage on all vehicles used in pest control operations and transportation of toxic materials.

(3) Label all materials in such a manner that the contents of all containers are plainly visible.

(4) Keep chemicals separated by type to prevent cross-contamination.

(5) Do not use obsolete or unsatisfactory materials and equipment.

(6) Permit no smoking or eating in the storage area and post area with signs to that effect.

(7) Identify pesticide storage areas with prominent waterproof signs over each entrance (including windows) on all side of building. Post a list of chemicals (organophosphates, carbamates, chlorinated hydrocarbons, flammable solvents, etc.) on the outside of building, along with storage plan.

(8) Inform police, fire department, and medical officials in writing of the location and layout of the storage area, types of materials stored, and hazards involved. Provide fire chief with telephone numbers of those personnel responsible for storage. Fire companies should map the locations of pesticide chemical storage in their respective areas. "Pesticide Fires: Prevention, Control and Cleanup" is available for AFPMB, Washington, D.C.

(9) Inform nearest physician and hospital of potential hazards, and ensure that medical personnel know how to treat for pesticide exposure. Ensure the "Clinical Handbook on Economic Poisons" available for HHS, Communicable Disease Center, Office of Pesticides, Atlanta, Georgia 30333. Antidotes should include an adequate supply of atropine sulfate and 2-PAM (protopam chloride).

(10) Obtain desirable fire fighting equipment (extinguishers) and have all employees familiarize themselves with its operation. Be sure the equipment works.

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- (11) Keep pesticide containers, particularly glass, away from windows and sunlight so they will not be subject to heat and ignition.
- (12) Keep combustibles away from steam lines and heat. Read label for information on flammability and store accordingly.
- (13) Dispose of unlabeled pesticides. Treat them as highly toxic.
- (14) Keep a quantity of hydrated lime on hand for detoxification.
- (15) In the event of container leakage, immediately make drip pans available until repackaging is completed.
- (16) Never use milk or beverage bottles, or any types of food containers, for storage of toxic chemicals.
- (17) Clean up spilled chemicals immediately.

b. Handling of Pesticides - (Mixing/Loading) - It is extremely important to follow label requirements pertaining to the use of safety equipment and clothing. Each job should be assessed for hazard - there may be occasions when common sense requires additional precautions to be taken even though not required by law.

Pesticide poisoning of applicators or those associated with the application usually occurs from absorption through the skin. To avoid pesticides coming into contact with the skin, it is recommended that the following minimum requirements apply to all pesticide use, regardless of the hazard category (label specifications may require more stringent methods).

(1) Coveralls - Coveralls that cover the entire body from wrist to ankles will be worn at all times during handling or application operation. Individuals involved in contract administration of aerial spray operations should also wear coveralls if close to the application and handling process. It is mandatory that these clothes be laundered often and they should be removed prior to going home. Note: Pant legs and sleeves should be worn outside of boots or gloves. Disposable or reusable coveralls are acceptable. Disposable coveralls are usually lightweight and more comfortable. If the operation will result in contact with heavy spray or mist, a waterproof suit should be worn. If liquid-proof clothing is required, it should be made of a tear-resistant plastic.

(2) Gloves - Rubber gloves must be worn anytime pesticides are handled either during the mixing or loading operation or during hand application. Unlined flexible plastic or neoprene gloves are the most desirable. Rubber gloves are also satisfactory unless prohibited by the label. Check the gloves for leaks prior to use, by filling with water and squeezing the glove. Do not use gloves that have cloth lining or wristband, or are made of leather.

(3) Boots - Unlined rubber boots which cover the ankles should be worn when hand applying pesticides. Coverall legs should be worn outside of the boots. Boots should be washed often. Do not use leather or fabric boots.

(4) Goggles/Face Shield - Goggles must be worn when pouring or mixing concentrates. Goggles should be the type that are non-fogging. Face shields should be made of clear plastic and be attached to the hat so they can be

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raised and lowered. Do not use eye protection with a headband that can absorb the pesticide.

(5) Hats - A liquid-proof washable plastic hard hat shall be worn by applicators during pesticide application and mixing operations. Hats with leather sweatbands should not be worn

Summary (Minimum Requirements)

|           | Aerial<br>Contract<br>Admin. | Loading | Mixing | Application |
|-----------|------------------------------|---------|--------|-------------|
| Coveralls | X                            | X       | X      | X           |
| Gloves    |                              | X       | X      | X           |
| Goggles   |                              |         | X      | X           |
| Boots     |                              |         | X      | X           |
| Hat       |                              |         | X      | X           |

If respiratory devices or aprons are necessary, the following should be considered:

Aprons- Aprons must be made of rubber or a synthetic liquid-proof material that will resist solvents. They should be long enough to cover the body from chest to boots.

Respiratory device - The respirator must properly fit the face, so that air leakage does not occur - the user must be clean shaven. Use only equipment that is approved by the National Institute for Occupational Safety and Health or the Mining Enforcement and Safety Administration. The user must be adequately instructed in its use.

All equipment can be obtained from G.S.A. or other approved sources. Designs range widely and it is important to avoid the undesirable traits of some equipment. The wrong equipment can result in increase exposure over that of using no protective equipment.

(6) The following additional rules should be followed when handling pesticides:

(a) Handle full barrels of chemicals or diesel oil with care to avoid personal injury - use barrel rolls if applicable.

(b) To minimize inhalation, handle all pesticides in well ventilated areas only.

(c) Immediately wash any contamination off the skin, with detergent and water. Frequent washing of the skin during and after pesticide application is as important as protective clothing.

(d) The following actions are recommended for respirator use:

(i) Change cartridge after each 8-hour exposure, or more often if needed.

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(e) Change filters every other day, or more often if needed.

(f) Thoroughly wash at each day's end.

(g) When handling fumigants, wear gas masks specifically approved for fumigant materials.

c. Transporting Pesticides. When transporting pesticides, the following precautions should be taken.

(1) Carry the pesticides in the cargo compartment of the vehicle, not in the passenger compartment.

(2) Take all possible steps to ensure that no container leaks develop, that no container is punctured or ruptured, that no lids or caps are loosened and paper container are kept dry.

(3) Special precautions must be taken while loading and stacking pesticide containers on a vehicle. Containers should be tied down, so that none can fall or roll about due to vehicle movement.

(4) Containers must never be transported while open. Partially used containers must be securely resealed before movement.

(5) After transportation, all herbicide containers should be inspected for damage and leaks, and the vehicle should be carefully examined for contamination.

(6) Generally, trucks with wooden platforms should not be used, since decontamination would probably require replacement of the planking.

(7) The vehicle should carry pesticides only - never a mixed load. Trucks used to transport pesticide must never be used to transport food, clothing, beverages, household goods, animal feeds or similar commodities without prior decontamination.

(8) Travel adjacent to streams with loaded pesticide tankers should be minimal, and accomplished by careful planning of routes and necessary spray volumes.

(9) All valves capable of emptying tank trucks must be lockable.

3. Safe Application. The following guidelines pertain to safety precautions to be taken during the actual application. It is important that sufficient planning precedes the application so that contract specification or instructions to the applicators reflect these concerns.

a. Precautions -

(1) Do not allow leaks in the spray distribution system or in the chemical mixing equipment. Keep equipment in good mechanical condition. Properly calibrate equipment prior to project initiation.

(2) Wear appropriate clothing as required for the type of chemical being used. Wash work clothing daily and change to clean clothing when not on



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duty. Cleanup is mandatory after each day's work. Coveralls should be furnished to those employees directly involved with spraying operations.

(3) Read the label on the chemical container and follow recommended safety practices. Do not use any chemical in a manner inconsistent with its label.

(4) Wash hands with soap and water immediately after contact with chemicals, and before smoking or handling food. Do not eat, drink or smoke while using chemicals. Chemicals are absorbed through the skin more readily in the areas of the neck, wrist and genitals. Some pesticide classes, i.e. pyrethroid insecticides, are strong skin irritants and should be handled with appropriate caution.

(5) Select sites for loading, cleaning equipment and storage which will prevent contamination of streams, ponds, cisterns, food stocks, or crops adjacent to work area.

(6) Safely dispose of empty chemical containers immediately after use (see p. 31).

(7) Do not work in direct spray drift.

(8) When working in high weeds, always go to the farthest point and work away from the area you are treating.

(9) Do not blow out clogged nozzles, hose, or lines with mouth.

(10) Avoid standing over the tank opening or downwind of materials when filling machines or mixing chemicals. When mixing concentrated liquids, use face shield.

(11) Never leave contaminated equipment or chemicals unattended. Use properly calibrated equipment (see p. 36)

b. Aerial Application - The following guidelines should be considered for all aerial applications:

(1) Arrange airborne spraying schedules so that poor visibility before and shortly after sunrise and sunset will not seriously affect the safety of the pilot.

(2) Allow spraying from a higher altitude if steep canyon heads, snags, or standing timber in the spray area make it too hazardous to spray at the specified contract heights. Stop spraying when conditions are too hazardous. Maintain the maximum flight height for acceptable results over vegetative cover and obstacles.

(3) Ascertain that all reconnaissance flights are performed in aircraft approved for BLM personnel, with spray tanks empty, and at an altitude of now less than 500 feet above vegetative ground cover. Any BLM employee must have authorization to be a passenger or crew member.

(4) Caution pilots to recognize dangers such as tall snags and trees, and probable location of downdrafts. Review map with each pilot, paying

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particular attention to heliports, areas being sprayed, and approaches to and from those areas.

(5) Caution pilots as to the location of telephone lines near any heliport which will be used.

(6) Pilots must wear crash helmets and double shoulder harnesses. It is advisable not to wear clothes made of synthetic fibers other than Nomex.

(7) Pilots should not fly in fog, heavy rain, before daylight or after dark.

(8) Pilots must not exceed the continuous flying limitations as outlined below:

(a) Unless further restricted by the using agency, flight hours must not exceed 8 hours during any 14-hours duty period.

(b) Pilot duty hours must not exceed 14 consecutive hours during any 24-hour period.

(c) At least 10 consecutive hours of rest are required prior to 24-hour period above.

(d) Pilots must have two 24-hour periods of rest (off duty) during any 14 day period during the performance of this contract. Off-duty periods must be designated by the Government unless a relief pilot is required. The contract must submit a schedule of relief pilot duty days to the COAR at the start of the contract period.

(e) Pilots must not exceed 36 hours flight time during any consecutive 6-day period. This flight time limitation may be temporarily exceeded during emergency conditions (life saving) or for unscheduled in route delay due to weather conditions. When a pilot acquired 36 hours flight time in any consecutive 6-day period, he must be given at least the following 24-hour period off duty after which a new 6-day cycle will begin.

In combined operations, the sending area should notify the receiving area of the daily accumulated flying time for each pilot in any 6-day period when between-area moves are made.

(9) Place a wind indicator of plastic ribbon or similar material near each heliport, heliport or air strip being used.

(10) The pilot in command must be responsible for the safety of the aircraft, its occupants, and cargo. He has complete authority to postpone, change, or cancel any flight when he believes existing or impending conditions make it unsafe.

(11) Have the pilot complete BLM Form 9400-9 (Helicopter Load Calculation) daily or often as needed.

(a) If the project officer is not in radio contact with the main office, the pilot must adhere to check-in schedules as required in Department Manual 350.

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c. Guidance to Personnel Working Around Aircraft.

- (1) Wear logger-type shoes with non-skid soles and snag-resistant shirts and trousers. If wearing a hat, use chin strap or carry in hand.
- (2) Carry first aid kits in your vehicle.
- (3) Stay away from aircraft when the propeller or rotor blades are in motion, unless authorized by the pilot or other authority. This means stay at least 50 feet away from small helicopters and 100 feet away from large helicopters.
- (4) When nearer than 50 feet to the helicopter, approach or leave from front or from side near front, where the pilot can always see you. Do not approach fixed wing aircraft from front.
- (5) When a passenger, do not approach or leave the aircraft until authorized by the pilot. Never approach or leave ship from any side where ground is higher than ground where ship is standing. When leaving the ship, duck down and walk immediately away, to the side until you are at least 50 feet from the rotors.
- (6) Wear seat belts and helmets with chin strap under chin, and shoulder harness while in flight. Keep safety belt fastened until instructed by pilot to leave the aircraft. Passengers and crew must not carry "strike anywhere" matches on aircraft flights. Any person who will be a passenger in a helicopter must wear Nomex fire resistant shirt and pants or coveralls, Nomex gloves, and a protective helmet.
- (7) Unless equipped with safety goggles or glasses, do not watch landings, takeoffs, or hovering, within 100 feet of the helicopter. Ear protection must be worn.
- (8) Stay away from tail rotor at all times and see that others do likewise. "THE TAIL ROTOR IS A KILLER!"
- (9) When working in the vicinity of the aircraft, wear headgear that will not blow off and foul helicopter or other equipment.
- (10) Keep aircraft clear of debris and equipment which may be dislodged by the wind created by the rotor blade.
- (11) Report overdue aircraft, malfunctioning equipment or aircraft to the COAR or Project Inspector immediately. Keep the base station informed as to the location of the aircraft.
- (12) Place caution signs on approaches to active heliports and land strips located on or near a road. Visitors must be kept in a safe area by the BLM project supervisor. Vehicles must be parked in a designated area. Visitors must be asked to leave the project area if they refuse to comply with applicable safety rules as outlined in this safety plan.
- (13) Monitor pre-flight inspections as performed by the pilot each day. This includes oil and gas check. Check visually for such items as oil

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leaks, loose nuts or bolts, loose or dripping nozzles, worn control hinges, and bad tires or skids. Check reserve gasoline supply.

(14) Insure that a suitable electrical ground is provided when the aircraft is being refueled. A ground (between the fuel truck and the aircraft) must be completed prior to refueling. It is good practice to prevent aircraft refueling which the engine is running.

(15) The responsible individual must issue a "suspend-work order" for aircraft which are considered unsafe or otherwise unsatisfactory for performance of ferry, reconnaissance, or application flights.

(16) Reconnaissance aircraft must be approved for such use by the Office of Aircraft Services (OAS).

d. Container Disposal. Pesticide containers retain a small amount of pesticide even after being rinsed. Therefore, the disposal of all pesticide containers must comply with Federal, State and local laws. County extension agents or State regulatory officials should be familiar with the local regulations. Federal regulations are administered by EPA.

(1) Account for every used container and never allow unrestricted use by individuals.

(2) All liquid containers must be rinsed at least three times prior to disposal. The rinse water should be sprayed onto the treatment area.

(3) Disposal of containers can be accomplished by burning or burial. The exact method used depends on the Federal, State and local laws. Always consult with local regulatory officials prior to disposal.

C. Emergency Action. It is extremely important that pesticide project plans include a carefully thought-out course of action which addresses emergency situations. Without prior planning, necessary delays and additional damage or injury could occur as a result of a spill or fire. Everyone involved in the project should be aware of the procedures and their responsibilities for implementation.

1. Spill Contingency Plan - Preplanning. Each project leader should prepare spill contingency plans in advance of the actual pesticide application.

A contingency plan prepares individuals for proper action, should an accidental spill occur. The plan, to be prepared for each area, must consider each tract that is to be treated.

Prior to treatment initiation, any critical points such as mixing location or water courses should be identified on a map, which is made available to project inspectors and water samplers during the implementation of the project.

a. Locate downstream points that are critical and estimate approximate stream travel times from the unit to these points. This is necessary so that if an uncontained spill occurs, downstream water users can be notified.

Telephone numbers should be identified, although, in most instances, people would need to be contacted in person.

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b. Identify and mark on the map, possible points of containment downstream from the unit. If spills occur on a road, roadside ditch outlets into streams should be monitored.

c. Identify points where water samples should be taken, such as intakes to fish hatcheries, intake to domestic water sources and major fish bearing streams at locations where the stream enters a larger body of water. Samplers should be dispatched to these points.

d. Identify the location of earth moving equipment that could be used in the containment or cleanup of the spill.

e. Identify possible routes for application equipment transport and identify critical areas along those routes which may warrant special consideration.

## 2. Spill Emergency Action.

a. Immediate action should be taken to minimize spill contamination, pending the arrival of containment personnel and equipment.

b. If possible, immediately plug leaks at the source container.

c. Immediately confine spill to holding area.

d. If necessary, secure available equipment and personnel to construct ponding areas to prevent the spill from reaching waterways.

e. After taking the necessary emergency procedures for containment, begin cleanup and disposal operations (see p. 30).

NOTE: The degree of urgency for environmental monitoring is directly related to the amount of pesticide spilled, the toxicity to specific organisms and spill location.

f. Notify the necessary local, State, and Federal personnel.

3. Fire. Note: "Pesticide Fires: Prevention, Control and Cleanup" is available from AFPMB, Washington, D.C. If a fire should occur in a pesticide storage facility, the following action should be taken:

a. Call the Fire Department.

b. Have fire inspector or facilities engineer notify a qualified physician to remain on stand-by.

c. Inform fire fight personnel of the following:

(1) Type of chemicals contained in the facility.

(2) Safety equipment that is required and possible poisoning if exposed to fumes or smoke without adequate protection.

(3) Soft streams of water (such as a fog) should be used to

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prevent tearing paper containers or breaking jars.

(4) Foam should be used when large volumes of flammable liquid solvents are released from ruptured containers.

(5) Drums containing inflammable solvents should be cooled with water spray.

(6) Maintain a safe distance in the event of explosion.

(7) Large volumes of water should be avoided, to minimize toxic run-off. If necessary, a dike should be constructed to prevent run-off contamination and to contain overflow of burning liquid.

(8) Rope off contaminated area and maintain it under continuous supervision until cleanup is completed.

d. Avoid smoking, drinking or eating while fire fighting, to avoid ingestion of toxic substances.

e. Protect employees and nearby residents by recommending evacuation of residents downwind of the fire, and requiring a medical check for those that may have been exposed.

4. First Aid. First aid involving chemical exposure should be incorporated into the District's first aid training courses.

a. Emergency action steps to be taken in case of accidental poisoning:

(1) Move the individual away from the pesticide and remove contaminated clothing. Wash the pesticide off skin.

(2) If the individual is not breathing, or breathing is weak, initiate first aid (refer to label instructions).

(3) Notify a physician of the pesticide involved. Administer antidote if advised by physician. Keep patient warm, quiet, and calm.

If appropriate, take the individual to hospital. Have a copy of the pesticide label.

Personnel involved in the project should be aware of the name, address, and telephone number of the physician and hospital where treatment and information can be obtained. This same information should be posted on any facilities where pesticides are stored.

b. General first aid procedures for various types of exposure:

(1) Pesticides on skin - Immediately remove contaminated clothing and thoroughly wash affected area with soap and water.

(2) Pesticides taken orally - Read label and follow instructions. Consult physician as soon as possible.

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(3) Pesticides in the eyes - Hold the eye(s) open and flush with a gentle stream of water for 15 minutes.

(4) Pesticide burns - Remove contaminated clothing, wash skin with large quantities of water, and cover with a loose cloth. Treat for shock (see c. below). Do not treat with ointment or greases.

(5) Pesticides inhaled - Move individual to fresh air, loosen clothing, and administer artificial respiration if breathing has stopped. Treat for shock as described below. If individual is in an enclosed space, do not enter the area without respiratory equipment.

c. Shock Symptoms/Treatments:

Sometimes poisoning victims go into shock. If untreated or ignored the victim can die from shock even if the poisoning injuries would not be fatal. The skin will be pale, moist, cold and clammy. The eyes are vacant and lackluster with dilated pupils. The breathing will be shallow and irregular. The pulse is very weak, rapid, and irregular. The victim may be unconscious or in a faint. The following treatment should be administered:

(1) Unless he is vomiting, keep the victim flat on his back with his legs up 1 to 1-1/2 feet above his head.

(2) Keep the victim warm enough to prevent shivering. Do not overheat.

(3) If the victim is conscious and has not swallowed any poison, give small amounts of water or a dilute salt solution (½ teaspoon of table salt to 1 quart of water). Give as often as the victim will accept it.

(4) Keep the victim quiet and reassure him often.

(5) Never try to give anything by mouth to an unconscious victim.

(6) In an emergency use any source of fairly clean water such as irrigation canals, lakes, ponds, watering troughs, etc. Don't let the victim die while you worry about how dirty the water is.

d. General Poisoning Symptoms/Antidotes:

(1) Carbamates - the symptoms occur within 12 hours and are: reduced coordination, restricted pupils, headache, dizziness, nausea, excessive salivation and weakness.

The antidote is: Atropine (must be administered by a physician) DO NOT USE 2-PAM.

(2) Chlorinated Hydrocarbons - The symptoms are: twitching, apprehension, excitability, and convulsions.

The antidote is: Atropine (must be administered by a physician).

(3) Organophosphates - the symptoms are: loss of

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coordination, reduced pupil size, nausea, diarrhea, slowed heartbeat, sweating, headache, weakness, and stomach cramps.

The antidote is: Atropine and protopam chloride (2-PAM) (must be administered by a physician).

(4) Chlorophenoxys - the symptoms are: irritation, burning sensation on skin, in nose, eyes, throat, uncoordination, and dizziness.

The antidote is: None. Induce vomiting (see e.).

(5) Dipyridyls - the symptoms are: dry skin, irritation, discoloration of fingernails, eye irritation, nosebleeds, a cough develops stomachache, diarrhea and vomiting.

The antidote is: None. Induce vomiting (see e.).

(6) Triazines - the symptoms are: irritation of eyes, nausea, diarrhea, vomiting if ingested.

The antidote is: None. Induce vomiting (see e.).

NOTE: The universal antidote (sponge) for ingested pesticides is:

Two parts activated charcoal  
One part magnesium oxide  
One part tannic acid  
Dilute ½ ounce of the above in ½ glass of water.

As a general rule, the nearest Poison Control Center should be consulted regarding the appropriate antidote for the pesticide being used.

e. How to Induce Vomiting:

Vomiting is to be used only as first aid until the victim can be gotten to a hospital. Make sure that the victim is lying face down or kneeling forward while retching or vomiting. Do not allow victim to lie on his back, as vomits could enter the lungs and cause aggravated damage. These steps should be followed:

(1) Give the patient large amounts of milk or water. One or two cups for victims up to five years old: up to a quart for victims over five years.

(2) Induce vomiting by placing a finger or the bunt end of a spoon at the back of the throat (do not use sharp object). A glass of soapy or strong salt water will also induce vomiting.

(3) Provide the physician with a vomit sample.

(4) WARNING - Never induce vomiting if the victim is unconscious or in convulsions: or if the victim has ingested a strong acid, a strong alkali, petroleum products, or concentrate pesticide solutions - all of which are corrosive and will burn as severely when vomited up.



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(5) Vehicle/Aircraft Accidents. These guidelines are recommended in cases of an aircraft or vehicle accident.

a. Action to be taken:

(1) Prior to locating accident or crash:

(a) Local search and rescue officials should be notified.

(b) A ground crew should be sent to the general area to stand-by.

NOTE: The location of aircraft or vehicles being used in a pesticide application project should be kept current so if an accident occurs, valuable time will not be expended in locating the site.

b. When accident site is located:

(1) Notify the proper officials.

(2) Maintain communications with those involved in the rescue.

c. When rescue crew reaches the scene:

(1) If the equipment is not on fire:

(a) If the operator is not seriously injured, take him to hospital or doctor.

(b) If the pilot is seriously injured or unconscious:

(i) Do not move him from the vehicle.

(ii) Check if he is strangling or choking; stop bleeding in accordance with the latest first aid procedures.

(2) If the equipment is on fire:

(a) Remove operator from vehicle, and to safety.

(b) Extinguish the fire with extinguisher unless it is hazardous to do so.

(c) Check the operators clothing to determine if he has been splashed with chemicals. If so, and if he is not seriously injured, assist him to the nearest water and wash several times with soap.

(d) If the operator is not seriously injured, take him to hospital or doctor. If seriously injured, have proper emergency services transport him to the hospital. Ensure that hospital personnel know if the operator has been exposed to chemicals. Check with contractor's crewmen to determine the chemical(s) to which he has been exposed. If morphine has been administered for pain, and he has phosphate poisoning, it can be fatal.

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6. Decontamination. It is important to clean up accidental contamination as quickly and safely as possible. The following are recommended actions for area decontamination after a fire or spill (read the label and always check with local, State and Federal agencies to ensure compliance with law):

a. Cleanup after the fire:

(1) Personal precautions to take:

(a) Wash and shower using large amounts of soap and water to remove any traces of toxic chemicals.

(b) Put on clean clothes.

(c) If leather-soled shoes were worn, examine for absorbed pesticides.

(d) Wash all personal clothing, protective clothing, and respirator. Do not contaminate inside of respirator with chemicals which have been deposited on the outside. Clean protective clothing is needed each day for the cleanup. Install new cartridges in the respirator.

(2) Basic rules:

(a) Notify local public health officials and physician, Fire Marshal, and District Manager of appropriate District.

(b) Post warning signs and rope off area to prevent unauthorized entry into burned out and water run-off areas.

(c) Check with manufacturers for additional advice and for availability/use of expert decontamination teams.

(d) Have a person familiar with pesticides direct the cleanup.

(e) Instruct all personnel to wear protective clothing, including a self-contained breathing apparatus or suitable respirator. Boots, gloves, and goggles are important since phosphates are absorbed directly through the skin and eyes. Also, some carbamates are readily absorbed through the eyes and result in symptoms which may mask more serious phosphate poisoning.

(f) Permit no smoking, eating or drinking either in the area, or before washing. Do not track pesticides out of area.

(3) Cleanup and disposal after fire or spill:

(a) Neutralize and absorb toxic chemicals by covering with double their volume of lime, attaclay, or soda ash, and dampen slightly. Spray standing walls, joists and other surfaces which cannot be readily reached, with lime, mixed at the rate of 50 lbs. per

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100 gallons of water. Close off area overnight.

(b) Neutralize run-off water by adding large quantities of soda ash. Pump standing water immediately into tankers for disposal in approved dumping area. Note: Soda ash increases the solubility of herbicides in the phenoxy group, and has no neutralizing effect on the specific herbicides atrazine, simazine, velpar, dalapon, garlon, and picloram. Cleanup of these particular chemicals must be performed through instruction of the manufacturer.

(c) Use safe removal procedures.

(d) Be sure all personnel involved understand the toxic nature of debris, and are properly clothed and masked.

(e) Use mechanized loaders, dump trucks, etc., to minimize human contact with contaminated material.

(f) Avoid raising a dust.

(g) Absorb excess liquid with lime, sawdust, or clay. Do not wash any material into waterway or sewer system without official authorization of a public health official.

(h) Carry debris to approved dumping area in tight metal-bodied dump trucks or tight containers. Moisten, or cover load with disposable cover if dust is a problem. Avoid overloading, to prevent spills in route.

(i) Scrape grounds or ditch banks contaminated with run-off water to a depth of 6 inches, dispose of the rest of the debris, and replace with uncontaminated soil.

(j) Spills from leaking containers found during cleanup should be treated with additional lime.

(k) Decontaminate tools, vehicles, concrete slabs, etc. with solution consisting of 1 quart sodium hypochlorite (household bleach) plus 1 cup detergent in 2 gallons of water; or 5 percent sodium carbonate (soda ash) solution plus detergent; or 5 percent sodium phosphate solution plus detergent. Scrub thoroughly and follow with a clean water rinse.

(l) Inspect surrounding area for possible contamination and leave entire area safe and in usable condition for the public.

(m) Use safe disposal procedures. (See (4) below.)

Find isolated site suitable for burying debris away from ground or surface water. Burial site should be on high ground with low water table since low areas are more likely to contribute to water contamination. Obtain approval from local board of health and local EPA regional solid waste management representative.

(n) Dig pit large enough to hold all debris. Cover bottom with generous amount of lime.

(o) Dump fire debris into pit adding lime throughout.

(p) Cover with at least 18 inches of soil, compact, and mound so that it will shed water.

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(q) Decontaminate tools and equipment with sodium hypochlorite - detergent solution previously described. Launder clothing and hang in sun.

(4) Disposal of containers

(a) Nonburnable containers (metal, glass, plastic, etc.).

(i) If containers are damaged, they must be removed to toxic dumps for disposal.

(ii) Never use any pesticide container for purposes other than originally intended.

(iii) To decontaminate a container for disposal, drain the container completely, carefully add water and triple rinse. Add rinse water to spray tanks.

(b) Burnable containers (wood, cardboard, paper, etc.)

(i) Check local, State and Federal regulations.

(ii) Small quantities may be burned if local laws permit. Never inhale smoke from burning containers.

7. Emergency Monitoring. It is often necessary to assess the environmental impact after an accidental spill. To determine the impact on water quality, monitoring must begin as soon as possible after the spill occurs. The following procedures are recommended if a spill cannot be contained (check local, State, and Federal regulations regarding water monitoring requirements):

a. Assessment. If containment is possible, observe the degree of success. If the spill is near water, or complete containment is unlikely (due to magnitude, possible leaching, etc.), put a tracer into the spilled material and position an observer/water sampler below the area where the chemical would likely enter the water. The personnel assigned should be "clean" and equipped with sample containers and lights for night sampling.

To avoid contamination, water samplers should not enter any area adjacent to the spill site. Water sampling in the immediate area should be performed by the spray project personnel using emergency water sample bottles located at sampling points downstream from the spill site.

b. Sampling.

(1) Non-Containment Case.

(a) Immediately estimate when spill first entered water and the distance it may have traveled during the elapsed time. If possible, introduce a tracer into the stream at the point where the spill reached the water.

(b) Immediately sample water as near to the source of spill as possible to detect the concentration of the "slug" (peak concentration).

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(c) Using travel time measurements from the stream (or adjacent streams), estimate when the “slug” will pass the “contingency” sampling point and one or more intermediate points (use tracers as deemed helpful).

(d) Obtain water samples at intermediate point(s) and “contingency” points during the appropriate time period [sampling could be started prior to observing the tracer and based on travel time the appropriate sample(s) could be selected for analysis].

(e) For later analysis, collect soil samples at points between spill site and water source.

(2) Partial Containment Case.

(a) Since partial containment may have both surface and subsurface flow reaching the stream, sampling will vary in intensity.

(b) When the tracer reaches the sampling point, start sampling at 15-minute intervals.

(c) When tracer is no longer visible, sample at 1- hour intervals until 24 hours have elapsed since the spill.

(d) Obtain samples at intermediate point(s) and “contingency” point to detect the peak concentration of the “slug”.

(e) Collect soil samples at intermediate point(s).

II. Application Guidance. There is a wide variety of pesticide application equipment ranging from hand held sprayers to aircraft. It is important that the equipment selected is the most efficient for the job and that it is properly used. Personnel must be familiar with the capabilities and limitations of all equipment including the support equipment.

The following recommendations and guidelines should be considered when applying pesticides:

A. Environmental Consideration.

1. The following are recommended minimum widths (measured horizontally) for protective buffer strips for all pesticides applied adjacent to waters which are valuable for domestic use, are perennial marshy areas, are important for angling or other recreation, and/or are used by significant numbers of fish for spawning, rearing, or migrations routes (Class I streams).

|                     | <u>Buffer Strip Width</u> |
|---------------------|---------------------------|
| a. Aerial Spraying  | 100 feet                  |
| b. Vehicle Spraying | 25 feet                   |
| c. Hand application | 10 feet                   |

Specific buffer strip widths indicated on pesticide labels or by State regulations

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must be followed. Pesticide program planners should refer to labels and State regulations for specific requirements.

2. Applications to hard surfaces subject to pesticide run off into important water supplies must be avoided.
3. Make no aerial application with 1/4 miles (440 yds.) Of a human habitation without notifying the resident.
4. When spraying rangeland subject to grazing, notify appropriate personnel of livestock feeding restrictions as per the pesticide label. Make no applications directly over livestock.
5. As a minimum, post all pesticide treated areas with appropriate signs as indicated on the label, or required by State law. In addition, post areas as directed by District policy.

To ensure compliance with label restrictions and State laws, trained personnel must record weather conditions at treatment sites prior to and during application. Additional measurements must be made if a weather change which could jeopardize precise treatment placement on the target area, is imminent.

Aerial spraying operations are usually prohibited when any of the following conditions exist on the spray area (follow label directions if they site additional restrictions):

- a. Wind velocity exceeds 6 miles per hour or as specified on the label.
  - b. Snow or ice covers target foliage.
  - c. Precipitation is occurring or is imminent.
  - d. Fog significantly reduces visibility.
  - e. Relative humidity is less than 50 percent (water based sprays).
  - f. Air turbulence (thermal updrafts, etc.) is sufficient to affect the normal spray pattern.
6. The water intake for the mixing operation should be arranged so that an air gap or reservoir is placed between the live water intake and the mixing tank to prevent any backflow of chemical into the water source.
  7. Mixing and loading operations must take place in an area where an accidental spill would not contaminate a stream or body of water.
  8. Do not rinse spray tanks in or near streams, or dispose of herbicide containers at the contract area.
  9. Aerially applied treatments must be turned off at the completion of spray runs, and during turns to start another spray run. Precautions must be taken to confine the spray material to the designated area.

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10. Application nozzles on aerial projects must be equipped with automatic shut-off devices to prevent loss of pesticide along nonspray routes.

11. When helicopters are used to apply pesticides, the following practices are recommended:

a. Spray nozzles on the boom should not extend beyond six/sevenths of the length of the helicopter rotor.

b. Spray application must be made at an average airspeed of 45 miles per hour (mph). The allowable range in airspeed is from 40 mph to 50 mph, safety permitting.

c. Spray application must be made at heights ranging from 30 feet to 45 feet above ground cover when terrain and safe flying practices permit.

d. Spray solution must be applied uniformly. Two flights may be necessary for good coverage as described below. The second flight must be made as near 90 degrees of the first flight as topography and safety will allow. If the area cannot be cross flown, the second flight must be flown in the reverse direction of the first flight. On each flight, one-half of the spray solution per acre must be applied.

e. The effective spray swath must be considered as two times the width of the spray boom unless the contract can demonstrate by an approved checking method that his equipment can spray an effective swath wider than specified above.

f. There should be at least two qualified ground workers for each mixing truck to facilitate fueling, mixing spray solutions, loading, maintenance and protection of equipment and materials. One ground worker should be designated as supervisor and should be equipped and trained to take proper action in an emergency.

g. Aerial application of granular pesticide should follow the following:

(1) Granular pesticides are dependent on precipitation to dissolve and carry them into the soils. They do not become active in the plant until the plant extracts the pesticide from the soil water solution, therefore, response may be slow depending on precipitation.

(2) Aircraft must be equipped to accurately apply granular pesticides at a uniform swath width.

(3) Wind velocity should not exceed 15 miles per hour or as specified on the label.

(4) Should not be applied when ground is covered with snow or frozen.

(5) Do not apply during rain storm.

(6) Do not apply on slopes of more than 15 percent or where there is a possibility of over land flow carrying the granules into susceptible nontarget areas.

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(7) The granular pesticides can be applied throughout the year if they are not degraded by sunlight. However, they should be applied just before the normal precipitation season.

(8) Persons helping with the loading of granular pesticides, should wear equipment to minimize inhalation of the dust.

(9) Must have adequate protection for bulk pesticide from moisture.

12. The control of drift from pesticide application is important, otherwise the prescribed amount of the pesticide will not remain on site and reach the target species. Contamination of nearby sensitive areas such as streams, crops or residences should be prevented.

Drift control during aerial application is related to weather conditions, distance that droplets must fall, and droplet size. Droplet size is the major factor influencing amount and distance of drift (droplets less than 100 microns in size are the most drift susceptible).

To reduce drift hazard, select the proper application equipment; then apply pesticides in favorable weather conditions. Nozzle type and size, boom pressures, spray adjuvants, and spray viscosity are the primary methods of controlling droplet size. An important consideration in any case is to provide an acceptable level of drift control and still maintain pesticide effectiveness.

For aerial application key personnel should be in constant radio communication with the pilot so that if unacceptable drift is observed, immediate action can be taken. The use of smoke devices on the project site can provide invaluable information for predicting direction and movement of the spray material.

Herbicides may be required during off-season in recreation areas to control poisonous plants, such as poison oak. Herbicide applications are made early in the spring or late in the fall prior to, or after maximum recreation use.

Refrain from pesticide use in designated wilderness areas except when in accordance with the Interior Guidelines.

**B. Calibration of Equipment.** Pesticides are formulated to be applied at predetermined rates to meet specific pest control objectives. Even if the spray tank contains the correct mixture, you can still apply the wrong amount of pesticide. You need to know at what rate the equipment is applying the pesticide to the target. When you know the rate/minute delivery of the machine, the machine is calibrated. You can decide the length of time (minutes, seconds, miles/hour) an area must be sprayed to get the correct dosage on each target.

Various types of equipment are used to apply an active ingredient (pesticide) in a carrier (water, etc.) at a specified rate (pounds or gallons) to a unit area (acre). Such equipment includes: (1) a backpack sprayer, (2) mist blower, (3) mobile spray boom, (4) helicopter, or (5) a fixed-wing aircraft.

#### 1. Ground Application - Boom Sprayer

a. **Pumping Rate.** To find the pumping rate of any sprayer, the amount of spray being pumped through the nozzles each minute must be determined. Fill the Spray tank completely full of water. At the throttle setting and pressure



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chosen, allow the sprayer to pump for 5 full minutes (the reason for 5 minutes is to obtain a more exact measurement). Measure the amount of water needed to refill the tank. Divide this figure by 5 to determine the amount delivered in one minute.

## Example 1

$$\frac{10 \text{ gallons}}{5 \text{ minutes}} = 2 \text{ gallons per minute (GPM)}$$

b. Gallons Per Acre. In order to apply the pesticide evenly and accurately, the sprayer must move at a constant speed over the area and be pumping at a constant pressure. Each nozzle must be clean, at the proper height from the ground, and delivering the same volume as each other nozzle that you wish to use; then calibrate to determine the total amount of spray being applied per acre.

Calibration does not require the spraying of an entire acre is a few basic facts are known:

- (1) One acre = 43,560 square feet
- (2) The distance moved in one minute at the throttle setting decided upon
- (3) Width of spray boom
- (4) Pumping rate of sprayer

## Example 2

Suppose: Sprayer boom is 20 feet wide, sprayer travels 440 feet/minute, and the sprayer pumps 2 gallons/minute.

-Figure the area covered in one minute:

$$440 \text{ ft/min.} \times 20 \text{ ft} = 880 \text{ sq.ft/min.}$$

- Figure minutes required to cover one acre:

$$\frac{43,560 \text{ sq.ft/acre}}{8800 \text{ sq.ft/min.}} = 4.95 = \text{about } 5 \text{ minutes/acre}$$

- Finally, figure the amount of spray pumped per acre:

$$2 \text{ gal./min.} \times 5 \text{ min./acre} = 10 \text{ gal/acre}$$

c. Amount of Pesticide Needed. To determine how much pesticide to add to the tank, two facts must be known:

- (1) Gallonage capacity of the tank.
- (1) The recommended amount of pesticide formulation; or the amount of active ingredient (AI) you want to apply per acre (label states AI per gallon of formulation, or percentage AI of wettable powder formulation).

## Example 3

Suppose: One pint of formulation/acre is recommended, tank capacity is 80 gallons, and the sprayer delivers 10 gal/acre (from Example 2)

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- Figure the number of acres one tank load will spray:

$$\frac{80 \text{ gal/tankful}}{10 \text{ gal/acre}} = 8 \text{ acres/tankful}$$

- Figure the amount of formulation to add to tank:

$$1 \text{ pt./acre} \times 8 \text{ acres/tankful} = 8 \text{ pts./tankful}$$

Suppose: The recommended rate is 1.0 lb of wettable powder (WP) formulation/acre, and 1 tankful covers 8 acres (from above).

- Figure the amount of formulation to add to the tank:

$$1.0 \text{ lb./acre} \times 8 \text{ acres} = 8 \text{ lb./acre}$$

## Example 4

Suppose: The recommended rate is  $\frac{1}{2}$  lb. AI/acre, the pesticide contains 4 lb. AI/gallon, and a full tank covers 8 acres (from Example 2).

- Figure the number of pints need to apply  $\frac{1}{2}$  lb. AI:

$$\frac{4 \text{ lbs.}}{1 \text{ gal.}} = \frac{4 \text{ lbs.}}{4 \text{ qts.}} = \frac{1 \text{ lb.}}{1 \text{ qt.}} = \frac{1 \text{ lb.}}{2 \text{ pts.}} = \frac{1}{2} \text{ lb. AI/1 pt. formulation}$$

- Figure how much formulation is needed/tankful:

$$1 \text{ pt./acre} \times 8 \text{ acres/tankful} = 8 \text{ pts./tankful}$$

OR

Suppose: The recommended rate is  $\frac{1}{2}$  lb. AI/acre, the pesticide formulation is 50WP ( or 50% concentration), and a full tank covers 8 acres.

- Figure the number of ounces of wettable powder that are needed to apply  $\frac{1}{2}$  lb. AI acre:

$$0.5(50 \text{ percent conc.}) X = 0.5 \text{ lb. AI, then solving for X,}$$

$$X = \frac{.5}{.5} = 1.0 \text{ lb.} = 16 \text{ oz./acre}$$

- Figure how much WP is needed/tankful

$$16 \text{ oz./acre} \times 8 \text{ acres/tankful} = 128 \text{ oz. or 8 lbs./tankful}$$

2. Ground Application - Hand Sprayer

- a. Layout one square rod; this is an area 16  $\frac{1}{2}$  ft. X 16  $\frac{1}{2}$  ft.

- b. Fill sprayer with water and determine the time it takes to spray the area ( a number of trials should be conducted and time averaged).

- c. Collect discharge from nozzle for the same length of time needed to spray the square rod, and measure it in pints.

- d. Gallons per acre = no. pts. collected x 160 (160 sq rod = 1 acre)

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## Example 5

Suppose: An average of 3.5 pts. were collected in a number of trials.

- Figure deliver/acre:

$$\frac{3.5 \times 160}{8} = 70 \text{ gal./acre}$$

3. Aerial Application. Keeping in mind much of the background information presented in the Ground Application - Boom Sprayer section, the following steps and calculations should be performed:

a. Determine the acres covered in one minute:

$$\frac{2 \times \text{swath width (ft.)} \times \text{speed (mph)}}{1000} = \text{acres/min.}$$

b. Determine delivery rate in gallons per minute:

$$\text{Acres/minute} \times \text{designated rate (gal./acre)} = \text{gal/minute}$$

c. Determine the number of nozzles needed for proper spray distribution:

$$\frac{\text{Gal./min}}{\text{Capacity (gpm) of 1 nozzle}} = \text{number of nozzles}$$

d. Install onto the spray boom, the number of nozzles calculated above.

The system should be calibrated and tested to ensure that the desired output is delivered.

## Example 6

Suppose: these variable factors are given:

Rate of application = 10 gal./acre

Application speed = 40 mph

Swath width = 50 ft.

Spray pressure = 30 psi

The nozzle capacity is 0.940 gal./min. [RD-8(10-45)].

- Figure acres covered per minute:

$$\frac{2 \times 50 \text{ ft.} \times 40 \text{ mph}}{1000} = 4 \text{ acres/min.}$$

- Figure gallons applied per minute:

$$4 \text{ acres} \times 10 \text{ gal.} = 40 \text{ gal./min}$$

- Figure the number of nozzles needed:

$$\frac{40 \text{ gal.}}{0.94 \text{ gal./min}} = 42.55 \text{ or } 43 \text{ nozzles}$$

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e. **Checking Calibration.** To check the discharge in gallons per minute, place a known quantity of water in the spray tank, and at the specified pump pressure, monitor the length of time required to empty the tank.

1. Determine the discharge time in minutes by:

Gal. water discharged

Gal./min. (From Example 6) = time

2. If the actual discharge time is within  $\pm 5$  percent of the calculated discharge the time, the equipment is properly calibrated. If the variance exceeds  $\pm 5$  percent, adjust discharge as described in the section below.

Example 7

**Suppose.** The actual discharge time is 1 minute, 5 seconds, and the calculated discharge time is, 40 gal. discharged = 1 minute 40 gal./min.

- Figure  $\pm 5$  of 1 minute

- 5 percent = 57 sec. and

+ 5 percent = 1 minute, 3 seconds.

- The actual discharge time of 1 mi., 5 sec. does not fall with the range of 57 sec. - 1 min., 3 sec.; therefore, the aircraft is not properly calibrated.

f. **Accuracy of Aerial Application.** After ground calibration, airborne calibration should be checked prior to pesticide application, and daily thereafter. This is accomplished by using stopwatch to determine the time required to spray a know quantity of water. A  $\pm 5$  percent deviation is acceptable.

- (1) Check pump pressure and nozzle output:

load (gallons) = Desired application time  
discharge rate ( gal./min)

Example 8

**Suppose:** The aircraft load is 65 gallons, the calibrated discharge is 40 gal./min., and the actual discharge time is 1 min., 40 sec.

- Figure the desired application time:

65 gallons = 1 min. 38 sec.

40 gal./min.

- Therefore the discharge is acceptable, as it is within 5 percent.

- (2) Check application speed by timing the aircraft between tow points of know distance, and calculate speed:

distance (ft. ) = miles/hour.  
Time (sec.) X 1.47

Example 9

**Suppose:** The aircraft flies 3,300 feet in 44 seconds.

3300 ft. = 51 miles/hour  
44 sec. X 1.47

- The application speed should be within  $\pm 5$  percent of the speed used to calibrate.

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4. Changing Delivery Rate (all Types of Application). If delivery is either more or less than desired, the rate can be altered by three methods:

a. Change the pump pressure. Lower pressure means less spray delivered; higher pressure means more spray delivery. This is not a highly desirable alternative because changes in pressure alter the nozzle spray pattern.

b. Change ground or air speed of the sprayer. Slower speed means more delivery; faster speed means less spray delivery. This may be practical for small changes in number of gallons, but not for large delivery changes..

c. Change nozzle discs or jets to alter the amount each nozzle delivers. The large the disc orifice, the more spray delivered. This is usually the preferred method.

### III. Treatment Survey Procedures.

A. Pretreatment Survey Procedures. Pest control pretreatment site specific data must be collected to assess pest control needs. The degree of detail may vary according to conditions on the site(s). A vegetation management survey form for collecting data under a variety of field conditions shown in Illustration 2. This form or a satisfactory modification of it may be used throughout each District in order to provide consistency in analyzing pest management needs. Pretreatment survey data must be cited in all pest control program environmental assessments.

The following minimal information should be available when conducting pretreatment field surveys:

1. Management program/objective for the site.
2. Consideration of all feasible pest management alternatives, including:
  - a. Identification of environment effects on fish, wildlife, soil, water, air, rare/endangered plants and animals.
  - b. Human health hazard(s) associated with each method.
  - c. Effectiveness of each method (retreatment needs).
  - d. Cost of each method.
  - e. Cost of each method regarding hazards to nontarget species.
  - f. Map of survey unit(s).
3. Recommended treatment method(s), or combinations of methods.
4. If chemical pesticides are recommended, the following additional information is required.
  - a. Pesticide common names, application rate, carrier.
  - b. Posting requirements (if needed).
  - c. Positive placement techniques planned to minimize drift and effects on nontarget areas.

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- d. Method of application (ground, aerial, backpack).
- e. Special restrictions on the pesticide label with regard to handling, buffer strips, grazing, planting, wind, droplet size, etc.
- f. Monitoring plans (water, efficacy, nontarget effects, etc.)

IV. Treatment Evaluation Processes

A. Post-Treatment Evaluation Procedures. Pest control projects must be evaluated regardless of the type of control method used (i.e., chemical pesticide, biological control, manual cutting, etc.). The examination focuses on the short/long-term impact on the target species and management objectives. The purposed of the post treatment evaluation is to build an experience record that clearly demonstrates the effects of pest control and the cost effectiveness of various methods or combinations of methods.

Post-treatment evaluations generally are made within 2 years after treatment. Significant environmental impacts, projected prior to treatment, undergo evaluation at the anticipated time of impact.

Methodology for the post-treatment evaluation should be developed by individual District and should be consistent within the District. Minimum requirements include a written evaluation that contains quantifiable data and the rationale for any conclusions reached. A reforestation stocking survey may be a significant part of the post-treatment evaluation process on some timber producing areas.

B. Water Monitoring. A water monitoring program, if judged worthwhile, should be conducted by each District as part of the proposed action. The purpose is to determine the effectiveness of buffer strips, and administrative controls in minimizing impacts on water quality and the aquatic environment. Past water monitoring experience may indicate that no additional monitoring is necessary.

Deep well water monitoring should be done upon request if there is a reasonable possibility of contamination from BLM pesticide operations. If a monitoring request is received, experts from EPA, universities, and the State Department of Agriculture should be consulted to ascertain the validity of such requests.

Each District must evaluate its own monitoring needs. At the time a pesticide program is developed, District personnel should determine those areas which might require special attention, such as domestic water supplies and fish hatcheries.

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1. Water Sampling Procedures:

a. Sample Site and Equipment. Sample sites should be selected prior to the herbicide treatment. Ideally, the person responsible for the monitoring program should select sites when the treatment boundaries are laid out. The sites should be as close as possible to the downstream boundary of the treatment area. It should be downstream from the inflow of all small drainages flowing through the treatment area. The sample site should be accessible in all seasons and under most conditions. Samplers should be able to reach the sample site without having to go through the treated area, or through adjacent zones subject to spray drift. This avoids contamination of personnel and equipment involved in the monitoring of water quality. The sample site should be a flowing section where samples can be taken without disturbing the stream banks and bottom. Such disturbances can kick up soil or organic debris that can affect analyses.

All equipment, sample containers, vehicles, and personnel used in monitoring water quality must be kept separate from the treatment process. Empty and full sample containers must be handled and stored away from all pesticides and other chemicals to avoid contamination. Persons doing the sample collection must not be involved in any other phase of the treatment.

Laboratory analysis for organic chemicals is complex and expensive. Contact a laboratory or laboratories during the early planning stage of a monitoring project. Discuss in detail the procedures to follow as well as price schedules. Prices vary somewhat between laboratories in relation to chemical type and number of samples. Check or verify laboratory qualifications to ensure that they meet EPA or State standards for chemical analysis.

b. Sample Frequency. Sample frequency is generally based on pesticide behavior. Pesticides can reach the water at the time of application, or they can be subsequently carried into the stream through overland flow. The overland flow will vary as a result of topography, soil conditions, litter cover, vegetation, and rainfall intensity.

Peak levels of contamination resulting from any pesticide reaching a stream during application will occur shortly after application. The highest levels will be found during the first 24 hours, followed by a rapid decline in concentration. A secondary peak, usually quite small, can occur as a result of overland flow during storms. In most treatment programs, contamination of water is nonexistent and no peaks occur.

Where contamination does occur, levels most often fall within EPA established threshold levels, and are detected immediately after treatment. The sampling program is designed to sample most frequently during the period when any contamination is most likely to be present, and to continue monitoring through the active life of the pesticide.

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Generally sampling should be done at the following intervals:

Sample Number 1 - Pretreatment.

A single control sample must be taken prior to treatment, preferably within 24 hours of the treatment period. If possible the samples should be taken from the treatment area. However, it is permissible to take control samples from areas proximal to the treatment area, so long as the stream character is similar or unaltered, i.e., by tributaries, etc.

The control or pretreatment sample is necessary to detect contaminants which may be present prior to application of the pesticide treatment being monitored. Given the irregular land ownership programs within BLM, contamination of water resulting from non-BLM programs is possible. The control sample will detect pretreatment contaminants and serve as a control check on BLM treatments.

Sample Number 2 - Within One Hour Post-Treatment.

The sample must should be taken as soon after completion of treatment as possible, but must be taken within one hour post-treatment. A short travel period may be necessary after the treatment ends, since monitoring crews to avoid exposure, must not be in the vicinity of the treatment area during treatment. Since the peak of any contamination will occur shortly after treatment, it is imperative that the initial monitoring sample be taken promptly.

Sample Number 3 - Within 24 Hours Post - Treatment.

This sample must be taken one day post-application (at approximately the same hour).

Sample Number 4 - Sampling in Sensitive Areas.

Sampling near domestic, agricultural, municipal, or fish hatchery supply intakes must be done within one hour of treatment at 24 hours post-treatment, and 6 days post-treatment. Travel time must be taken into account when determining the sample schedule (See Sample Number). If 6-day post-treatment levels exceed EPA standards, additional sampling must be performed at 48- hour intervals, as long as pesticide levels remain above the acceptable tolerance.

Sample Number 5 - Multiple Applications.

If multiple applications are used per unit, samples will be taken after each application according to the above schedules.



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Sample Number 6 - First Storm.

Samples must be taken during or immediately after, the first storm following application. This is particularly important when the storm is within 3 months following treatment.

Sample Number 7 - Long-Term Sampling.

If pesticide is found in water samples collected under the above schedules, additional samples must be taken to monitor contamination. Samples may be required after the second storm, after the first leaf fall following treatment, and up to one year later, as long as contamination remains above threshold levels. In the case of long-term contamination, a complete investigation should be made to determine the reasons for continued contamination, and steps should be taken to avoid similar situations.

c. Determination of Travel Time. In establishing a sample schedule for sites downstream from the treatment area, travel time must be taken into consideration. Travel time is the time needed for water to move from the treatment area to the downstream sample site, and depends upon the velocity and volume of flow. As the velocity increases, so does the volume of water, therefore, the travel time determination made at one water level cannot be used for a different flow level. Since streams differ in character, the travel time will have to be determined for each stream. The following are some acceptable methods of determining an approximate travel time:

(1) Average Velocity. Measure the velocity of the stream at several points between the treatment area and sample site. Add the values and divide by the number of measurements to get an average velocity. Divide the distance from the treatment area to the sample site by the velocity to obtain the approximate travel time. If available, a current meter should be used to determine velocities.

(2) Dye Tracer. Use a dye tracer that will not interfere with any sample monitoring. A predetermined amount of dye is introduced into the stream at the treatment area, and dye travel time to the sample area is determined.

(3) Floating objects. This is the least reliable method, due to the influence of currents, presence of back eddies and dead spots, and the potential for snagging objects in the stream. One or more floating objects are introduced into the water, and the time measured before they reach the sample site. The technique is more accurate in large, rather than small streams.

d. Collecting the Sample. If an integrated sampler (Such as a DH48) is available, a sample must be taken at different depths over a cross-section of the stream. In the absence of an integrated sampler, a container should be filled near the middle of the stream where the flow is constant. The best location is where the stream is fairly straight, and where there is sufficient depth to submerge the bottle, at an angle, with the mouth uppermost, about 2 to 4 inches below the surface of the water. Do not hold the mouth at the surface as this samples only the surface layer and not the whole stream. If the bottle contains a preservative, do not overfill as this will allow some of the preservative to escape.

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Do not stir up the bottom or dislodge material from the sides of the stream as this can influence the sample results. Care must be taken at all stages to prevent contamination of the sample or the container.

Each sample must be clearly identified and all pertinent information correctly and completely recorded on a tag or label securely attached to the container. In addition to an identification number, the attached tag or label should show the date and time collected, location, weather conditions since which application, and the name of the collector. Other items of information which may be recorded are the rate of application, chemical formulation used, and size of area treated.

e. Transport and Storage. Never transport or store sample containers near pesticides. Upon completion of sampling, ship the accumulated samples to the laboratory for chemical analysis. If for some reason, the samples are not analyzed immediately, verify storage conditions with the analytical laboratory.

Water samples must be stored in a cool, dry location completely removed from pesticides and other chemicals. Samples not subject to immediate analysis may be stored for a period no longer than necessary, up to a maximum of 6 months. After 6 months, the sample must be disposed of by emptying contents on the ground away from streams. Containers may be disposed by burning, burying, or cleaning. Some containers are reusable if properly cleaned; in most instances it is less expensive to replace, than to clean and store bottles.

Pesticide samples will provide more accurate readings if kept cool. Some require refrigeration and others, such as fosamine and glyphosate, must be frozen to avoid chemical breakdown. Pesticides with rapid breakdown may require icing of the samples from the time they are collected. Specific information on handling and storing samples must be obtained from the analytical laboratory prior to the time samples are taken.

Containers for some herbicides contain pellets of sodium hydroxide, which raise the pH to restrict growth of microorganisms and to prevent breakdown of the herbicide. Avoid all skin or eye contact with these pellets or their solutions as they can cause severe chemical burns. Do not rinse sample containers which contain pellets, and do not fill containers to overflowing when sampling as this will dilute the preservatives.

NOTE: In highly sensitive areas it may be prudent to take dual samples each time and store the second sample as insurance against spill or loss.

2. Alternative Sampling Procedures. Chemical analyses for pesticide residues are expensive because of the time and equipment required. It may be desirable to reduce the cost of monitoring on some projects by combining samples and thereby reducing the number of analyses required. Combine equal parts of each of several samples taken at a monitoring point, excluding the control sample. Include no more than four to five samples in a composite. Save remainder of each individual sample in case the analytical results on the composite show that more detailed information is needed. Mark the composite sample as such and include a complete identification when submitting for analysis.

Water sampling with subsequent analysis by an EPA or State certified laboratory is the most accurate check on any possible contamination. However,

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the procedure is slow with results often not available for several months following the actual treatment. If a more rapid assessment is needed, three methods of quick checking are suggested:

a. Observers. Personnel present during the treatment can observe if inadvertent direct contamination of streams or open water occurs, and if so, can then notify the project leaders. If there are sensitive areas downstream, the project leader can take the appropriate steps to conduct rapid water sampling and initiate protective action for the sensitive areas.

b. Splash Cards. Monitors on site during spray operations can quickly place out cards for quality control purposes. Determining deposit, in terms of gallons per acres is possible, but accuracy depends upon use of the proper spread factor.

Deposit cards are useful for droplet size and application rate assessment, and for detection of drift. Several types of cards have been used in spray monitoring, including aluminum plates, Kromekote paper, and oil sensitive papers. Oil sensitive paper (Thermofax 209 Type 658) is a white copy paper upon which spray droplets will produce brown stains when exposed to UV light rays for a short time period. Water mixtures of non-oil-based chemicals will not spot the Thermofax paper.

c. Fluorometers. This instrument has been used extensively by USFS. A predetermined amount of dye is added to the pesticide tank mix prior to application. Water samples for dye analysis are taken at the same time, or additionally, as water samples for laboratory analysis. Dye samples are tested via the fluorometer, which utilizes the fluorescence of dye and UV light, providing a general value for the level of dye present. The dye pesticide ratio in a stream is assumed to be identical to the original dye-pesticide mixture. Therefore, if the dye concentration in the subject stream is known, the degree of possible pesticide contamination can be calculated quickly. The procedure is simple, rapid, and can be employed at a permanent facility or as a mobile unit.

The fluorometer technique can provide early warning of potential contamination, signaling the need for further sampling or preventive action at downstream sensitive areas as identified in the ES.

3. Impact Assessment. The impact of chemical treatments or contaminants on stream ecology is difficult to assess. The methods used to determine ecological impacts are complex, time consuming, and the results are often subjective.

a. Laboratory Bioassay. Bioassay is a commonly used biological impact procedure, which attempts to discern the pollutant concentration at which adverse effects on aquatic organisms occur. Such testing requires highly trained personnel. Furthermore, conclusions pertaining to all organisms in a stream, based on single-organism test results, are always open to question.

b. Population Sampling. In some instances it may be possible and desirable to sample stream bottoms and/or fish to detect changes in population size, organism behavior, etc. As for bioassays, these procedures require time, labor, and expense.

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c. Live Box. This third alternative is practical, but also has limitations. Basically, it consists of a box (constructed of wire screen), into which fish or other organisms are placed, and submerged into a stream or lake. If pollutant concentration reaches toxic levels, the test organisms may exhibit distressed or abnormal behavior (agitated or erratic swimming movement, progressing into sluggishness and loss of equilibrium), and eventual death. As a control, a second live box should be submerged in an area of the stream which has been unexposed to the potential contaminant.

This procedure demonstrates only the gross effects of toxic pollutants. It does not provide qualitative estimates such as abnormal development, effects on reproduction, etc.

V. Economic Benefits.

A. Economic Analysis of Pest Control Benefits. Pests are controlled to prevent losses or to increase production of valuable resources such as timber or grass, or to improve wildlife habitat. Control also alleviates the adverse human health affects resulting from contact with toxic plants, (poison oak, poison ivy), insects (fleas, mosquitoes), and animals (rats, bats, etc).

Advocating control of a pest should be based on logical thought processes which accurately quantify:

1. The benefits to be gained.
2. The cost of the control effort.
3. The time involved in obtaining control..
4. The efficacy of the control method.
5. Any adverse impacts resulting from the action.

Through this process an individual can prepare data for evaluation of alternatives, for which a valuable tool is economic analysis. Comprehensive economic analysis requires:

a. Quantification of pest control benefits in dollar terms (based on the value of animal unit months, board feet of timber, or recreation days) or relative to other social values.

b. Costs of pest control as a cost-per-unit of benefit (board feet, animal unit months, jobs).

c. The relative time (months, years) between incurring costs and benefits.

d. The appropriate interest rate to be used for natural resource investments (as recommended by the U.S. Water Resources Council). Careful and precise collection of statistics are essential to the determination of benefits/cost rates and the current net value of proposed pest control projects.

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Procedures for making the calculations involved in economic analysis are described in BLM Manual Section 9500. Additional technical guidance is available from the Bureau's Service Center Tech. Note 309 -Analytical Considerations, An Economic Analysis Series for Screening Proposed Timber Management Projects or Tech. Note 348 - Data Processing Programs for Remote Calculations. Access is via the District computer terminal utilizing the "INVEST" use program currently available on the Service Center computer system.

Economic benefits may not be the only advantages of pest control. Therefore, nonmonetary benefits should also be described to the maximum extent possible. Examples include watershed stabilization due to grass or tree establishment, increased big game forage, etc.

#### VI. Chemical Classifications and Behavior in the Environment.

A. Chemicals for pest control are primarily organic compounds (containing carbon atoms) synthesized for specific purposes. Some are however, naturally occurring, as extractions from plants (botanicals) and toxins produced by the fermentation of bacteria (bacterials). Pest control compounds are classified into various groups or families with members of each having some common characteristics. Any one group may contain insecticides, herbicides, and fungicides. Chemical groups include organochlorines (chlorinated hydrocarbons), organophosphates, carbamates, phenoxys, triazines, pyridos, biologicals, and pyrethroids (synthetic pyrethrum).

Member of some of all of these groups are occasionally removed from usage for various reasons (regulation, resistance, cost effectiveness, etc.), or member are introduced as they are developed. Individual chemicals are not discussed in this Handbook as the lists are undergoing constant change. Chemical descriptions, toxicities, and the risks pursuant to their usage can be found on the label and/or in "Farm Chemicals Handbook," Meister Publishing Co., Willoughby OH.

#### VII. Plans

A. Operational Plan. An operational plan should be developed and updated for each pesticide project. The plan should be designed for use in the field by on-site personnel. A general outline of what an operational Safety and Implementation Plan should include is as follows:

##### 1. Project Specifications.

Include contract specifications, pesticide information and vital regulations and procedures.

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2. Key Personnel Responsibilities.

Include specifics of the key project personnel responsibilities and duties (operational and emergency situations).

3. Communications Procedures.

Include radio procedures and emergency response actions.

4. Public Contact Procedures.

Include public notification and media response guidelines and action to be taken in case of unauthorized personnel on project sites.

5. Safety.

Include critical safety requirements, accident reporting procedures, and first aid procedures.

6. Accidental Spill Response.

Include maps of sensitive areas, emergency procedures, monitoring guidelines, and cleanup procedure.

7. Emergency Telephone Numbers.

Include Emergency Numbers for the following:

|                          |                         |
|--------------------------|-------------------------|
| law enforcement          | safety officer          |
| ambulance                | water monitor           |
| poison control center    | BLM key personnel       |
| physicians               | radio operators         |
| fire department          | heavy equipment sources |
| Environmental Protection | State Department of     |
|                          | Environmental           |
| Agency                   | Quality                 |

Glossary of Terms

-A-

abiotic: pertaining to the absence of life.

absorb: absorption pertains to the intake of substances by the skin, respiratory tract, and gastrointestinal tract.

absorbed: held or bound in such a manner (a surface phenomenon) that the chemical is rendered inactive or only slowly available. Clay and organic colloids exhibit the property in many instances.

acid equivalent: the theoretical yield of parent acid from an ester or salt such as esters of 2,4-D or the amine salt of 2,4-D.

activator: a material added to a pesticide to increase, either directly or indirectly, its toxicity.

active ingredient: the chemical compound in a product responsible for the desired effects, or the ingredient or ingredients which are capable in themselves, of preventing, destroying, repelling or mitigating insects, fungi, rodents, weeds, or other pests in the case of an economic poison.

acute toxicity: a measure of the amount of a substance, as a single dosage or concentration, required to kill test animals of several species.

adherence: the property of a substance to adhere to stick to a given surface.

adjuvant: any component or a formulation which modified the mixture beneficially.

adulterated: by law, applied to any economic poison if its strength or purity falls below professed standard or quality as expressed on its labeling or under which it is sold or if any substance has been substituted wholly or in part for the article or if any valuable constituent of the article has been wholly or in part abstracted.

aerobic: living or functioning in air or free oxygen.

aliphatic: chemically, compounds that possess open-chain molecular structures. Aliphatic compounds are generally thought to be less phytotoxic than aromatic ones.

anaerobic: living or functioning in the absence of air or free oxygen, the opposite of aerobic.

anionic surfactant: a surface-active additive to a pesticide having a negative surface charge. The anionics perform better in cold, soft water. Most wetting agents are of this class.

annual: plant that completes its life cycle from seed in 1 year.

antidote: practical immediate treatment, including first aid, in case of poisoning.

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antioxidant: a substance capable of chemically protecting other substances against oxidation or spoilage.

API gravity: the gravity or viscosity of oils as determined by the American Petroleum Institute of Standards.

aquatic weeds: undesirable plants that grow in water.

aqueous: indicative of the presence of water in a solution.

aromatic: chemically, a compound having a closed-ring structure.

attractants: substances or devices capable of attracting insects.

auxin: plant growth hormone.

auxin herbicide: a herbicide that has an effect like a plant growth hormone.

auxiliary solvents: solvents added in addition to the principal solvent to keep a formulation as a solution under conditions of relatively low temperatures such as: methylated naphthalenes, methylated aromatic petroleum solvents, methylene chloride, methyl chloroform.

average particle size: diameter of a liquid or powder particle measured in one of four ways: the arithmetic mean diameter, the diameter of particle of average surface, the diameter of particle of average volume, or the diameter of particles of same specific surface as the powder. It should be stated which of these four possible diameters is actually measured.

-B-

bactericide: a chemical designed for killing bacteria.

band application: an application to a continuous restricted area such as along a crop row rather than over the entire field area.

basal treatment: a treatment applied to the stems or trunks or plants at or just above the ground line.

bed: (1) a narrow flat-topped ridge on which crops are grown with a furrow each side to drain off excess water or (2) an area in which seedlings or sprouts are grown before transplanting.

biennial: a plant that completes its life cycle in 2 years. The first year it produces leaves and stored food. The second year it produces fruits and seeds.

bioactivity: pertains to the property of affecting life.

bioassay: the qualitative or quantitative determination of substance by the systematic measurement of the response of living organisms as compared to measurement of the response to a standard or standard series.

biocide: synonym for pesticide.

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biological control: the use of live organisms to control a pest species.

biotic: pertaining to life.

botanical name: a scientific name made up of at least the genus and species. It is universal and more reliable than common names.

brand: the name, number, trademark, or designation applied to an economic poison of any particular description by the manufacturer, distributor, importer, or vendor thereof. Each economic poison differing in the ingredient statement, analysis, manufacture or distributor, name, number, or trademark is considered as a distinct and separate brand.

broadcast application: an application over an entire area.

brush control: control of woody plants.

brush seedling stage: a successional stage in the development of forest where vegetation is dominated by brush and/or tree seedlings.

buffer strip: a protective area adjacent to an area requiring special attention or protection. In contrast to riparian zones which are ecological units, buffer strips can be designed to meet varying management concerns.

-C-

carbamate: a salt or ester of carbamic acid ( $\text{CH}_3\text{NO}_2$ )

carcinogen: a substance or agent capable of producing cancer.

carcinogenic: the term used to describe the cancer producing property of a substance or agent.

carrier: the liquid or solid material added to a chemical compound to facilitate its field application; an inert material which when used with a toxic compound improves the physical dispersion of the toxicant.

Catalyst: a substance that speeds up the rate of a chemical reaction, but is not itself used up in the reaction.

causal organism: the organism that produces a given disease.

centigrade (C.): a thermometer scale in which water freezes at 0 degrees C. and boils at 100 degrees C. To change to degrees Fahrenheit, multiply degrees centigrade by nine-fifths and add 32. Also called Celsius (c), it is the preferred form approved by the Ninth General Conference on Weights and Measures in 1948.

chemical degradation: the breakdown of chemical substance into simpler components through chemical reactions.

chemical name: a name that indicates the chemical composition and/or chemical structure of the compound being discussed.

chemosterilant: a chemical compound capable of producing reproductive sterilization.

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cholinesterase (acetylcholinesterase): an enzyme (organic catalyst) capable of influencing the rate of hydrolysis of acetylcholine thereby regulating the activity of the nerve impulses.

chlorinated hydrocarbon: a hydrocarbon in which some of the hydrogen atoms have been replaced by chlorine atoms (a hydrocarbon contains only the elements of carbon and hydrogen.)

chromosomal: pertaining to the small bodies within a cell which occur in definite numbers in the cells of a given species. These bodies are composed of genes which control the activities of the cells.

chronic toxicity: the results produced in test animals by lifetime exposure to a dose or concentration estimated to approximate the exposure to be encountered through use of the test substance in a prescribed manner.

coloration: treatment of certain white or colorless pesticides with a coloring agent to produce a uniformly colored product not subject to change in color beyond the minimum requirements during ordinary conditions of marketing, storage, and use. Seed treatment materials are examples of pesticides which have been colored.

compatibility: the ability of protective materials to be mixed together without loss of effectiveness or damage.

compatible: two compounds are said to be compatible when they can be mixed without affecting each other's properties.

concentration: the amount of active ingredient or acid equivalent in a given volume or weight of diluent. Recommendations and specifications for herbicide concentrations should be on the basis of pounds-per-unit volume of liquid or percent by weight of solid diluents.

congenital: existing at birth, but acquired in the uterus rather than inherited.

contact herbicide: a herbicide that kills primarily by contact with plant tissue rather than as a result of translocation.

critical habitat: (1) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Endangered Species Act, on which are found those physical or biological features (i) essential to the conservation of the species and (ii) which may require special management considerations or protection, and (2) specific areas outside the geographical area occupied by the species at the time it is listed upon the determination by the Secretary that such areas are essential for the conservation of the species.

cultural resources: those fragile and nonrenewable remains of human activity occupation; or endeavor, reflected in districts, sites, structures, building, objects, artifacts, ruins, works of art, architecture, and natural features, that were of importance of human events. These resources consist of (1) physical remains, (2) areas where significant human events occurred– even though evidence of the event no long remains, and the (3) the environment immediately surrounding the actual resource. Cultural resources, including

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both prehistoric and historic remains, represent a part of the continuum of events from the earliest evidences of man to the present day.

cut-surface application: treatments made to frills or girdles that have been made through the bark into the wood of a tree.

cytological aberration: a deviation from normal cell structure of function.

-D-

decision document: a document issued subsequent to environmental analysis identifying the decisions made concerning a proposed action, the rationale used in making the decisions, and the environmental.

deflocculating agent: a material added to a suspension to prevent settling. The use of these materials, such as gelatin and milk products, has decreased as formulations with finer particle size have been developed. A substance which aids in the production or maintenance or a disposition of a solid with a liquid.

defliator or defoliant: A compound which causes the leaves or foliage to drop from the plant.

degradation: the process by which a chemical compound is reduced to a less complex compound.

deposit: synonym for spray residue: the amount of pesticide deposited per-unit-area of plant, plant part, or other surface at any given time. Initial deposit: the amount deposited initially.

dermal: of or pertaining to the skin.

dermal toxicity: the passage of pesticides into the body through the unbroken skin. Most pesticides pass through broken skin to some extent. Many are not absorbed readily unless in certain solvents. However, many, including most organophosphates, will pass through unbroken skin as technical material and in all formulations. Dermal exposure results from spillage onto skin and clothing (including gloves and other protective equipment), from drift, or from damaged or improperly maintained equipment. It is important to be aware of hazards resulting from the dermal toxicity of materials. This is the greatest hazard to people handling pesticides.

desiccant: a compound that promotes dehydration or removal of moisture from plant tissues.

detergent: a chemical (not soap) having the ability to remove soil and grime. Detergents can be used as surfactants in some pesticide sprays.

dicotyledonous: a plant having two-seed leaves or cotyledons; the broad leaf plants.

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diluent: any liquid or solid material serving to dilute or carry an active ingredient, any liquid or solid material serving to dilute an active ingredient in the preparation of a formulation.

directed application: an application to a restricted area such as a row, bed, or at the base of plants.

disease: a condition in which any part of a living organism is abnormal; the condition of a plant that is being continuously affected by some factor that interferes with the normal activity of the plant's cells or organs. Injury, in contrast, results from momentary damage.

disinfectant: a chemical or physical agent that kills or inactivates organisms on or within the plant part. In the case of seeds (seed disinfectant) (restricted usage), an agent that frees from infection by destroying the pathogen established within the plant or plant parts.

dispersing agent: a material that reduces the cohesive attraction between like particles. Dispersing the suspending agents are added during the preparation of wettable powders to facilitate wetting and suspension of the toxicants.

dissolved solvents: material dissolved in water; usually refers to material in a water sample which passes through a 0.45 mm membrane filter.

dormant: state of inhibited growth of seeds or other plant organs.

dose, dosage: quantity of a toxicant applied per unit or plant, fungus, forest product, lumber, soil or special surface.

dose ratio: ratio between successively increasing doses.

drift: the movement of air-borne particles from the intended contact area to other areas.

-E-

emulsifiable concentrate: compound produced by dissolving the toxicant and an emulsifying agent in an organic solvent. A solvent substantially insoluble in water is usually selected since water-miscible solvents have not in general proved satisfactory. Strength is usually stated in pounds of toxicant per gallon of concentrate.

emulsify: to make into an emulsion. When small drops of one liquid are finely dispersed (distributed) in another liquid, an emulsion is formed. The drops are held in suspension by an emulsifying agent, which surrounds each drop and makes a coating around it.

emulsifying agent: a material which facilitates the suspending of one liquid in another; for example, oil dispersed in water.

emulsion: a mixture in which one liquid is suspended as minute globules in another liquid; e.g., oil water.

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endangered species: plant or animal species that are in danger of extinction throughout all or a significant portion of their range.

endemic: descriptive of a disease that occurs in low incidence but more or less constantly in a given population.

endotoxin: any group of toxic substances found in certain disease-producing bacteria and liberated by the disintegration of the bacterial cell.

environmental impact statement (EIS): a formal document filed with the Environmental Protection Agency that considers significant environmental impacts expected from implementation of a major Federal action.

enzyme: one of a class of substances formed in living cells that affects the reaction rate; an organic catalyst.

epidemic: descriptive of a disease that strikes many people in a region at the same time or a disease that spreads rapidly.

epinasty: increased growth on upper surface of a plant organ or part (especially of leaves) causing it to bend downward.

epiphyte: a plant that grows upon another plant or nonliving structure, which it uses as a mechanical support but not as a food source. Some (such as Spanish moss) may harm the plants they grown on, however, by excluding light or smothering them.

erosion (soil): removal of soil from its place of origin to a point of deposition other than a stream channel.

escape: a plant on a treated area that either missed treatment or failed to respond to treatment in the same manner as other treated plants.

ester: a compound formed by reaction of an acid and an alcohol accompanied by the loss of water formed during the reaction.

evapotranspiration: the process which returns soil moisture to the atmosphere, including evaporation and plant transpiration (uptake of soil water through roots and loss of water through leaves or needles).

-F-

Fahrenheit (F): a thermometer scale that marks the freezing point of water at 32 degrees F. and the boiling point at 212 degrees F.

fetotoxin: a substance that through its chemical action can kill or injure unborn human or animal offspring.

filler: a diluent in a powdered form.

forbs: herbaceous plants; most often used pertaining to herbaceous plants eaten by wildlife.

formulation: a term used synonymously with product. It contains the active pesticide, the carrier, and other additives required to make the pesticide ready for application.

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fortified: the pesticidal properties of one product may be enhanced by fortifying with another. Herbicidal oils are frequently fortified.

fuller's earth: a silicate mineral used as an adsorbent base or dust diluent. It is flowable and possesses excellent grindability, acting as a grinding aid. Characteristics: bulk density, 20 to 38 lbs per cubic foot; pH 7; usual screen analysis, 200 325 mesh; oil adsorption, 20 to 35 percent. Characteristics of granular fuller's earth, used in granular dust formation include oil adsorption, 15 to 25 percent; usual screen analysis, 15 to 60 mesh; bulk density, 50 lbs per cubic foot.

fumigant: a chemical toxicant employed in volatile form.

fungi: all nonchlorophyll bearing thallophytes (that is, all nonchlorophyll bearing plants of a lower order than mosses and liverworts) as, for example, rusts, smuts, mildews and molds (singular fungus).

fungicidal (general use): possessing the ability to inhibit or kill fungi (restricted use): possessing the ability to kill fungi.

fungicide: a chemical that kills or inhibits fungi.

fungistatic: possessing the ability to inhibit the germination of fungus spores or the development of mycelium while in continued contact. The effect of many protective fungicides in the initial phase is fungistatic.

-G-

germicide: a substance that kills microorganisms.

gestation: the period of carrying the young in the uterus.

gpm: gallons per minute.

growth regulator: an organic substance effective in minute amounts for modifying plant processes.

-H-

hard water: water containing soluble salts of calcium and magnesium and sometimes iron. Hardness caused by bicarbonate salts of these metals is known as temporary hardness; boiling expels the carbon dioxide and converts the bicarbonate to the insoluble carbonate causing incrustation of the walls and the bottom of the container. Hardness from chlorides and sulfates of calcium and magnesium is not affected by boiling.

hazard: the probability that injury will result from use of a substance in a proposed quantity and manner.

herbaceous plant: a vascular plant that does not develop wood tissues.

herbicide: a phytotoxic chemical used for killing or inhibiting plant growth.

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highly toxic: (1) substances are considered highly toxic by law if the LD50 (Lethal Dose) of a single oral dose is 50 milligrams or less per kilogram of body weight (LD50); (2) if LC50 (Lethal Concentration) of toxicity by inhalation is 2,000 mcg or less of dust or mist per liter of air or 200 ppm or less by volume of a gas or vapor when administered by continuous inhalation for 1 hour to both male and female rats or to other rodent or nonrodent species if it is reasonably foreseeable that such concentrations will be encountered by man or (3) if LD50 of toxicity by skin absorption of 200 milligrams or less per kilogram of body weight when administered by continuous contact for 24 hours with the bare skin or rabbits or other rodents or nonrodents as specified.

hydrogen-ion concentration: a measure of the acidity of a chemical solution. The greater the concentration of hydrogen-ions (atoms of hydrogen with positive charges), the more acid the solution is. The hydrogen-ion concentration is expressed in terms of the pH of the solution.

hydrolysis: the splitting of a substance into the smaller units of which is composed by the addition of water elements. For example, when starch is heated in water containing a small amount of acid or subjected to the action of digestive enzymes, the simpler sugar, glucose, is released.

-I-

impermeable: not capable of being penetrated.

inert: relatively inactive.

inert ingredients: all ingredients which are not "active" (see ACTIVE INGREDIENTS).

ingredients: the simplest constituents of the economic poison which can reasonably be determined and reported.

insecticide: a substance or mixture of substances intended to prevent, destroy, or repel any insects which may be present in any environment.

integrated pest control (IPM): use of several techniques as one system to gain control of a pest species; i.e., fire, grazing, and biological agents. (See Bureau Manual Section 9220.)

invert emulsion: an emulsion in which oil is the continuous phase another is suspended in it.

isomers: two or more chemical compounds having the same structure but different properties.

-L-

label: all written, printed, or graphic matter on, or attached to the economic poison, or the immediate container thereof, and the outside container or wrapper of the retail package of the economic poison.

labeling: all information and other written, printed, or graphic matter attached to the pesticide or any of its accompanying containers or wrappers which is

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referred to on the label or in supplemental literature.

labile: easily destroyed.

lactation: the period during which an animal is producing milk.

latent: dormant

LC50 (lethal concentration 50 percent): the concentration which is expected to cause death in 50 percent of the test animals so treated. A means of expressing the toxicity of a compound present in air as a dust, mist, gas or vapor. It is generally expressed as micrograms per liter as a dust or mist but in the case of a gas or vapor as parts per million (ppm). The LC50 is the statistical estimate of the dosage necessary to kill 50 percent of a very large population of the test species through toxicity on inhalation under stated conditions.

LD50 (lethal dose 50 percent): a common method of expressing the toxicity of a compound. It is generally expressed as milligrams of the chemical per kilogram of body weight of the test animal (mg per kg). An LD50 is a statistical estimate of the dosage necessary to kill percent of a very large population of the test species through toxicity on inhalation under stated conditions (e.g. single oral dose of aqueous solution), or by law, the dose which is expected to cause death within 14 days in 50 percent of the test animals so treated. If a compound has an LD50 of 10 mg per kg., it is more toxic than one with an LD50 of 100 mg per kg.

leaching: movement of a substance downward to solution through the soil.

low volatile ester: an ester with a high molecular weight and low vapor pressure.

-M-

macro: a combining form meaning large.

metabolism: the chemical changes in living cells by which energy is provided for vital processes and new material is assimilated.

metabolite: a product of the chemical changes in living cells which provide energy and assimilate new material.

microfauna: microscopic forms of animal life.

microflora: microscopic forms of plant life.

microbial degradation: the breakdown of a chemical substance into simpler components by bacteria.

miscible: capability of two or more liquids to be mixed together to form a uniform mix.

Miscible liquids: tow or more liquids capable of being mixed and remaining mixed under normal conditions.

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**Morbidity:** the relative incidence of disease or the state of wasting away.

**Mutagen:** a substance that tends to increase the frequency or extent of genetic mutations (changes in hereditary material).

-N-

**natural levels:** amount of pollutants present from natural sources without human disturbances which have reached equilibrium.

**necrosis:** localized death of living tissue: i.e., death of a certain area of an organ.

**necrotic:** a term used to describe tissues exhibiting varying degrees of necrosis or dead areas or spots.

**nematicide:** a material designed to kill nematodes.

**nematodes:** a cylindrical, usually microscopic, parasitic worm which attacks animals or plants, or may be free-living in soil or water.

**no residue:** as applied to pesticides, acceptability for registration of an economic poison on the basis of the absence of a residue at harvest time on the raw agricultural product when the economic poison is used as directed.

**nonselective herbicide:** a chemical that is generally toxic to all plants.

**nontarget component or vegetation:** vegetation which is not expected or planned to be affected by the treatment.

**noxious weed:** a weed arbitrarily defined by law as being especially undesirable, troublesome, and difficult to control. Definition of the term noxious weed varies according to legal interpretations.

-O-

**oral toxicity:** the passage of material into the body through the mouth. This exposure may result indirectly from contaminated hands or food.

**organic:** a large group of chemical compounds that contain carbon.

**organic acids:** acids containing only carbon, hydrogen and oxygen. Among the best known are citric acid (in citrus fruits) and acetic acid (in vinegar).

**organogenesis:** the origin and development of organs in plants and animals.

**organophosphates:** as applied to pesticides, phosphate esters, all of which possess the property of inhibiting cholinesterase or being converted to a compound capable of inhibiting cholinesterase.

**osmosis:** the transfer of materials through a semi-permeable membrane that separates two solutions, or between a solvent and a solution that tends to equalize their concentration. The walls of living cells are semi-permeable membranes and much of the activity of the cells depends on osmosis.

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oximes: chemical compounds characterized by the general formula  $R - CH = NOH$

-P-

particulates: finely divided solid or liquid particles in the air or in an emission; includes dust, smoke fumes, mist, spray, and fog.

parts per million: a way of expressing amounts, especially of trace minerals in diets or foods. Examples of how small a part per million is: it is equal to 1 pound in 500 tons, 1 inch in about 16 miles, or 1 cent in \$10,000.00.

pathogen: the infective agent causing a disease, e.g., a fungus, bacterium, or virus.

pest: each of the following forms of plant and animal life and viruses is declared to be a pest under the Federal Insecticide, Fungicide, and Rodenticide Act when it exists under circumstances that make it injurious to plants, humans, domestic animals, other useful vertebrates, useful invertebrates, or other articles or substances: mammals; birds, fishes; amphibians, reptiles; aquatic and terrestrial invertebrates; roots and other plant parts growing where not wanted; and viruses other than those on or in living humans or other animals.

pesticide: (1) any substance or mixture of substances which is normally used in preventing, destroying, or repelling mammals, fishes, birds, insects, reptiles, or other fauna, and plants, which are pests and (2) any use as a plant regulator, defoliant, or desiccant. The term pesticide includes, but is not limited to, the following: acarides, insecticides, nematocides, fungicides, herbicides, defliants, desiccants, chemosterilant, plant regulators, rodenticides, and vertebrate and invertebrate animal poisons, or repellants.

petroleum distillate: kerosene.

phenoxy herbicides: chemicals having herbicidal properties and a chemical structure consisting of a phenyl ring attached to an oxygen, which is in turn attached to a carboxylic group. Examples of phenoxy herbicides are 2,4-D, MCPA, 2,4,5,- TP (Silvex), 2,4-DB, Herbon, and Sesone.

photodecomposition: the breakdown of a substance, especially a chemical compound, into simpler components by the action of radiant energy.

photosynthesis: formation of carbohydrates in the tissues of plants exposed to light.

phytotoxic: possessing the ability to kill or injure higher plants or their plant parts.

plant regulator: a substance intended to alter the behavior of ornamental crops or plants or the produce thereof through physiological rather than physical action. The term does not include substances intended solely for use as plant nutrients or fertilizers.

postemergence: after the emergence of a specified weed or crop.

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potentiate: to augment, increase, or improve the activity, utility or effectiveness of a compound for a given purpose.

ppb: parts per billion, e.g., 1 ppb might refer to one gallon of herbicide in one billion gallons of water.

ppm: parts per million.

pmw: parts per million by weight.

preemergence: before the emergence of specified weed or crop.

preplanting: any time before the crop is planted.

propellants: in pressurized insecticide products, the material producing the force required to dispense the active ingredient from the container, such as propellant 11 (trichloro monofluoro methane) or propellant 12 (dichloro difluoro methane).

protective value: ability to prevent infection of the plant or plant part.

psi: pounds per square inch (pressure).

putrefaction: the decomposition of proteins caused by microorganisms under anaerobic conditions, resulting in the production of incompletely oxidized compounds, some of which are foul smelling.

-R-

radioactive: giving off atomic energy in the form of radiation, such as in alpha, beta or gamma rays.

radioisotopes: one of the broad classes of elements capable of becoming radioactive and giving off atomic energy. Some radioisotopes occur naturally; others are produced artificially. The work is synonymous with radioactive elements and includes tracer elements.

rate: rate refers to the amount of active ingredient or acid equivalent of a pesticide applied per unit area (such as one acre). Rate is preferred to the occasionally used terms dosage and application.

release: to free trees from competition by cutting or otherwise removing or killing nearby vegetation and branches. Usually applied to young stands.

residue: that which remains; more specifically, that amount of an agricultural chemical that remains on the harvested crop.

resistant species: one that is difficult to kill with a particular herbicide.

respiratory toxicity: intake of pesticides through air passages into the lungs. Pesticides may reach the lungs as a vapor or as extremely fine droplets or particles. Most compounds are more toxic when inhaled by this route. Safety equipment is essential to protect the pesticide handler or applicator from the hazards of respiratory exposure wherever it is recommended on the label.

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rodenticide: a substance or mixture of substances intended to prevent, destroy, or repel rodents.

-S-

safener: a material added to a pesticide to eliminate or reduce phytotoxic effects.

salt: one of a class of compounds formed when the hydrogen atom of an acid radical is replaced by a metal or metal-like radical. The most common salt is sodium chloride, the sodium salt of hydrochloric acid. Other metal or metal-like salts in food may include phosphorus, calcium, potassium, sodium, magnesium, sulfur, manganese, iron, cobalt, and zinc. They may be present as chlorides, sulfates, phosphates, lactates, citrates, or in combination with proteins as in calcium caseinate.

scoping: the process by which significant issues relating to a proposal are identified for environmental analysis. Scoping includes eliciting public comment on the proposal, evaluating concerns, and developing alternatives for consideration.

selective pesticide: a chemical that is more toxic to some species (plant, insect, animal, microorganisms) than to others.

sensitive species: species not yet officially listed, but which are undergoing a status review or are proposed for listing according to Federal Register Notices published by the Secretary of the Interior or Secretary of Commerce, or according to comparable State documents published by State officials.

sensitivity level(s): estimates of levels of public concern for scenic quality. Sensitivity levels (high, medium, or low) are based upon standard Bureau criteria (BLM Manual 8400).

seral (successional) stage: the relatively transitory plant communities within an orderly process of plant community change.

site preparation: any action taken prior to reforestation efforts (natural or artificial) to create an environment which is favorable for survival of suitable trees during the first growing season. This environment can be created by altering ground cover, soil, or microsite conditions; using biological, mechanical, or manual clearing; prescribed burning; herbicides or a combination of methods.

slurry: a watery mixture or suspension of an insoluble pesticide.

soil application: application of a chemical primarily to the soil surface rather than to vegetation.

soil incorporation: mechanical mixing of the pesticide with the soil.

soil injection: mechanical placement of the pesticide beneath the soil surface with a minimum of mixing or stirring.

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soil sterilant: a chemical that prevents the growth of plants, microorganisms, etc., when present in the soil. Soil sterilization may be temporary or relatively permanent, depending on the nature of the organism being controlled.

spot treatment: the application of a pesticide to selected individual plants or animals.

spray drift: the movement of airborne spray particles from the intended application area.

spreader: substance which increases the area that a given volume of liquid will cover on a solid or on another liquid.

sticker: a material added to a pesticide to increase tenacity rather than to increase initial deposit.

subacute toxicity: results produced in test animals of various species by long-term exposure to repeated doses or concentrations of a substance.

surfactant: a material which facilitates and accentuates the emulsifying, dispersing, spreading, wetting and other surface-modifying properties of the formulations.

susceptible species: a organism that is killed by moderate application rates of a given pesticide.

suspension: a system consisting of very finely divided solid particles dispersed in solid, liquid, or gas.

syndrome: symptoms characterizing a particular abnormality.

synergism: the phenomenon which results in a cooperative action of discrete agents so that the total effect is greater than the sum of the two components taken separately.

synthesis: a coming together to two or more substances to form a new material.

systemic: a term used to describe certain pesticides that function by entering and becoming distributed within the plant as opposed to the pesticides that function by contact with the plants surface.

-T-

target species: plant species of competing vegetation which is controlled in favor of desired species.

tenacity: synonym for adherence; the resistance of a pesticide deposit to weathering as measured by retention.

tenacity index: a ratio of the residual deposit over the initial deposit when subjected to prescribed washing techniques.

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teratogen: a substance tending to cause developmental malformations in unborn human or animal offspring.

threatened species: plant or animal species that are not presently in danger of extinction, but are likely to become so within the foreseeable future through all or a significant portion of their range.

tolerance: the maximum amount of a pesticide chemical that may remain on a raw agricultural commodity. This amount, by law, is established by a regulation adopted by the Environmental Protection Agency either on the initiative of the Administrator or request of an interested person.

topkill: the death or dieback of the exterior portion of brush or tree crowns.

toxicant: an agent capable of exhibiting toxicity: a poison.

toxicity: the capacity of a substance to produce injury.

toxicity by skin absorption: toxicity resulting from exposure to a compound by continuous contact with the bare skin.

toxicity on inhalation: by law, toxicity resulting from exposure to a dust, mist, gas or vapor by continuous inhalation for 1 hour by both male and female rates or other rodent or nonrodent species.

toxic threshold: the point at which a substance becomes poisonous to an organism.

tracer element: a radioactive element used in biological and other research to trace the fate of a substance or follow stages in a chemical reaction, such as the metabolic pathway of a nutrient or growth formations in plants or animals. Radioactive elements that have proved useful for tracer work in nutrition research are carbon 14, calcium 45, cobalt 60, strontium 90, and phosphorus 32. Carbon 14 is used widely in studies of fat and sugar metabolism and cholesterol formation.

translocated pesticide: one that is moved within the plant from the site of entry.

transpiration: the process by which plants take up moisture from the soil through their root systems and give off moisture to the air through their leaves.

-V-

vapor drift: the movement of herbicidal vapors from the area of application.

vapor pressure: the property which causes a chemical compound to evaporate.

vector: a carrier such as an insect that carries and transmits pathogen.

viscosity: a property of fluid that determines whether it flows readily or resists flow. A pure liquid at a given temperature and pressure has a definite viscosity. Viscosity of liquids usually increases with a decrease in temperature. Thus, sugar syrups are thicker when they are cold than when heated.

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volatile: a compound is said to be volatile when it evaporates (changes from a liquid to a gas) at ordinary temperatures on exposure to air.

-W-

water quality: the combined physical, chemical, and biological characteristics of water bodies.

weed: a plant which, due to certain characteristics or due to its presence in certain areas, is undesirable.

weed control: the process of limiting weed infestation so that crops can be grown profitably or other operations can be conducted efficiently.

weed eradication: the complete elimination of all live plants, plant parts, and seeds of a weed infestation from an area.

wettable powder: a solid formulation which, in addition to water, forms a suspension used for spraying. It is prepared by adding water to the formulation.

wetting agent: a material which reduces the contact angle of a liquid on a given surface. Limited to wetting pesticides which spread toxicant on leaves or other surface, a compound which when added to a spray solution causes it to contact plants surfaces more thoroughly.

-Z-

zero tolerance: no detectable amount of the pesticide may remain on the raw agricultural commodity when it is offered for shipment.

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DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
Bureau of Indian Affairs  
National Park Service

PLAN FOR TRAINING AND CERTIFICATION OF PESTICIDE  
APPLICATORS

## H-9011-1 - CHEMICAL PEST CONTROL

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## INTRODUCTION

Public Law 92-516, the Federal Environmental Pesticide Control Act of 1972, provides that the Administrator, U.S. Environmental Protection Agency (EPA), "prescribe standards for certification of applicators of pesticides." Regulations that were promulgated to implement the Act require that Federal Agency applicators of restricted use pesticides obtain appropriate State certification or participate in the Government Agency Plan (GAP).

Because of the termination of the Federal Working Group on Pesticide Management, it is no longer the intent of EPA to certify or qualify Federal employees under a single GAP. Instead, EPA has decided to change the Federal Employee certification from GAP to individual agency plans. 42 FR 41907 (August 19, 1977).

This document has been prepared in order to gain the approval of EPA for the following training and certification plan for the Bureau of Land Management (BLM), National Park Service, and the Bureau of Indian Affairs personnel. Henceforth known as the DOI Bureau in this plan.

## I. RESPONSIBILITIES AND STANDARDS

### A. Departmental Responsibility

Overall responsibility for development, implementation, and surveillance of this plan shall rest with the DOI Agencies under the guidance of the Department of the Interior (DOI).

The functions and responsibilities of the DOI Agencies in pesticide applicator certification and other aspects of the pest management program are set forth in Appendix 1, DOI Manual 517 DMI. This Manual Section contains the DOI established policy guidelines for supervision, surveillance, control operations, methods, materials, training, certifications, safety, record keeping, and reporting. Details and specific guidelines to implement the requirements are issued by DOI in the form of Manual sections. BY virtue of these Manuals, compliance on the part of the DOI Agencies is mandatory.

### B. Bureau Responsibility

1. Policy. The Director of each individual agency is responsible for pesticide programs on specific public lands under its jurisdiction. Policy guidelines for supervision, surveillance, control operations, materials, methods, training, certifications, safety, record keeping, and report are provided in Appendix A of this Plan.

2. Certification. The local manager of the DOI Agency will select and recommend personnel of his/her District for applicator training. With the concurrence of the DOI Agency, Director, this person will be scheduled for training. At the completion of the training a comprehensive written test will be administered by the DOI Manager.

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The test results will be reviewed by the responsible Washington Office, DOI Agency, Manager in charge of the pesticide training program.

The minimum passing score will be 70 percent. The reviewing official will recommend to the Director, DOI certification of the individual if test results are satisfactory. The certification, if approved, will be issued by the Washington Office and forwarded to the local manager for distribution to the DOI employee.

The Washington Office, serves as a consultant body on pest management programs, provides liaison with other Federal and State agencies in these matters and provides guidance to the Field offices on standards for pesticide applicator competency. The DOI Agency shall have the responsibility for continuous monitoring of the plan and for insurance of strict compliance with the requirements and intent of the plan.

The DOI personnel with responsibilities where this certification plan does not satisfy specific needs due to economic, specialty, and other criteria, may comply with an EPA approved State or tribal plan for certification and training after approval from the Washington Office, DOI Agency. A State certification is only valid for that State in which the certification is granted. A tribal plan is only valid for the reservation in which it was issued and does not pertain to BIA employees.

3. Funding. The individual Agency will fund the plan.

C. DOI/State Regulatory Interaction

1. Cooperation in Abating Environmental Pollution. DOI agencies will cooperate with the Administrator, EPA, State, interstate, and local agencies in the prevention, control, and abatement of environmental pollution caused by pesticide use. A report of instances of misuse or falsification of records by non-DOI personnel will be sent to the appropriate State and EPA regional official.

2. Compliance with Standards and Regulations. In accordance with guidelines as may be issued by the Administrator, EPA, the DOI agencies will provide to the Administrator and to the State, interstate, and local agencies such information as is necessary to determine compliance with State substantive standards and limitations and with Federal regulations and guidelines which affect pesticide use. Nothing in this plan to require EPA approved tribal plans to comply with State requirements.

3. Environmental Assessments and/or Impact Statements. Environmental assessments (EA's) and/or impact statements (EIS's) are prepared on all pesticide programs. EIS's are made available always to States, and tribal organizations and EA's are available upon request.

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4. Adherence to State Standards. DOI Agencies intend and desire to cooperate with individual States by adhering to substantive standards which exceed or are additional to those established in this plan. DOI is responsible for all pest management program activities within their respective DOI Agencies in establishment of policy, planning, and funding of programs.

5. Resolution of DOI/Agency/State Discrepancy. If a State should decide that a given substantive standard is more stringent than or is additional to standards established in this plan, it should notify the agency and request compliance.

The DOI Agency will forward all such notifications to the Administrator, EPA, immediately and, as soon as possible thereafter, will forward its opinion as to whether the standard is substantive or procedural in nature. It is understood that the Administrator, EPA, in cases of disagreement between the DOI Agency and a State, will undertake liaison between the affected parties and mediate any such conflicts.

#### D. Legal Authority and Qualified Personnel

1. Applicable Directives and Regulations. Instructions for compliance with the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (PL 92-516, hereafter referred to as FIFRA), is provided to all Offices by Departmental Manual DM 611.1.

2. Grounds for Denying, Suspending, and Revoking Certification. Any DOI employee who violates any provision of FIFRA or falsifies records under this plan may have his DOI certificate denied, suspended, or revoked. The responsibility for revocation action rests with the Director of the DOI Agency involved upon recommendation from the State Director.

3. Provisions for Right-of-Entry Consent. During normal working hours or at other times after having given advance notification, appropriate Federal officials and State certification authorities may enter DOI Agency lands and offices. These authorized personnel may review the agency certified pesticide applicator's pest management methods and procedures and may inspect and sample any pesticide record, device, container, product apparatus of equipment used in pest management programs.

4. Provisions Requiring Certification for who may Apply Pesticides. No general use or restricted use pesticides (as classified by EPA) are to be applied except by or under the direct supervision (as defined in 40 CFR 171.2(bb)) of certified applicators after prior approval from the Washington Office. Where contractors are utilized, the DOI Agency will assure that they hold valid certification in the State where application will occur and adequate liability insurance for personal injury and damage to property as required.

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E. Records and Reports

1. Records. Record keeping and reporting procedures will be used to provide management personnel an opportunity to review the pesticides being employed in control programs, the methods of application, the amounts and dosages used, the areas treated, and any other information that is pertinent to the conduct of the program. Certified applicators will maintain records of restricted use pesticide applications (as classified by EPA) for a period of 2 years. The contents of the records will be as specified in 40 CFR 171.7(b)(1)(iii)E.

2. Reports. Annual reports on the certification of applicators and activities related to restricted pesticide use will be submitted to the Administrator of the EPA as requested. The report will contain information outlined in 40 CFR, and will be based on the activities of the fiscal year preceding the submission date of March 31. Other reports will be submitted as required by the Administrator.

F. Program Review

Each DOI Agency shall prepare and submit to the appropriate official, a detailed pest control proposal for review prior to application. Information from this report will be available for data processing and is retrievable for management purposes. Close control of pesticide uses and pest management activities is maintained through on-site annual reviews of programs, monitoring of all proposed pest control operations reports, review of commercial pest control contracts, and review of pesticide and pesticide dispersal equipment procurement to ensure that the program is as modern, safe economical, and efficient as possible. Construction contracts and major report projects are reviewed to ensure that appropriate pest management requirements are included. Monitoring for safety and efficacy is accomplished by personnel who are trained in the hazards of pesticide. These professional pest management personnel (range conservationist, foresters, entomologists, and wildlife manager) shall meet at various locations as needed to review pesticide application.

II. TRAININGA. General Conformity to Standards

The DOI plan for certifying applicators requires that any pesticides must be applied by certified applicators or under the continuing supervision of a certified applicator. Training and certification of pesticide applicators are considered as the most essential elements of the DOI plan. High standards assure that pest control supervisory and operator personnel have a high level of competency to apply materials effectively and safely.

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1. Commercial Applicators. Applicators will be certified in the following categories as listed in 40 CFR, Section 171.3:

- a. Agricultural Pest Control – Plant
- b. Forest Pest Control
- c. Ornamental and Turf Pest Control
- d. Aquatic Pest Control
- e. Right-of-Way Pest Control
- f. Industrial, Institutional, Structural and Health-Related Pest Control
- g. Public Health Pest Control
- h. Animal Pest and Disease Control
- i. Demonstration and Research Pest Control

If certification in other categories proves to be required, categories will be added or certification will be accomplished in cooperation with the State or tribe in which the DOI Agency Office is located. In the latter event, DOI personnel will complete general standard training under the DOI plan.

The estimated number of personnel expected to receive DOI certification in each category is listed below in order that the impact on other State and Federal training areas can be assessed.

- a. Agricultural Pest Control – Plant (250)
- b. Forest Pest Control (90)
- c. Ornamental and Turf Pest Control (38)
- d. Aquatic Pest Control (50)
- e. Right-of-Way Pest Control (28)
- f. Industrial, Institutional, Structural and Health-Related Pest Control (25)
- g. Public Health Pest Control (20)
- h. Demonstration and Research Pest Control (40)

NOTE: Many applicators will hold certification in more than one category.

B. Standards of Competency for Certified Applicators

The standards of competency required by the DOI will equal or exceed those stated in 40 CFR, Section 171.4 and 171.6. These standards require all commercial applicators to demonstrate practical knowledge of the principles and practices of pest control and safe use of pesticides and the supervisory requirements set by the Federal and State agencies. Areas of competency include labels and labeling, equipment, application techniques, and laws and regulations. In addition the applicator must meet standards of competency in areas related to their specific activities.



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### C. Requirement for Written Examinations

Written examinations will be required to determine competency in general and specific standards as outlined in 40 CFR, Section 171.4 and 171.6 for each category of certification. Testing shall be based on examples of problems and situations appropriate to the particular category or subcategory of the applicator's certification and the areas of competency outline in the aforementioned categories.

Examinations may include true-false, multiple choice, completion and problem-type questions. Examinations may have been prepared by the WO, BLM and submitted with this plan.

In addition to written examination, the responsible Manager will attest to the competency of the applicant after an on-the-job demonstration of competency.

### III. THE TRAINING PLAN

#### A. General

DOI considers training of its applicator to be the most important portion of this plan. In developing the plan as later specified, the subject to be covered and the number of hours to be devoted to the subject is considered the minimal amount suitable for DOI certification training and is not limited to these amounts of time.

Due to the lack of training facilities, it is the intent of the Department to develop Memorandum of Agreements with other Federal Agencies, or contracts with State or private institutions that have suitable training facilities to carry out these training plans. Suitable facilities must include instructional handouts, laboratory materials for identification of pests, and actual or simulated equipment suitable for training and demonstrations.

DOI applicators will be required to satisfactorily complete training and successfully pass any examination given as part of the training program. In addition, they must successfully pass the written DOI Agency examination prior to certification. Also, demonstration of on-the-job competency is required prior to achieving certification.

The DOI pesticide applicator training will consist of attendance at formal courses, correspondence courses, and practical on-the-job training. The courses conducted by the individual training components leading to certification of pesticide applicators consist of both classroom and practical training.

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Subject areas covered in the comprehensive courses include biology and identification of organisms, surveillance techniques, operation and maintenance of dispersal equipment, formulation and application of pesticides, safety, toxicology and ecology, proper storage and disposal methods.

## B. Training Methods

A training plan for the certification of Department of the Interior employees has been developed. The guidelines of the U.S. Environmental Protection Agency have been followed in the formulation of this plan. Proposed curricula have been developed and are hereby presented for the following categories:

- Agricultural Pest Control – Plant
- 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
- Animal Pest and Disease Control
- Demonstration and Research Pest Control

The standards presented here are considered minimal and may be expanded to meet substantive standards of the States in which the public and Indian lands are located.

The Training and Certification Plan requires pesticide applicators to successfully complete the general and specific standard training and examination prior to being considered for certification in any category. Completion of either phase of training does not result in certification, but merely qualifies the individual for additional training leading to certification. For example, if an individual desires certification in Forest Pest Control he must successfully complete the 30- hour core phase and meet the requirements specified for the category. Furthermore, his on-the-job competence will be observed and evaluated. He will be recommended for certification only after meeting all of the aforementioned requirements.

Many of the pesticide application techniques are similar, or identical, for different categories. Therefore, certain categories will be grouped to facilitate training. Agricultural-Plant, Industrial-Health Related and Public Health categories will be covered in one block of instruction of 10 hours. Forest, Ornamental and Turf, Aquatic, and Right-of-Way categories will form another block of 10 hours.

### C. Standards of Certification

1. General Standards for the Core Phase. DOI employees desiring certification in any category identified in 40 CFR, Section 171.3 must demonstrate competency in standards as described in 40 CFR, Section 171.4(b) and 171.6. DOI employees (except professional pest management personnel desiring certification) shall attend a mandatory core training program of not less than 30 hours (Enclosure 1). Training will be provided in but not limited to the following areas: labeling, pesticide calculations, safety, environmental effects of pesticides, general entomology and pest identification, pesticides, equipment and application techniques, integrated pest management, laws and requirements, records and reports.

2. Specific Standards – Categories. BLM employees desiring certification must demonstrate competency in specific standards as described in 40 CFR Section 171.4(c). Additional standards of competency required by DOI are described as follows:

a. Agricultural Pest Control.

Plant: DOI is involved in the application of pesticides to rangelands and has a need to certification in this category. Individuals must have completed the core phase plus 10 hours of training in vegetation practices, plant biology and physiology, mode of action of herbicides, and integrated pest management.

b. Forest Pest Control

Individuals to be certified in this category must successfully complete the core phase. In addition, they must attend a training program of not less than 10 hours covering, but not limited to, the following areas: vegetation and turf management practices, fertilization programs, plant biology and physiology, classification and mode of action of herbicides, biology and control of ornamental and turf pests and diseases, weed control, and integrated pest management programs.

c. Ornamental and Turf Pest Control

Individuals to be certified in this category must successfully complete the core phase. In addition they must attend a training program of not less than 10 hours covering but not limited to the following areas: vegetation and turf management practices, fertilization programs, plant biology and physiology, classification and mode of action of herbicides, biology and control of ornamental and turf pests and diseases, weed control, and integrated pest management.

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d. Aquatic Pest Control

Individuals to be certified in this category must successfully complete the core phase. In addition, they must attend a training program of not less than 10 hours covering but not limited to the following areas: vegetation and turf management practices, plant biology and physiology, identification and control of aquatic weeds, classification and mode of action of herbicides, and integrated pest management.

e. Right-of-Way Pest Control

Individuals to be certified in this category must successfully complete the core phase. In addition, they must attend a training program of not less than 10 hours covering but not limited to the following areas: vegetation and turf management practices, plant biology and physiology, identification and control of weeds, classification and mode of action of herbicides, and integrated pest management.

f. Industrial-Health Related and Public Health Pest Control

Individuals to be certified in this category must successfully complete the core phase. In addition, they must attend a training program of not less than 10 hours covering but not limited to the following areas: vegetation and turf management practices, plant biology and physiology, classification and mode of action of herbicides, identification and control of individual, institutional, structural and public health related pests and diseases, and integrated pest management programs.

g. Animal Pest and Disease Control

Individuals to be certified in this category must meet the standards established by Veterinary Service, Animal Health Program, Animal and Plant Inspection Service U.S.D.A. This includes, but is not limited to epidemiology, identification of insects and parasites, selection, formulation and treatment of animals, and toxicology of pesticide poisoning.

h. Demonstration and Research Pest Control.

Individuals to be certified in this category who hold college degrees (BS, MS, Ph D) in entomology or other pest management fields may not be required to attend mandatory training courses, but must meet the same standards of certification as detailed in 40 CFR, Section 171.4(b) and 171.6. In addition, they shall meet the specific standards required for all categories applicable to their particular activity (40 CFR, Section 171.4(c)). Regardless of training, all applicators must complete written examinations and on job training prior to receiving certification.

### 3. Standard for Determination of Competency of Certified Applicators

#### a. Written and Performance Testing

Competence in the use and handling of pesticides shall be determined on the basis of written examinations, performance testing, and on-the-job evaluation. Written and performance testing will be conducted for each category in which certification is desired. Testing will cover but not be limited to those areas outlined in 40 CFR, Section 171.4 and 171.6. Samples of test questions for each category are attached as Appendix B. An individual must attain a score of 70 percent or higher to pass the written and performance testing phases.

#### b. On-the-Job Evaluation as a Criterion for Certification

Individuals successfully meeting the testing requirement above will be eligible for certification. Final decisions as to competency will be based on on-the-job evaluations as well as successful testing. Individuals to be certified will be issued a DOI certificate of competency.

## IV. CERTIFICATION DOCUMENTS AND PROCESSES AND RECERTIFICATION

### A. Certification Acceptance and Documents

1. Determination of Status of Current Certified Applicators. All applicators desiring certification under the DOI program will be required to take written examinations for certification under the standard of FIFRA as described in paragraph III.3.a. and b. Further, all applicators who have not undergone DOI/BLM training will be required to complete recertification training programs as described in IV.B.4.

Copies of complete examinations will be supplied upon request.

#### 2. Private Applicators – Not applicable.

3. Certification Documents. In addition to the certification document a wallet-size card bearing identical information as the certificate will be carried by the certified applicators while application or supervision of the application of pesticide is being performed.

4. Other Certification Acceptance. Other Federal Agencies, State agencies, and commercial firm's contractors who wish to perform pest control operations on public lands under cooperative agreement or contracts must present evidence of valid, current State, Tribal, or Federal certification or the State or Reservation in which the work is to occur.

## H-9011-1 - CHEMICAL PEST CONTROL

B. Maintenance of Plan1. Provisions to Assure that Certified Applicators Comply with Standards.

Certification shall be valid for a period not to exceed 3 years. At each DOI Manager will conduct annual reviews of pest management activities (1) to assure that certified personnel are current, (2) to evaluate competency of certified personnel, and (3) to recommend earlier recertification if competency is lax. Pest management professionals will also recommend those changes which would result in safer pest management operations, and advise on pesticides, application techniques, and scheduling which would reduce risks.

2. Assurance that Certified Applicators Continue to Meet Requirement of Changing Technology. The DOI Manual and the implementing regulations of the DOI direct that appropriate educational programs be conducted on changes in techniques resulting from development of new and improved methods, materials, and equipment. Training is normally conducted in conjunction with periodic reviews mentioned in paragraph B.1.

Training courses are supplemented by the preparation and distribution of local agency technical memoranda by the DOI professional, and by scheduled yearly workshops which cover a variety of subjects and serve as a source of information for field personnel on new methods and materials for pest control. Quality control of training and performance is ensured by the continuous review of instructional programs and visits to Offices by DOI professionals to observe on-the-job performance. Pest management professionals utilize the State Cooperative Agreements and information, a staff function of the State Office, to aid them in keeping abreast of current information pertaining to the field of pest management. Such information is of great value in planning DOI pest management programs to improve efficiency and safety in the application of pesticides. This is accomplished by attendance of employees at professional meetings, cooperative extension meetings, and issuance of information memoranda to the Field Offices.

3. Cancellation Procedures. Upon indications of noncompliance with the plan or where competency is lax the Manager may immediately suspend a certification. A report of the action will be forwarded to the DOI Washington Office for review. The Director of that agency may revoke, continue suspension pending retraining, or reinstate certification as appropriate.

Any employee having his/her certification revoked is not eligible for recertification.

4. Recertification. Certification will be valid for a period not to exceed 3 years, however, recertification may be required earlier, if needed. Recertification will require the taking and passing of a written examination and redetermination of on-the-job competence. Training programs will be established to update pest control technology and review pertinent legal and administrative material. Recertification programs normally will be 2-3 days in duration and will be conducted by professional pest management personnel on a local needs basis.

## H-9011-1 - CHEMICAL PEST CONTROL

Annual inspection of pest control activities will be performed by professional pest management personnel, at which time competency of certified employees will be evaluated and recommendation for early recertification will be made, as necessary.

H-9011-1 - CHEMICAL PEST CONTROL

Enclosure 1

MINIMUM GENERAL STANDARDS FOR THE CORE PHASE

(i) Label & Labeling Comprehension (3 hrs)

Pesticide Calculations

Slide series: Principal Provision of Amended FIFRA – prepared by  
EPA region office IX

(ii) Safety (3 hrs)

Pesticide Toxicology  
Pesticide Safety – Protective Equipment  
Pesticide Storage and Disposal

Slide series: Pesticide Worker Safety – prepared by California  
Department of

Food & Agriculture

Films: Health Hazards of pesticides

(iii) Environment (4hrs)

Principles of Ecology  
Pesticides in Man and the Environment  
Alternatives to Pesticides  
Pollution

Films: Endless Chain  
Pesticides & Wildlife

(iv) Pests (2 hrs)

Introduction to Entomology  
Introduction to Lab

Films: Rival World

(v) Pesticides (4 hrs)

Classification and Characteristics of Pesticides

Films: Insecticides, Forms & Safety  
Herbicides, Fundamentals of Applications  
Pesticides in Focus



H-9011-1 - CHEMICAL PEST CONTROL

MINIMUM GENERAL STANDARDS FOR THE CORE PHASE

(vi) Equipment (7 hrs)

Phase I - Equipment Calibration & Maintenance  
Phase II – Equipment Demonstration & Operation

A. Small Equipment

Compressed air sprayers  
Backpack sprayers/dusters  
Aerosol Generators  
Other miscellaneous small equipment

B. Heavy Equipment

Hydraulic sprayer  
Aerosol Generators (including ULV)  
Mist and dust machines

(vii) Application Techniques (3 hrs)

Principles of Pest Control

(viii) Laws & Regulations (2 hrs)

FIFRA, as amended  
Federal and State supervisory requirements

(ix) Records, Reports and Program Planning (2 hrs)

Total Hours (30)

H-9011-1 - CHEMICAL PEST CONTROL

Enclosure 2A

MINIMUM SPECIFIC STANDARDS FOR THE CATEGORIES

Agricultural Plant Pest Control

|                                             |              |
|---------------------------------------------|--------------|
| Vertebrate Pest Control                     | 2 hrs        |
| Biology, ID, and Control Invertebrate Pest  | 2 hrs        |
| Biology, ID, and Control of Vegetative Pest | 4 hrs        |
| Integrated Pest Management                  | <u>2 hrs</u> |

TOTAL 10 hrs.

H-9011-1 - CHEMICAL PEST CONTROL

Enclosure 2B

MINIMUM SPECIFIC STANDARDS FOR THE CATEGORIES

Forest Pest Control  
Ornamental and Turf Pest Control  
Aquatic Pest Control  
Right-of-Way Pest Control

|                                                                 |       |
|-----------------------------------------------------------------|-------|
| Introduction to Vegetation Management<br>(non-chemical control) | 2 hrs |
|-----------------------------------------------------------------|-------|

|                            |       |
|----------------------------|-------|
| Plant Biology & Physiology | 2 hrs |
|----------------------------|-------|

|                                                      |      |
|------------------------------------------------------|------|
| Classification, Use and Mode of Action of Pesticides | 1 hr |
|------------------------------------------------------|------|

|                               |      |
|-------------------------------|------|
| Aquatic Weeds: ID and Control | 1 hr |
|-------------------------------|------|

|                            |       |
|----------------------------|-------|
| Integrated Pest Management | 2 hrs |
|----------------------------|-------|

|                        |              |
|------------------------|--------------|
| Herbicide Use Problems | <u>2 hrs</u> |
|------------------------|--------------|

TOTAL 10 hrs

H-9011-1 - CHEMICAL PEST CONTROL

Memorandum from Office of the Secretary Establishing Pesticide-  
Use Proposal Criteria for the Office of Environmental Project Review

## 9011- CHEMICAL PEST CONTROL

.01 Purpose. This Manual Section sets forth the Bureau of Land Management (BLM) policy, responsibilities, and guidance for conducting chemical pest control program under an integrated pest management approach on lands administered by the BLM.

02. Objective. The objective is to provide procedures and guidelines for planning and implementing the use of pesticides in an integrated pest management approach, and conducting assigned responsibilities for management of a chemical pest control program on lands administered by the BLM so as to assure maximum protection to the environment and human health.

03. Authority.

A. Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701-1712) - The act states that the BLM must manage public lands according to the principles of multiple use and sustained yield. These principles are further qualified in the act by the statutory duty that the BLM prevent unnecessary degradation of the public lands.

B. Public Rangelands Improvement Act of 1987 ( 43 U.S.C. 1901 et seq.) - The act states the BLM must manage, maintain, and improve public lands suitable for livestock grazing so that they become as productive as feasible.

C. The Federal Insecticide, Fungicide, and Rodenticide Act, as amended (Public Law (P.L.) 92-516) - The act requires all pesticide to be registered with the Environmental Protection Agency (EPA). The Federal Environmental Pesticide Control Act of 1972 amends the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, and requires the basis for registration to be whether or not a pesticide causes unreasonable adverse effects on man or the environment.

## 9011- CHEMICAL PEST CONTROL

The act also makes it illegal to use a registered pesticide in a manner inconsistent with its labeling. It also requires the certification of all personnel who supervise or apply restricted pesticides. The degree of certification must meet the classification requirements for proper storage, transportation, or disposal of pesticides. The responsibility for administering the act is vested in the EPA.

D. Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 11001), also known as the Emergency Planning and Community Right-to-know Act - Provides that workers must be given information such as Material Safety Data Sheets and Technical Data Sheets on pesticides that they will be handling or applying.

E. Carlson Foley Act of 1968 (P.L. 90-583) - Provides for the authorization for reimbursement of expenses to State or local agencies for weed control on Federal lands.

F. Federal Noxious Weed Act of 1974 (7 U.S.C. 2801-2813), as amended by Sec. 15, Management of Undesirable Plants on Federal Lands, 1990 - This bill requires that each Federal Agency: (1) Designates a lead office and person trained in the management of undesirable plants; (2) Establish and fund an undesirable plant management program; (3) Complete and implement cooperative agreements with State agencies; and (4) Establish integrated management systems to control undesirable plant species.

G. Departmental Manual 517 - Prescribes the Department's guidance for the use of pesticides on the lands and waters under its jurisdiction and for compliance with the Federal Insecticide, Fungicide, and Rodenticide Act, as amended.

## 9011- CHEMICAL PEST CONTROL

H. National Environmental Policy Act (NEPA) (40 CFR Parts 100-1508) - Provides that all Federal Agencies will do an analyses of the potential impacts their proposed action will have on all affected environments.

### 04. Responsibility.

A. The Director and Deputy Director. The Director and Deputy Director formulates BLM policy within limits delegated by the Secretary, assuring that BLM chemical pest control programs conform with the Department of the Interior policy and receive necessary review. This responsibility is exercised through the Assistant Director, Land and Renewable Resources.

B. The Chief, Division of Forestry. Acting for the Assistant Director, Land and Renewable Resources, the Chief is responsible for overseeing the chemical pest control program and also reviews and monitors the implementation actions on land administered by the BLM.

C. Other Washington Office Division Chiefs. Other Washington Office Division Chiefs are responsible for coordinating and ensuring specific guidelines are met and provided for the chemical pest control program in their area of responsibility.

D. State Directors. State Directors are responsible for ensuring adherence to BLM policy and procedures developed in this Manual Section, and overseeing the chemical pest control program on BLM lands within their states.

E. District Managers. District Managers are responsible for planning and implementing a chemical pest control program within their area of responsibility in conformance with BLM and State Office policy and procedures.

## 9011- CHEMICAL PEST CONTROL

F. Area Managers. Area Managers are responsible for planning and implement a chemical pest control program within their area of responsibility in conformance with BLM, State Office and District policy and procedures.

.05 References. (See BLM Manual Sections 6830 - Animal Damage Control, 6840 - Threatened and Endangered Species, 9012 - Expenditure of Rangeland Insect Pest Control Funds, 9015 - Integrated Weed Management, and BLM Handbook H-9011-1 - Chemical Pest Control.)

06. Policy. Policies governing the use of chemical pest control on lands administered by the BLM are as follows:

A. All users must conform with basic policy statements as outlined in the Department of the Interior Pesticide Use Policy (517 DM 1).

B. All proposed uses of chemical pest control methods on public lands are to be reviewed and studied thoroughly to evaluate the need for such uses and to determine the possible impacts each may have on the ecosystem and total environment.

C. All alternatives available through integrated pest management are to be explored. Integrated pest management methods include, but are not limited to prevention, education, biological, cultural, mechanical, and chemical methods.

D. The EPA registered pesticides are considered safe for use when applied in conformance with current label guidelines and restrictions. These pesticides and the other methods of pest management available through integrated pest management are effective and environmentally sound tools when applied correctly.



## 9011- CHEMICAL PEST CONTROL

E. Given a variety of viable alternative, the most cost effective method shall be chosen.

F. Only pesticides that have been analyzed through NEPA documentation can be used in chemical pest control on BLM lands.

07. Files and Record Maintenance. Establish and maintain files in accordance with BLM Manual Section 1270 and disposed of in accordance with Manual Section 1272. See BLM Handbook H-9011-1 for a description of recordkeeping requirements and specific filing instructions.

## 9011- CHEMICAL PEST CONTROL

.1 Guidelines for Conducting Chemical Pest Control Program. When BLM consents to a chemical pest control program on lands administered by BLM at the request of individuals, organizations, or other Federal Agencies. If the control work is accomplished by another Federal Agency, that agency must provide information for submission of a Pesticide Use Proposal (PUP) (see Illustration 1 in H-90111-1, Pesticide Use Proposal) and receive the approval of the Authorized BLM official. All other chemical pest control programs, including those done under BLM proposals, cooperative projects, on right-of-ways, or by lessees and concessionaires, and other activities and authorizations issued pursuant to a permit, must be submitted for review and approval in PUP format which is in conformance with the procedures below. Those agencies, lessees, cooperators, and other authorized land users may be subject to punitive measures by failure to submit such proposals. Upon completion of an application of a pesticide, a Pesticide Application Record must be completed within 24 hours (See Illustration in H-9011-1). This record must be kept for 10 years in project files.

### .11 Review and Coordination.

A. Office of Environmental Affairs (OEA). The Department of the Interior, OEA, requires all pesticide proposals meeting the criteria as described in 517 DM1 to be submitted to them for review.

B. Division of Forestry. The Division of Forestry coordinates all pesticide use proposals and forwards to OEA those project requiring review by OEA officials. For those offices without trained and certified personnel, the WO chief, Division of Forestry give final approval to all proposed projects that conform with Department and BLM policy.

C. State Director. The State Director coordinates all pesticide use proposals for his/her State

## 9011- CHEMICAL PEST CONTROL

and forwards to the Division of Forestry those proposals requiring review and approval by the Chief, Division of Forestry or OEA>

### .12 Planning

A. Manage chemical pest control programs on BLM lands consistent and integrated with land management planning documents.

B. In addition to conforming with Departmental policy, an environmental analysis is prepared for each proposal. If this analysis indicated an environmental impact statement is necessary, that document must also be prepared.

1. Identifying and Organizing Objectives.

a. Weigh benefits of control against the environmental, economic and values that may be threatened.

b. Determine scope of project and integrate into the plan positive measures for protecting wildlife and other values.

c. Determine for each target pest the possible courses of action and evaluate relative merits for controlling the pest with the least adverse effect on the environment. This integrated pest management approach must be followed in arriving at the decision to use a chemical pesticide.

d. Any program involving the use of chemical pest control is submitted as a pesticide use proposal for review on a fiscal year basis to allow time for review and approval for inclusion in the annual work plan. Other submissions may be made on an emergency basis. For further details on Program Submission,

## 9011- CHEMICAL PEST CONTROL

Implementation, and Reports, refer to BLM Handbook (H-9011-1).

### 2. Coordinating with Other Agencies.

Specialists of the United States Department of Health and Human Services, The United State Department of Agriculture, the United States Department of the Interior (Fish and Wildlife Service), and the Environmental Protection Agency provide consultation and assistance on problems of medical, agricultural, and environmental importance (i.e., disease and pest management, quarantine control, fish and wildlife protection) upon request. Personnel in BLM State Offices coordinate and request consultation and assistance as needed from local agency representatives. For further guidance in Animal Damage Control, see BLM Manual Section 6830, and Grasshopper, Mormon Cricket Control, see BLM Manual Section 9012.

### 3. Seeking Public Involvement.

Before a decision is made to proceed with a chemical pest control project, the public shall be invited to review and comment on the site-specific analyses for the project. The public is to be notified of the final decision for a site- specific project as soon as it has been made. Notice methods include local newspapers, district and resource area public notices, and public rooms are used to distribute public information concerning proposed BLM actions.

### 4. Employing Protective Measures.

Establish definite boundaries for the treatment area and leave a buffer strip along streams, near residences, and other sensitive areas. Width depends on the pesticide used, method of application, climatic conditions, and form applied. Adhere to protective measures described on the label of the pesticide planned for use and refer to H-9011-1 for further guidance.

### 5. Training and Certification

## 9011- CHEMICAL PEST CONTROL

a. The Federal Insecticide, Fungicide, and Rodenticide Act of 1972, as amended, P.L. 92-516 requires that all personnel applying restricted-use pesticide are certified in the use of these pesticides or under the direct supervision of certified applicators. Additionally, it will be the policy of the BLM that all nonrestricted pesticides shall be applied by certified applicators or under the direct supervision of a certified applicator. All personnel involved in planning, reviewing, supervising, or applying pesticides must be adequately trained to handle pesticide and equipment properly. This ensures that control measures are applied with maximum safety, efficiency, and economy. Continued training, periodic examinations, and appropriate certification of personnel are required to safeguard against misuse, prevent contamination of the environment, and protect public lands.

b. It is the responsibility of the Washington Office to ensure adequate training and certification. The Assistant Director, Land and Renewable Resources has the responsibility for all pesticides used within BLM. For further details on training and certification refer to BLM Handbook H-9011-1.

.13 Monitoring. Monitoring means the periodic measuring of the changes, over a period of time, from the introduced chemicals in various parts of the environment. For further details on monitoring refer to BLM Handbook H-9011-1.

.14 Safety Plan - Pesticide Applications. Project personnel and safety officers must be constantly alert to detect any unsafe practices. The officer in charge of the project and the District base radio operator must keep copies of a site-specific safety plan. The designated Contracting Office's Authorized Representative, inspector, or project officer is in charge, and the safety officer enforces the safety rule outlined.

## 9011- CHEMICAL PEST CONTROL

For further details on Safety Plans - Pesticide Applications refer to BLM Handbook (H-9011-1).

### .15 Threatened and Endangered Species.

Before a chemical pest control program may be initiated, a survey of the area for threatened or endangered species must be made. The BLM Manual 6840 encompasses the BLM's policy for all endangered species.

## APPENDIX “E”

# COST PROPOSAL FORM

### San Juan Soil & Water Conservation District

**Project:** Cones Fire Rangeland Restoration – Phase 1  
**Treatment:** Tebuthiuron Pellet Application  
**Estimated Treatment Area:** 2,929 Acres  
**Application Rate:** 0.3 Pounds Active Ingredient per Acre

## OFFEROR INFORMATION

**Offeror/Company Name:** \_\_\_\_\_

**Authorized Representative:** \_\_\_\_\_

**New Mexico Pesticide Applicator License Number:** \_\_\_\_\_

**Mailing Address:** \_\_\_\_\_

**City, State, ZIP:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_

**Email:** \_\_\_\_\_

## COST PROPOSAL

The Offeror shall provide a single per-acre price for successfully treating approximately 2,929 acres in accordance with the Statement of Work.

| Bid Item                                                                | Estimated Quantity | Unit | Unit Price | Estimated Total |
|-------------------------------------------------------------------------|--------------------|------|------------|-----------------|
| Tebuthiuron pellet application at 0.3 pounds active ingredient per acre | 2,929              | Acre | \$ _____   | \$ _____        |

**Estimated Treatment Cost:** \$ \_\_\_\_\_

**New Mexico Gross Receipts Tax:** \$ \_\_\_\_\_

**TOTAL PROPOSED COST, INCLUDING NMGR:** \$ \_\_\_\_\_

## Calculation

2,929 estimated acres × \$ \_\_\_\_\_ per acre = \$ \_\_\_\_\_

NMGRT = \$ \_\_\_\_\_

Total Proposed Cost = \$ \_\_\_\_\_

## COST INCLUSIONS

The per-acre price shall include all costs necessary to complete the work required by the Statement of Work, including:

- Mobilization to and from the project site.
- All labor and supervision.
- Licensed pesticide applicator services.
- Equipment, vehicles, and machinery.
- Tebuthiuron pellets and all other required materials and supplies.
- Application of Tebuthiuron pellets at 0.3 pounds active ingredient per acre.
- Compliance with the pesticide label and applicable BLM pesticide application requirements.
- Coordination with the BLM project manager and ground monitor.
- Daily documentation of herbicide quantities, acres treated, dates, and environmental conditions.
- Completion of required Pesticide Application Records.
- Documentation of Tebuthiuron product lot and batch numbers.
- GIS shapefiles identifying treatment swaths and the product batch applied to each swath.
- Required reporting and project closeout documentation.
- Insurance, licenses, permits, overhead, administrative expenses, and incidentals.
- All other expenses required to successfully complete the Statement of Work.

No separate payment will be made for mobilization, labor, equipment, materials, documentation, reporting, GIS deliverables, overhead, or incidental expenses.

## PAYMENT BASIS

Payment will be based on the number of acres successfully treated, inspected, verified, and accepted by the San Juan Soil & Water Conservation District and the Bureau of Land Management.

The estimated quantity of 2,929 acres is provided for proposal-evaluation purposes. The final treatment acreage may be adjusted to accommodate approved unit-boundary changes or leave islands. The District does not guarantee payment for the entire estimated acreage unless the acreage is successfully treated and accepted.



The unit price per acre shall remain fixed throughout the contract period unless a written contract amendment is approved by all required parties.

## OFFEROR CERTIFICATION

The Offeror certifies that:

1. The proposed per-acre price includes all costs necessary to complete the Statement of Work.
2. The Offeror has reviewed and understands the project requirements, treatment specifications, location, schedule, and required deliverables.
3. The Offeror can begin work after September 1, 2026, and complete the work on or before November 30, 2026, within the required 60-consecutive-calendar-day performance period.
4. The treatment will be performed by a properly licensed pesticide applicator.
5. The information provided in this Cost Proposal is complete and accurate.
6. This Cost Proposal shall remain valid for \_\_\_\_\_ calendar days after the proposal submission deadline.

**Total Proposed Cost, Including NMGR:** \$ \_\_\_\_\_

**Authorized Signature:** \_\_\_\_\_

**Printed Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**APPENDIX “F”**  
**ORGANIZATIONAL REFERENCE QUESTIONNAIRE**  
**FOR:**

Offerors Name: \_\_\_\_\_

This form is being submitted to your company for completion as a reference for the organization listed above. Submit this Questionnaire to the San Juan Soil & Water Conservation District via e-mail to:

Name: Jaimie Scott, District Manager/Procurement Manager

Email: [Business@sanjuanswcd.com](mailto:Business@sanjuanswcd.com)

Forms must be submitted no later than September 08, 2026 @ 4:00 PM, and **must not** be returned to the organization requesting the reference. References are **strongly encouraged** to provide thorough comments in response to the questions asked. The comments you provide will help the San Juan Soil & Water Conservation District evaluate the above-referenced Offeror's service history, successful execution of services, and evidence of customer/client satisfaction.

**For questions or concerns regarding this form**, please contact San Juan Soil & Water Conservation District Procurement Manager at (505) 234-6040 and [Business@sanjuanswcd.com](mailto:Business@sanjuanswcd.com). When contacting the Procurement Manager, include the Request for Proposal number provided at the top of this page.

|                                                        |  |
|--------------------------------------------------------|--|
| Organization Providing Reference:                      |  |
| Contact Name & Title:                                  |  |
| Contact Telephone No                                   |  |
| Contact E-Mail Address:                                |  |
| Product/Service Dates:<br><i>(Start and End Dates)</i> |  |
| Technical Environment:                                 |  |

QUESTIONS:

1. In what capacity have you worked with Offeror in the past?
2. How would you describe Offeror's knowledge and expertise?
3. How would you describe Offeror's flexibility relative to changes in the project scope and timeline?
4. How satisfied are you with the materials/documentation produced by Offeror?
5. How would you describe the dynamics/interaction between Offeror personnel and your staff?
6. By name, please identify who are/were Offeror's principal representatives involved in your project. How would you describe your satisfaction with each representative, individually? Please provide a brief comment on the skills, knowledge, behaviors, or other factors on which you base your satisfaction.
7. How satisfied are/were you with the services rendered and/or products developed by Offeror? Please provide a brief explanation as to why you were or were not satisfied.
8. Which aspect(s) of Offeror's services are/were you most satisfied? Please provide a brief explanation as to why you were satisfied.
9. Which aspect(s) of Offeror's services are/were you least satisfied? Please provide a brief explanation as to why you were dissatisfied.
10. Would you recommend Offeror services to your organization again? Why or why not?
11. Is there any other information you wish to share regarding Offeror?



## APPENDIX “G”

# CONFLICT OF INTEREST, NON-COLLUSION AND DEBARMENT CERTIFICATION

2026 Aerial Herbicide Treatment  
RFP No. 26-27-002

### A. OFFEROR INFORMATION

|                      |                            |
|----------------------|----------------------------|
| Offeror Legal Name:  | Business Address:          |
| City, State and ZIP: | Authorized Representative: |
| Title:               | Telephone:                 |
| Email:               |                            |

### 1. CONFLICT-OF-INTEREST CERTIFICATION

The Offeror certifies that, except as disclosed below:

- The Offeror does not presently have and will not acquire any financial, business, personal, organizational, or
1. other interest that would conflict, or appear to conflict, with the impartial and objective performance of the resulting contract.
- The Offeror has disclosed all actual, potential, and apparent conflicts involving the Offeror, its owners, officers,
2. employees, agents, affiliates, proposed subcontractors, San Juan Soil & Water Conservation District supervisors or employees, BLM personnel, consultants, inspectors, or project representatives.
- Neither the Offeror nor its representatives improperly participated in preparing specifications, evaluation
3. criteria, or other solicitation requirements in a manner that would restrict competition or provide the Offeror with an unfair competitive advantage.
4. The Offeror has complied and will continue to comply with the New Mexico Governmental Conduct Act, Sections 10-16-1 through 10-16-18 NMSA 1978, and all other applicable conflict-of-interest laws.
5. The Offeror will immediately disclose in writing any conflict or potential conflict discovered after submission of its proposal or during contract performance.

#### SELECT ONE:

- ☐ No actual, potential, or apparent conflict of interest exists.
- ☐ A conflict or potential conflict exists and is fully described in an attachment to this certification.

Optional brief description or attachment reference:

|  |
|--|
|  |
|  |



## 2. NON-COLLUSION CERTIFICATION

The Offeror certifies that:

1. The proposal and all prices contained in it were independently developed without collusion, consultation, communication, or agreement with another Offeror or competitor for the purpose of restricting competition.
2. The Offeror has not directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding or competitive proposals.
3. Unless otherwise required by law, the prices, technical approach, and material terms of the proposal have not knowingly been disclosed to another Offeror or competitor before the proposal deadline.
4. No attempt has been made or will be made to induce another person or business to submit or refrain from submitting a proposal for the purpose of restricting competition.
5. The Offeror has not engaged in price fixing, bid rigging, market allocation, kickbacks, fraudulent representations, or other anticompetitive conduct relating to this procurement.

## 3. SUSPENSION AND DEBARMENT CERTIFICATION

The Offeror certifies that neither the Offeror nor any owner, principal, officer, proposed subcontractor, or other participant in the resulting contract:

1. Is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in a federal, state, or local government transaction;
2. Appears as an excluded or ineligible party in the federal System for Award Management, SAM.gov;  
Has, within the preceding three years, been convicted of or had a civil judgment entered for fraud, a criminal offense related to obtaining or performing a public contract, violation of antitrust laws, embezzlement, theft,
3. forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property, except as disclosed in an attachment;
4. Is presently indicted for or otherwise criminally or civilly charged by a governmental entity with an offense described above, except as disclosed in an attachment; or
5. Has had one or more public transactions terminated for cause or default within the preceding three years, except as disclosed in an attachment.

### SELECT ONE:

- ☐ The Offeror and its principals are not suspended, debarred, excluded, proposed for debarment, or otherwise ineligible.
- ☐ An exception exists and is fully described in an attachment to this certification.



### 3. SUSPENSION AND DEBARMENT CERTIFICATION — CONTINUED

The Offeror shall immediately notify the District in writing if its exclusion, suspension, debarment, eligibility, or certification status changes before contract award or during contract performance. The District may verify the Offeror's status through SAM.gov and other federal, state, or local records.

**Optional brief description or attachment reference:**

|  |
|--|
|  |
|  |

### 4. CERTIFICATION AND SIGNATURE

The undersigned certifies that they are authorized to execute this certification on behalf of the Offeror, have read and understand it, and that all representations and disclosures are complete, accurate, and truthful.

**NOTICE:** A materially false, misleading, or incomplete certification may result in rejection of the proposal, cancellation of an intended award, termination of a resulting contract, recovery of damages or payments, suspension or debarment, and referral to appropriate authorities.

#### AUTHORIZED CERTIFICATION

|                                                                                          |                         |
|------------------------------------------------------------------------------------------|-------------------------|
| <b>Authorized Signature:</b>                                                             | <b>Date:</b>            |
| <b>Printed Name:</b>                                                                     | <b>Title:</b>           |
| <b>Offeror Legal Name:</b>                                                               |                         |
| <b>Attachments Included:</b><br><input type="checkbox"/> No <input type="checkbox"/> Yes | <b>Number of Pages:</b> |
| <b>District Use Only – Reviewed By:</b>                                                  | <b>Date:</b>            |

Submit this completed certification and any required disclosure attachments with the Offeror's proposal.

## APPENDIX "H"

### CAMPAIGN CONTRIBUTION DISCLOSURE FORM

Pursuant to the Procurement Code, Sections 13-1-28, et seq., NMSA 1978 and NMSA 1978, § 13-1-191.1 (2006), as amended by Laws of 2007, Chapter 234, a prospective contractor subject to this section shall disclose all campaign contributions given by the prospective contractor or a family member or representative of the prospective contractor to an applicable public official of the state or a local public body during the two years prior to the date on which a proposal is submitted or, in the case of a sole source or small purchase contract, the two years prior to the date on which the contractor signs the contract, if the aggregate total of contributions given by the prospective contractor or a family member or representative of the prospective contractor to the public official exceeds two hundred fifty dollars (\$250) over the two-year period. A prospective contractor submitting a disclosure statement pursuant to this section who has not contributed to an applicable public official, whose family members have not contributed to an applicable public official or whose representatives have not contributed to an applicable public official shall make a statement that no contribution was made.

A prospective contractor or a family member or representative of the prospective contractor shall not give a campaign contribution or other thing of value to an applicable public official or the applicable public official's employees during the pendency of the procurement process or during the pendency of negotiations for a sole source or small purchase contract.

Furthermore, a solicitation or proposed award for a proposed contract may be canceled pursuant to Section [13-1-181](#) NMSA 1978 or a contract that is executed may be ratified or terminated pursuant to Section [13-1-182](#) NMSA 1978 if a prospective contractor fails to submit a fully completed disclosure statement pursuant to this section; or a prospective contractor or family member or representative of the prospective contractor gives a campaign contribution or other thing of value to an applicable public official or the applicable public official's employees during the pendency of the procurement process.

The state agency or local public body that procures the services or items of tangible personal property shall indicate on the form the name or names of every applicable public official, if any, for which disclosure is required by a prospective contractor.

THIS FORM MUST BE INCLUDED IN THE REQUEST FOR PROPOSALS AND MUST BE FILED BY ANY PROSPECTIVE CONTRACTOR WHETHER OR NOT THEY, THEIR FAMILY MEMBER, OR THEIR REPRESENTATIVE HAS MADE ANY CONTRIBUTIONS SUBJECT TO DISCLOSURE.

The following definitions apply:

**“Applicable public official”** means a person elected to an office or a person appointed to complete a term of an elected office, who has the authority to award or influence the award of the contract for which the prospective contractor is submitting a competitive

sealed proposal or who has the authority to negotiate a sole source or small purchase contract that may be awarded without submission of a sealed competitive proposal.

**“Campaign Contribution”** means a gift, subscription, loan, advance or deposit of money or other thing of value, including the estimated value of an in-kind contribution, that is made to or received by an applicable public official or any person authorized to raise, collect or expend contributions on that official’s behalf for the purpose of electing the official to statewide or local office. “Campaign Contribution” includes the payment of a debt incurred in an election campaign, but does not include the value of services provided without compensation or unreimbursed travel or other personal expenses of individuals who volunteer a portion or all of their time on behalf of a candidate or political committee, nor does it include the administrative or solicitation expenses of a political committee that are paid by an organization that sponsors the committee.

**“Family member”** means a spouse, father, mother, child, father-in-law, mother-in-law, daughter-in-law or son-in-law of (a) a prospective contractor, if the prospective contractor is a natural person; or (b) an owner of a prospective contractor;

**“Pendency of the procurement process”** means the time period commencing with the public notice of the request for proposals and ending with the award of the contract or the cancellation of the request for proposals.

**“Prospective contractor”** means a person or business that is subject to the competitive sealed proposal process set forth in the Procurement Code [Sections [13-1-28](#) through [13-1-199](#) NMSA 1978] or is not required to submit a competitive sealed proposal because that person or business qualifies for a sole source or small purchase contract.

**“Representative of a prospective contractor”** means an officer or director of a corporation, a member or manager of a limited liability corporation, a partner of a partnership or a trustee of a trust of the prospective contractor.

**Name(s) of Applicable Public Official(s) if any:** \_\_\_\_\_  
**(Completed by State Agency or Local Public Body)**

**DISCLOSURE OF CONTRIBUTIONS BY PROSPECTIVE CONTRACTOR:**

Contribution Made By: \_\_\_\_\_

Relation to Prospective Contractor: \_\_\_\_\_

Date Contribution(s) Made: \_\_\_\_\_  
\_\_\_\_\_

Amount(s) of Contribution(s) \_\_\_\_\_  
\_\_\_\_\_



Nature of Contribution(s)

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Purpose of Contribution(s)

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(Attach extra pages if necessary)

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Signature

---

Date

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Title (position)

**--OR--**

**NO CONTRIBUTIONS IN THE AGGREGATE TOTAL OVER TWO HUNDRED FIFTY DOLLARS (\$250) WERE MADE** to an applicable public official by me, a family member or representative.

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Signature

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Date

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Title (Position)

## APPENDIX "I"

### CONTRACTOR INSURANCE, LICENSING, AND AVIATION DOCUMENTATION FORM

#### San Juan Soil & Water Conservation District

Project Name: 2026 Aerial Herbicide Treatment

Project Type: Aerial Application

Contractor/Offeror: \_\_\_\_\_

#### 1. CONTRACTOR INFORMATION

Legal Business Name: \_\_\_\_\_

DBA, if applicable: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City, State, ZIP: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

#### 2. REQUIRED INSURANCE DOCUMENTATION

The Contractor shall provide current certificates of insurance or other acceptable evidence of coverage before contract execution and before beginning any work.

##### A. Aircraft or UAS Liability Insurance

The policy must specifically cover the aircraft or UAS used for aerial herbicide application and must not exclude pesticide, herbicide, chemical application, spray drift, or agricultural aviation operations.

District-Required Minimum:

\$1,000,000 each occurrence or combined single limit.

Coverage for bodily injury and property damage.

Coverage for pesticide and herbicide application.

Coverage for chemical drift or overspray.

Coverage for the specific aircraft or UAS used for the project.

San Juan Soil & Water Conservation District named as an additional insured when commercially available.

Insurance Company: \_\_\_\_\_

Policy Number: \_\_\_\_\_

Coverage Limit: \_\_\_\_\_

Effective Date: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

Deductible: \_\_\_\_\_

- ☐ Certificate of insurance attached
- ☐ Aircraft/UAS application endorsement attached
- ☐ Pesticide or chemical application coverage verified
- ☐ No exclusion for herbicide application or spray drift
- ☐ San Juan Soil & Water Conservation District listed as additional insured

#### B. New Mexico Pesticide Applicator Financial Responsibility

Under 21.17.50.21 and 21.17.50.22 NMAC, a commercial pesticide applicator must provide proof of financial responsibility covering liability arising from the handling, storage, disposal, application, use, or misuse of pesticides.

For aircraft application, the New Mexico minimum is:

Bodily injury: \$25,000 each occurrence and \$50,000 aggregate.

Property damage: \$50,000 each occurrence.

Combined single limit: \$100,000.

Maximum deductible: \$1,000.

A \$100,000 surety bond may be used where accepted by the New Mexico Department of Agriculture.

- ☐ Certificate of liability insurance attached
- ☐ Certified copy of liability policy attached
- ☐ \$100,000 surety bond attached
- ☐ Coverage applies to aerial pesticide application
- ☐ Coverage applies to handling, storage, disposal, application, use, and misuse of pesticides
- ☐ Deductible does not exceed \$1,000 for proof of state financial responsibility

#### C. Commercial General Liability

District-Required Minimum:

\$1,000,000 per occurrence.

\$2,000,000 general aggregate.

Coverage for bodily injury, property damage, and completed operations.

Pesticide, herbicide, chemical application, pollution, and spray-drift exclusions must be disclosed.

Insurance Company: \_\_\_\_\_

Policy Number: \_\_\_\_\_

Per-Occurrence Limit: \_\_\_\_\_

Aggregate Limit: \_\_\_\_\_

Effective Date: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

☐ Certificate attached

☐ Exclusions disclosed

☐ San Juan Soil & Water Conservation District listed as additional insured

### C. Workers' Compensation and Employers' Liability

The Contractor shall maintain workers' compensation coverage when required by New Mexico law.

Workers' Compensation: Statutory New Mexico limits

Employers' Liability: \$1,000,000 each accident, disease, and employee

Insurance Company: \_\_\_\_\_

Policy Number: \_\_\_\_\_

Effective Date: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

☐ Certificate attached

☐ Contractor claims a lawful exemption

If exempt, explain and attach supporting documentation:

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New Mexico generally requires workers' compensation coverage for businesses with three or more workers and for many incorporated or LLC businesses, subject to applicable exceptions. The Contractor is responsible for determining and maintaining legally required coverage.

### 3. NEW MEXICO PESTICIDE AND HERBICIDE LICENSES

The Contractor shall provide legible copies of all current licenses and certifications required to purchase, handle, transport, and aerially apply the herbicide specified in the Statement of Work.

## Business License

NMDA Commercial Pesticide Applicator Business Name: \_\_\_\_\_

Commercial Applicator License Number: \_\_\_\_\_

License Classification/Categories: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

☐ Copy of current NMDA commercial pesticide applicator license attached

## Individual Applicator or Agricultural Pilot

Applicator/Pilot Name: \_\_\_\_\_

License Number: \_\_\_\_\_

License Type:

☐ Commercial Applicator

☐ Operator/Technician

☐ Agricultural Pilot

☐ Other: \_\_\_\_\_

Applicable Herbicide Categories: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

☐ Copy of current individual pesticide/herbicide license attached

☐ Copy of agricultural pilot license attached, when applicable

☐ License authorizes the proposed herbicide application

☐ License will remain valid throughout the project period

## Additional Applicators or Pilots

| Name | License Type | License Number | Expiration Date | Copy Attached            |
|------|--------------|----------------|-----------------|--------------------------|
|      |              |                |                 | <input type="checkbox"/> |
|      |              |                |                 | <input type="checkbox"/> |
|      |              |                |                 | <input type="checkbox"/> |

## 4. AIRCRAFT OR UAS DOCUMENTATION

### Aircraft/UAS Information

Manufacturer: \_\_\_\_\_

Model: \_\_\_\_\_

Serial Number: \_\_\_\_\_

FAA Registration Number: \_\_\_\_\_

Maximum Takeoff Weight, Including Payload: \_\_\_\_\_

- ☐ FAA registration attached
- ☐ Remote Identification compliance documentation attached
- ☐ NMDA equipment inspection or license documentation attached
- ☐ Aircraft/UAS is identified on the applicable insurance policy

#### FAA Pilot Documentation

Remote Pilot/Pilot Name: \_\_\_\_\_

FAA Certificate Number: \_\_\_\_\_

Certificate Type: \_\_\_\_\_

- ☐ FAA Remote Pilot Certificate attached
- ☐ Other applicable pilot certificate attached

#### Agricultural Aircraft Authorization

A UAS used to dispense herbicides is generally subject to 14 CFR Part 137. The Contractor shall provide documentation demonstrating that the proposed operation is authorized by the FAA.

- ☐ FAA Part 137 Agricultural Aircraft Operator Certificate attached
- ☐ FAA exemption decision letter attached
- ☐ Applicable exemption number: \_\_\_\_\_
- ☐ FAA airspace authorization attached, if required
- ☐ Certificate of Waiver or Authorization attached, if required
- ☐ Operational limitations and conditions attached
- ☐ UAS weighing less than 55 pounds, including payload
- ☐ UAS weighing 55 pounds or more, including payload

### **5. HERBICIDE DOCUMENTATION**

Proposed Herbicide: Tebuthiuron Pellets

Product/Brand Name: \_\_\_\_\_

EPA Registration Number: \_\_\_\_\_

Application Rate: 0.3 pounds active ingredient per acre

- ☐ Current pesticide label attached
- ☐ Safety Data Sheet attached
- ☐ Herbicide is registered for the proposed use and application site
- ☐ Insurance policy does not exclude the proposed herbicide
- ☐ Contractor is licensed in the appropriate category for the proposed use

## 6. INSURANCE CONDITIONS

The Contractor agrees that:

- All required insurance and licenses will remain active throughout the contract and project periods.
- Certificates of insurance must be issued by insurers authorized to conduct business in New Mexico.
- Insurance policies must cover the Contractor's actual aerial or UAS herbicide operations.
- A general liability policy that excludes aviation, pesticide application, chemical drift, overspray, pollution, or herbicide operations will not satisfy the applicable requirement.
- The Contractor will provide updated certificates before any policy expires.
- The Contractor will immediately notify the District of any cancellation, nonrenewal, material reduction, suspension, or revocation of insurance, licenses, FAA certificates, exemptions, or authorizations.
- The District's review of documentation does not relieve the Contractor of responsibility for complying with applicable laws or maintaining adequate coverage.
- No aerial or UAS application may begin until the District has reviewed and accepted the required documents.

## 7. CONTRACTOR CERTIFICATION

I certify that the information and documents submitted with this form are complete, current, and accurate. I certify that the Contractor is properly insured, licensed, certified, and authorized to perform the aerial or UAS herbicide application required by the project.

Authorized Representative: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

### DISTRICT USE ONLY

- ☐ Insurance certificates reviewed
- ☐ Aircraft/UAS coverage verified
- ☐ Pesticide application and drift coverage verified
- ☐ Workers' compensation verified
- ☐ Commercial pesticide applicator license verified
- ☐ Individual herbicide/applicator licenses verified
- ☐ Agricultural pilot license verified
- ☐ FAA registration verified
- ☐ FAA pilot certificate verified

- ☐ Part 137 certificate and exemption verified
- ☐ NMDA equipment documentation verified
- ☐ Herbicide label and Safety Data Sheet reviewed
- ☐ Documentation approved
- ☐ Additional documentation required

Reviewed By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Comments:

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# Request for Taxpayer Identification Number and Certification

Go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9) for instructions and the latest information.

**Give form to the  
requester. Do not  
send to the IRS.**

**Before you begin.** For guidance related to the purpose of Form W-9, see *Purpose of Form*, below.

|                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Print or type.<br>See Specific Instructions on page 3. | <b>1</b> Name of entity/individual. An entry is required. (For a sole proprietor or disregarded entity, enter the owner's name on line 1, and enter the business/disregarded entity's name on line 2.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                           |
|                                                        | <b>2</b> Business name/disregarded entity name, if different from above.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                           |
|                                                        | <b>3a</b> Check the appropriate box for federal tax classification of the entity/individual whose name is entered on line 1. Check only <b>one</b> of the following seven boxes.<br><br><input type="checkbox"/> Individual/sole proprietor <input type="checkbox"/> C corporation <input type="checkbox"/> S corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate<br><br><input type="checkbox"/> LLC. Enter the tax classification (C = C corporation, S = S corporation, P = Partnership) . . . . .<br><b>Note:</b> Check the "LLC" box above and, in the entry space, enter the appropriate code (C, S, or P) for the tax classification of the LLC, unless it is a disregarded entity. A disregarded entity should instead check the appropriate box for the tax classification of its owner.<br><br><input checked="" type="checkbox"/> Other (see instructions) _____ | <b>4</b> Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):<br><br>Exempt payee code (if any) _____<br><br>Exemption from Foreign Account Tax Compliance Act (FATCA) reporting code (if any) _____<br><br><i>(Applies to accounts maintained outside the United States.)</i> |
|                                                        | <b>3b</b> If on line 3a you checked "Partnership" or "Trust/estate," or checked "LLC" and entered "P" as its tax classification, and you are providing this form to a partnership, trust, or estate in which you have an ownership interest, check this box if you have any foreign partners, owners, or beneficiaries. See instructions . . . . . <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                           |
|                                                        | <b>5</b> Address (number, street, and apt. or suite no.). See instructions.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Requester's name and address (optional)                                                                                                                                                                                                                                                                                   |
|                                                        | <b>6</b> City, state, and ZIP code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                           |
|                                                        | <b>7</b> List account number(s) here (optional)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                           |

## Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. See also *What Name and Number To Give the Requester* for guidelines on whose number to enter.

|                                       |  |  |  |   |  |  |  |  |  |
|---------------------------------------|--|--|--|---|--|--|--|--|--|
| <b>Social security number</b>         |  |  |  |   |  |  |  |  |  |
|                                       |  |  |  | - |  |  |  |  |  |
| <b>or</b>                             |  |  |  |   |  |  |  |  |  |
| <b>Employer identification number</b> |  |  |  |   |  |  |  |  |  |
|                                       |  |  |  | - |  |  |  |  |  |

## Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

|                  |                          |      |
|------------------|--------------------------|------|
| <b>Sign Here</b> | Signature of U.S. person | Date |
|------------------|--------------------------|------|

## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to [www.irs.gov/FormW9](http://www.irs.gov/FormW9).

## What's New

Line 3a has been modified to clarify how a disregarded entity completes this line. An LLC that is a disregarded entity should check the appropriate box for the tax classification of its owner. Otherwise, it should check the "LLC" box and enter its appropriate tax classification.

New line 3b has been added to this form. A flow-through entity is required to complete this line to indicate that it has direct or indirect foreign partners, owners, or beneficiaries when it provides the Form W-9 to another flow-through entity in which it has an ownership interest. This change is intended to provide a flow-through entity with information regarding the status of its indirect foreign partners, owners, or beneficiaries, so that it can satisfy any applicable reporting requirements. For example, a partnership that has any indirect foreign partners may be required to complete Schedules K-2 and K-3. See the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

## Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS is giving you this form because they

must obtain your correct taxpayer identification number (TIN), which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid).
- Form 1099-DIV (dividends, including those from stocks or mutual funds).
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds).
- Form 1099-NEC (nonemployee compensation).
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers).
- Form 1099-S (proceeds from real estate transactions).
- Form 1099-K (merchant card and third-party network transactions).
- Form 1098 (home mortgage interest), 1098-E (student loan interest), and 1098-T (tuition).
- Form 1099-C (canceled debt).
- Form 1099-A (acquisition or abandonment of secured property).

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

**Caution:** If you don't return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See *What is backup withholding*, later.

**By signing the filled-out form, you:**

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued);
2. Certify that you are not subject to backup withholding; or
3. Claim exemption from backup withholding if you are a U.S. exempt payee; and
4. Certify to your non-foreign status for purposes of withholding under chapter 3 or 4 of the Code (if applicable); and
5. Certify that FATCA code(s) entered on this form (if any) indicating that you are exempt from the FATCA reporting is correct. See *What Is FATCA Reporting*, later, for further information.

**Note:** If you are a U.S. person and a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien;
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States;
- An estate (other than a foreign estate); or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding.** Payments made to foreign persons, including certain distributions, allocations of income, or transfers of sales proceeds, may be subject to withholding under chapter 3 or chapter 4 of the Code (sections 1441-1474). Under those rules, if a Form W-9 or other certification of non-foreign status has not been received, a withholding agent, transferee, or partnership (payor) generally applies presumption rules that may require the payor to withhold applicable tax from the recipient, owner, transferor, or partner (payee). See Pub. 515, *Withholding of Tax on Nonresident Aliens and Foreign Entities*.

The following persons must provide Form W-9 to the payor for purposes of establishing its non-foreign status.

- In the case of a disregarded entity with a U.S. owner, the U.S. owner of the disregarded entity and not the disregarded entity.
- In the case of a grantor trust with a U.S. grantor or other U.S. owner, generally, the U.S. grantor or other U.S. owner of the grantor trust and not the grantor trust.
- In the case of a U.S. trust (other than a grantor trust), the U.S. trust and not the beneficiaries of the trust.

See Pub. 515 for more information on providing a Form W-9 or a certification of non-foreign status to avoid withholding.

**Foreign person.** If you are a foreign person or the U.S. branch of a foreign bank that has elected to be treated as a U.S. person (under Regulations section 1.1441-1(b)(2)(iv) or other applicable section for chapter 3 or 4 purposes), do not use Form W-9. Instead, use the appropriate Form W-8 or Form 8233 (see Pub. 515). If you are a qualified foreign pension fund under Regulations section 1.897(l)-1(d), or a partnership that is wholly owned by qualified foreign pension funds, that is treated as a non-foreign person for purposes of section 1445 withholding, do not use Form W-9. Instead, use Form W-8EXP (or other certification of non-foreign status).

**Nonresident alien who becomes a resident alien.** Generally, only a nonresident alien individual may use the terms of a tax treaty to reduce or eliminate U.S. tax on certain types of income. However, most tax treaties contain a provision known as a saving clause. Exceptions specified in the saving clause may permit an exemption from tax to continue for certain types of income even after the payee has otherwise become a U.S. resident alien for tax purposes.

If you are a U.S. resident alien who is relying on an exception contained in the saving clause of a tax treaty to claim an exemption from U.S. tax on certain types of income, you must attach a statement to Form W-9 that specifies the following five items.

1. The treaty country. Generally, this must be the same treaty under which you claimed exemption from tax as a nonresident alien.
2. The treaty article addressing the income.
3. The article number (or location) in the tax treaty that contains the saving clause and its exceptions.
4. The type and amount of income that qualifies for the exemption from tax.
5. Sufficient facts to justify the exemption from tax under the terms of the treaty article.

**Example.** Article 20 of the U.S.-China income tax treaty allows an exemption from tax for scholarship income received by a Chinese student temporarily present in the United States. Under U.S. law, this student will become a resident alien for tax purposes if their stay in the United States exceeds 5 calendar years. However, paragraph 2 of the first Protocol to the U.S.-China treaty (dated April 30, 1984) allows the provisions of Article 20 to continue to apply even after the Chinese student becomes a resident alien of the United States. A Chinese student who qualifies for this exception (under paragraph 2 of the first Protocol) and is relying on this exception to claim an exemption from tax on their scholarship or fellowship income would attach to Form W-9 a statement that includes the information described above to support that exemption.

If you are a nonresident alien or a foreign entity, give the requester the appropriate completed Form W-8 or Form 8233.

## Backup Withholding

**What is backup withholding?** Persons making certain payments to you must under certain conditions withhold and pay to the IRS 24% of such payments. This is called "backup withholding." Payments that may be subject to backup withholding include, but are not limited to, interest, tax-exempt interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, payments made in settlement of payment card and third-party network transactions, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

**Payments you receive will be subject to backup withholding if:**

1. You do not furnish your TIN to the requester;
2. You do not certify your TIN when required (see the instructions for Part II for details);
3. The IRS tells the requester that you furnished an incorrect TIN;
4. The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only); or
5. You do not certify to the requester that you are not subject to backup withholding, as described in item 4 under "*By signing the filled-out form*" above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See *Exempt payee code*, later, and the separate Instructions for the Requester of Form W-9 for more information.

See also *Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding*, earlier.

## What Is FATCA Reporting?

The Foreign Account Tax Compliance Act (FATCA) requires a participating foreign financial institution to report all U.S. account holders that are specified U.S. persons. Certain payees are exempt from FATCA reporting. See *Exemption from FATCA reporting code*, later, and the Instructions for the Requester of Form W-9 for more information.

## Updating Your Information

You must provide updated information to any person to whom you claimed to be an exempt payee if you are no longer an exempt payee and anticipate receiving reportable payments in the future from this person. For example, you may need to provide updated information if you are a C corporation that elects to be an S corporation, or if you are no longer tax exempt. In addition, you must furnish a new Form W-9 if the name or TIN changes for the account, for example, if the grantor of a grantor trust dies.

## Penalties

**Failure to furnish TIN.** If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

**Civil penalty for false information with respect to withholding.** If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

**Criminal penalty for falsifying information.** Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

**Misuse of TINs.** If the requester discloses or uses TINs in violation of federal law, the requester may be subject to civil and criminal penalties.

## Specific Instructions

### Line 1

You must enter one of the following on this line; **do not** leave this line blank. The name should match the name on your tax return.

If this Form W-9 is for a joint account (other than an account maintained by a foreign financial institution (FFI)), list first, and then circle, the name of the person or entity whose number you entered in Part I of Form W-9. If you are providing Form W-9 to an FFI to document a joint account, each holder of the account that is a U.S. person must provide a Form W-9.

• **Individual.** Generally, enter the name shown on your tax return. If you have changed your last name without informing the Social Security Administration (SSA) of the name change, enter your first name, the last name as shown on your social security card, and your new last name.

**Note for ITIN applicant:** Enter your individual name as it was entered on your Form W-7 application, line 1a. This should also be the same as the name you entered on the Form 1040 you filed with your application.

• **Sole proprietor.** Enter your individual name as shown on your Form 1040 on line 1. Enter your business, trade, or "doing business as" (DBA) name on line 2.

• **Partnership, C corporation, S corporation, or LLC, other than a disregarded entity.** Enter the entity's name as shown on the entity's tax return on line 1 and any business, trade, or DBA name on line 2.

• **Other entities.** Enter your name as shown on required U.S. federal tax documents on line 1. This name should match the name shown on the charter or other legal document creating the entity. Enter any business, trade, or DBA name on line 2.

• **Disregarded entity.** In general, a business entity that has a single owner, including an LLC, and is not a corporation, is disregarded as an entity separate from its owner (a disregarded entity). See Regulations section 301.7701-2(c)(2). A disregarded entity should check the appropriate box for the tax classification of its owner. Enter the owner's name on line 1. The name of the owner entered on line 1 should never be a disregarded entity. The name on line 1 should be the name shown on the income tax return on which the income should be reported. For

example, if a foreign LLC that is treated as a disregarded entity for U.S. federal tax purposes has a single owner that is a U.S. person, the U.S. owner's name is required to be provided on line 1. If the direct owner of the entity is also a disregarded entity, enter the first owner that is not disregarded for federal tax purposes. Enter the disregarded entity's name on line 2. If the owner of the disregarded entity is a foreign person, the owner must complete an appropriate Form W-8 instead of a Form W-9. This is the case even if the foreign person has a U.S. TIN.

### Line 2

If you have a business name, trade name, DBA name, or disregarded entity name, enter it on line 2.

### Line 3a

Check the appropriate box on line 3a for the U.S. federal tax classification of the person whose name is entered on line 1. Check only one box on line 3a.

| IF the entity/individual on line 1 is a(n) . . .                                                                                                   | THEN check the box for . . .                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| • Corporation                                                                                                                                      | Corporation.                                                                                                                               |
| • Individual or<br>• Sole proprietorship                                                                                                           | Individual/sole proprietor.                                                                                                                |
| • LLC classified as a partnership for U.S. federal tax purposes or<br>• LLC that has filed Form 8832 or 2553 electing to be taxed as a corporation | Limited liability company and enter the appropriate tax classification:<br>P = Partnership,<br>C = C corporation, or<br>S = S corporation. |
| • Partnership                                                                                                                                      | Partnership.                                                                                                                               |
| • Trust/estate                                                                                                                                     | Trust/estate.                                                                                                                              |

### Line 3b

Check this box if you are a partnership (including an LLC classified as a partnership for U.S. federal tax purposes), trust, or estate that has any foreign partners, owners, or beneficiaries, and you are providing this form to a partnership, trust, or estate, in which you have an ownership interest. You must check the box on line 3b if you receive a Form W-8 (or documentary evidence) from any partner, owner, or beneficiary establishing foreign status or if you receive a Form W-9 from any partner, owner, or beneficiary that has checked the box on line 3b.

**Note:** A partnership that provides a Form W-9 and checks box 3b may be required to complete Schedules K-2 and K-3 (Form 1065). For more information, see the Partnership Instructions for Schedules K-2 and K-3 (Form 1065).

If you are required to complete line 3b but fail to do so, you may not receive the information necessary to file a correct information return with the IRS or furnish a correct payee statement to your partners or beneficiaries. See, for example, sections 6698, 6722, and 6724 for penalties that may apply.

### Line 4 Exemptions

If you are exempt from backup withholding and/or FATCA reporting, enter in the appropriate space on line 4 any code(s) that may apply to you.

#### Exempt payee code.

- Generally, individuals (including sole proprietors) are not exempt from backup withholding.
- Except as provided below, corporations are exempt from backup withholding for certain payments, including interest and dividends.
- Corporations are not exempt from backup withholding for payments made in settlement of payment card or third-party network transactions.
- Corporations are not exempt from backup withholding with respect to attorneys' fees or gross proceeds paid to attorneys, and corporations that provide medical or health care services are not exempt with respect to payments reportable on Form 1099-MISC.

The following codes identify payees that are exempt from backup withholding. Enter the appropriate code in the space on line 4.

1—An organization exempt from tax under section 501(a), any IRA, or a custodial account under section 403(b)(7) if the account satisfies the requirements of section 401(f)(2).

- 2—The United States or any of its agencies or instrumentalities.
- 3—A state, the District of Columbia, a U.S. commonwealth or territory, or any of their political subdivisions or instrumentalities.
- 4—A foreign government or any of its political subdivisions, agencies, or instrumentalities.
- 5—A corporation.
- 6—A dealer in securities or commodities required to register in the United States, the District of Columbia, or a U.S. commonwealth or territory.
- 7—A futures commission merchant registered with the Commodity Futures Trading Commission.
- 8—A real estate investment trust.
- 9—An entity registered at all times during the tax year under the Investment Company Act of 1940.
- 10—A common trust fund operated by a bank under section 584(a).
- 11—A financial institution as defined under section 581.
- 12—A middleman known in the investment community as a nominee or custodian.
- 13—A trust exempt from tax under section 664 or described in section 4947.

The following chart shows types of payments that may be exempt from backup withholding. The chart applies to the exempt payees listed above, 1 through 13.

| IF the payment is for . . .                                                              | THEN the payment is exempt for . . .                                                                                                                                                                          |
|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • Interest and dividend payments                                                         | All exempt payees except for 7.                                                                                                                                                                               |
| • Broker transactions                                                                    | Exempt payees 1 through 4 and 6 through 11 and all C corporations. S corporations must not enter an exempt payee code because they are exempt only for sales of noncovered securities acquired prior to 2012. |
| • Barter exchange transactions and patronage dividends                                   | Exempt payees 1 through 4.                                                                                                                                                                                    |
| • Payments over \$600 required to be reported and direct sales over \$5,000 <sup>1</sup> | Generally, exempt payees 1 through 5. <sup>2</sup>                                                                                                                                                            |
| • Payments made in settlement of payment card or third-party network transactions        | Exempt payees 1 through 4.                                                                                                                                                                                    |

<sup>1</sup> See Form 1099-MISC, Miscellaneous Information, and its instructions.

<sup>2</sup> However, the following payments made to a corporation and reportable on Form 1099-MISC are not exempt from backup withholding: medical and health care payments, attorneys' fees, gross proceeds paid to an attorney reportable under section 6045(f), and payments for services paid by a federal executive agency.

**Exemption from FATCA reporting code.** The following codes identify payees that are exempt from reporting under FATCA. These codes apply to persons submitting this form for accounts maintained outside of the United States by certain foreign financial institutions. Therefore, if you are only submitting this form for an account you hold in the United States, you may leave this field blank. Consult with the person requesting this form if you are uncertain if the financial institution is subject to these requirements. A requester may indicate that a code is not required by providing you with a Form W-9 with "Not Applicable" (or any similar indication) entered on the line for a FATCA exemption code.

A—An organization exempt from tax under section 501(a) or any individual retirement plan as defined in section 7701(a)(37).

B—The United States or any of its agencies or instrumentalities.

C—A state, the District of Columbia, a U.S. commonwealth or territory, or any of their political subdivisions or instrumentalities.

D—A corporation the stock of which is regularly traded on one or more established securities markets, as described in Regulations section 1.1472-1(c)(1)(i).

E—A corporation that is a member of the same expanded affiliated group as a corporation described in Regulations section 1.1472-1(c)(1)(i).

F—A dealer in securities, commodities, or derivative financial instruments (including notional principal contracts, futures, forwards, and options) that is registered as such under the laws of the United States or any state.

G—A real estate investment trust.

H—A regulated investment company as defined in section 851 or an entity registered at all times during the tax year under the Investment Company Act of 1940.

I—A common trust fund as defined in section 584(a).

J—A bank as defined in section 581.

K—A broker.

L—A trust exempt from tax under section 664 or described in section 4947(a)(1).

M—A tax-exempt trust under a section 403(b) plan or section 457(g) plan.

**Note:** You may wish to consult with the financial institution requesting this form to determine whether the FATCA code and/or exempt payee code should be completed.

## Line 5

Enter your address (number, street, and apartment or suite number). This is where the requester of this Form W-9 will mail your information returns. If this address differs from the one the requester already has on file, enter "NEW" at the top. If a new address is provided, there is still a chance the old address will be used until the payor changes your address in their records.

## Line 6

Enter your city, state, and ZIP code.

## Part I. Taxpayer Identification Number (TIN)

**Enter your TIN in the appropriate box.** If you are a resident alien and you do not have, and are not eligible to get, an SSN, your TIN is your IRS ITIN. Enter it in the entry space for the Social security number. If you do not have an ITIN, see *How to get a TIN* below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN.

If you are a single-member LLC that is disregarded as an entity separate from its owner, enter the owner's SSN (or EIN, if the owner has one). If the LLC is classified as a corporation or partnership, enter the entity's EIN.

**Note:** See *What Name and Number To Give the Requester*, later, for further clarification of name and TIN combinations.

**How to get a TIN.** If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local SSA office or get this form online at [www.SSA.gov](http://www.SSA.gov). You may also get this form by calling 800-772-1213. Use Form W-7, Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can apply for an EIN online by accessing the IRS website at [www.irs.gov/EIN](http://www.irs.gov/EIN). Go to [www.irs.gov/Forms](http://www.irs.gov/Forms) to view, download, or print Form W-7 and/or Form SS-4. Or, you can go to [www.irs.gov/OrderForms](http://www.irs.gov/OrderForms) to place an order and have Form W-7 and/or Form SS-4 mailed to you within 15 business days.

If you are asked to complete Form W-9 but do not have a TIN, apply for a TIN and enter "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, you will generally have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

**Note:** Entering "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon. See also *Establishing U.S. status for purposes of chapter 3 and chapter 4 withholding*, earlier, for when you may instead be subject to withholding under chapter 3 or 4 of the Code.

**Caution:** A disregarded U.S. entity that has a foreign owner must use the appropriate Form W-8.

## Part II. Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if item 1, 4, or 5 below indicates otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). In the case of a disregarded entity, the person identified on line 1 must sign. Exempt payees, see *Exempt payee code*, earlier.

**Signature requirements.** Complete the certification as indicated in items 1 through 5 below.

**1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983.** You must give your correct TIN, but you do not have to sign the certification.

**2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983.** You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

**3. Real estate transactions.** You must sign the certification. You may cross out item 2 of the certification.

**4. Other payments.** You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments made in settlement of payment card and third-party network transactions, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

**5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), ABLE accounts (under section 529A), IRA, Coverdell ESA, Archer MSA or HSA contributions or distributions, and pension distributions.** You must give your correct TIN, but you do not have to sign the certification.

## What Name and Number To Give the Requester

| For this type of account:                                                                              | Give name and SSN of:                                                                                   |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| 1. Individual                                                                                          | The individual                                                                                          |
| 2. Two or more individuals (joint account) other than an account maintained by an FFI                  | The actual owner of the account or, if combined funds, the first individual on the account <sup>1</sup> |
| 3. Two or more U.S. persons (joint account maintained by an FFI)                                       | Each holder of the account                                                                              |
| 4. Custodial account of a minor (Uniform Gift to Minors Act)                                           | The minor <sup>2</sup>                                                                                  |
| 5. a. The usual revocable savings trust (grantor is also trustee)                                      | The grantor-trustee <sup>1</sup>                                                                        |
| b. So-called trust account that is not a legal or valid trust under state law                          | The actual owner <sup>1</sup>                                                                           |
| 6. Sole proprietorship or disregarded entity owned by an individual                                    | The owner <sup>3</sup>                                                                                  |
| 7. Grantor trust filing under Optional Filing Method 1 (see Regulations section 1.671-4(b)(2)(i)(A))** | The grantor*                                                                                            |

| For this type of account:                                                                                                                                                                   | Give name and EIN of:     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| 8. Disregarded entity not owned by an individual                                                                                                                                            | The owner                 |
| 9. A valid trust, estate, or pension trust                                                                                                                                                  | Legal entity <sup>4</sup> |
| 10. Corporation or LLC electing corporate status on Form 8832 or Form 2553                                                                                                                  | The corporation           |
| 11. Association, club, religious, charitable, educational, or other tax-exempt organization                                                                                                 | The organization          |
| 12. Partnership or multi-member LLC                                                                                                                                                         | The partnership           |
| 13. A broker or registered nominee                                                                                                                                                          | The broker or nominee     |
| 14. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments | The public entity         |
| 15. Grantor trust filing Form 1041 or under the Optional Filing Method 2, requiring Form 1099 (see Regulations section 1.671-4(b)(2)(i)(B))**                                               | The trust                 |

<sup>1</sup> List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

<sup>2</sup> Circle the minor's name and furnish the minor's SSN.

<sup>3</sup> You must show your individual name on line 1, and enter your business or DBA name, if any, on line 2. You may use either your SSN or EIN (if you have one), but the IRS encourages you to use your SSN.

<sup>4</sup> List first and circle the name of the trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.)

\* **Note:** The grantor must also provide a Form W-9 to the trustee of the trust.

\*\* For more information on optional filing methods for grantor trusts, see the Instructions for Form 1041.

**Note:** If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

## Secure Your Tax Records From Identity Theft

Identity theft occurs when someone uses your personal information, such as your name, SSN, or other identifying information, without your permission to commit fraud or other crimes. An identity thief may use your SSN to get a job or may file a tax return using your SSN to receive a refund.

To reduce your risk:

- Protect your SSN,
- Ensure your employer is protecting your SSN, and
- Be careful when choosing a tax return preparer.

If your tax records are affected by identity theft and you receive a notice from the IRS, respond right away to the name and phone number printed on the IRS notice or letter.

If your tax records are not currently affected by identity theft but you think you are at risk due to a lost or stolen purse or wallet, questionable credit card activity, or a questionable credit report, contact the IRS Identity Theft Hotline at 800-908-4490 or submit Form 14039.

For more information, see Pub. 5027, Identity Theft Information for Taxpayers.

Victims of identity theft who are experiencing economic harm or a systemic problem, or are seeking help in resolving tax problems that have not been resolved through normal channels, may be eligible for Taxpayer Advocate Service (TAS) assistance. You can reach TAS by calling the TAS toll-free case intake line at 877-777-4778 or TTY/TDD 800-829-4059.

**Protect yourself from suspicious emails or phishing schemes.**

Phishing is the creation and use of email and websites designed to mimic legitimate business emails and websites. The most common act is sending an email to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

The IRS does not initiate contacts with taxpayers via emails. Also, the IRS does not request personal detailed information through email or ask taxpayers for the PIN numbers, passwords, or similar secret access information for their credit card, bank, or other financial accounts.

If you receive an unsolicited email claiming to be from the IRS, forward this message to [phishing@irs.gov](mailto:phishing@irs.gov). You may also report misuse of the IRS name, logo, or other IRS property to the Treasury Inspector General for Tax Administration (TIGTA) at 800-366-4484. You can forward suspicious emails to the Federal Trade Commission at [spam@uce.gov](mailto:spam@uce.gov) or report them at [www.ftc.gov/complaint](http://www.ftc.gov/complaint). You can contact the FTC at [www.ftc.gov/idtheft](http://www.ftc.gov/idtheft) or 877-IDTHEFT (877-438-4338). If you have been the victim of identity theft, see [www.IdentityTheft.gov](http://www.IdentityTheft.gov) and Pub. 5027.

Go to [www.irs.gov/IdentityTheft](http://www.irs.gov/IdentityTheft) to learn more about identity theft and how to reduce your risk.

## Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to provide your correct TIN to persons (including federal agencies) who are required to file information returns with the IRS to report interest, dividends, or certain other income paid to you; mortgage interest you paid; the acquisition or abandonment of secured property; the cancellation of debt; or contributions you made to an IRA, Archer MSA, or HSA. The person collecting this form uses the information on the form to file information returns with the IRS, reporting the above information. Routine uses of this information include giving it to the Department of Justice for civil and criminal litigation and to cities, states, the District of Columbia, and U.S. commonwealths and territories for use in administering their laws. The information may also be disclosed to other countries under a treaty, to federal and state agencies to enforce civil and criminal laws, or to federal law enforcement and intelligence agencies to combat terrorism. You must provide your TIN whether or not you are required to file a tax return. Under section 3406, payors must generally withhold a percentage of taxable interest, dividends, and certain other payments to a payee who does not give a TIN to the payor. Certain penalties may also apply for providing false or fraudulent information.

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Appendix "K"



San Juan Soil & Water Conservation District

Project: 2026 Aerial Herbicide Treatment

Contract Terms and Conditions

DRAFT – CONTRACT NUMBER AND DATES TO BE CONFIRMED

SAN JUAN SOIL AND WATER CONSERVATION DISTRICT SERVICES

CONTRACT

FOR

[INSERT CONTRACTOR LEGAL NAME]

THIS AGREEMENT is made and entered into by and between the San Juan Soil & Water Conservation District, a governmental subdivision of the State of New Mexico and a public body politic and corporate, hereinafter referred to as the "District," and [INSERT CONTRACTOR LEGAL NAME], hereinafter referred to as the "Contractor." This Agreement becomes effective on the date of the last required signature below.

IT IS AGREED BETWEEN THE PARTIES:

1. Scope of Work.

A. The objective of the 2026 Aerial Herbicide Treatment project is to control and manage sagebrush and restore native rangelands toward ecological conditions more representative of the potential natural community. The authorized treatment area consists of approximately nineteen (19) polygons totaling approximately 4,285 acres within the Superior Mesa and Ice Canyon project areas in San Juan and Rio Arriba Counties, New Mexico. Treatment polygons and acreage may be adjusted for field conditions, resource protection, funding, or other approved project needs, but no adjustment or treatment outside an approved polygon is authorized without prior written approval from the District and BLM.

The contractor shall:

1. Purchase, furnish, transport, securely store, handle, load, and apply all Tebuthiuron 20P required for the authorized treatment at a rate of 0.30 pounds of active

ingredient per acre. The Contract Price includes all Tebuthiuron 20P and all associated delivery, storage, handling, loading, application, unused-product management, and container-disposal costs.

Before mobilization, provide the District with the proposed product name, manufacturer, EPA registration number, current label, Safety Data Sheet, lot or batch information, quantity to be supplied, and proof of purchase. No product may be used without prior written approval from the District and BLM. All product must be new, lawfully obtained, in properly labeled original containers, and used strictly in accordance with the approved label and written project authorization.

2. Perform all pesticide applications in accordance with the product label, applicable federal and state pesticide requirements, BLM Manual 9011—Chemical Pest Control, BLM Handbook H-9011-1—Chemical Pest Control, and applicable National Defense Authorization Act requirements.
3. Ensure all treatment is performed or supervised by properly licensed pesticide applicators and properly licensed and authorized agricultural pilots or remote pilots, as applicable.
4. Strictly observe all approved Superior Mesa, Ice Canyon, and other expressly authorized treatment polygons, leave islands, buffers, and exclusion areas. Prevent off-target application, chemical drift, overspray, or treatment outside authorized boundaries.
5. Coordinate access to and use of all required airstrips or landing areas and assume full responsibility and liability for each landing facility used. No representation by the District or BLM concerning a previously used facility transfers responsibility for evaluating or safely using that facility.
6. Document herbicide quantities, accepted acres treated, application dates and times, environmental and weather conditions, aircraft and pilot information, and all other required information daily using the BLM Pesticide Application Record form.
7. Document all Tebuthiuron 20P lot or batch numbers and provide corresponding GIS treatment-swath shapefiles identifying where each lot or batch was applied. Provide treatment lines, flight lines, GPS tracks, and acreage data daily, or on call at the request of the Project Manager.
8. Coordinate the work schedule with the San Juan Soil & Water Conservation District and the BLM Farmington Field Office Project Manager so that authorized monitoring and inspection personnel are available during project activities.
9. Clean all ground-support and loading equipment before entering the project area to remove soil, grease, debris, noxious weeds, and non-native plant seeds. Equipment cleaning shall occur away from the project site and in compliance with applicable environmental requirements.
10. Comply with all applicable fire restrictions and immediately suspend work during wet conditions or when directed by the District or BLM.
11. Protect cultural and archaeological resources. If concealed cultural resources are discovered, the Contractor shall immediately stop work in the surrounding area, protect the resources from damage, and notify the designated project inspector.



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12. Repair, at the Contractor's expense, any ruts, road damage, or other resource damage caused by project activities and remove all temporary marking materials upon completion.
13. Correct or re-treat, at no additional cost to the District, any authorized areas determined by the District or BLM to be incomplete, off-rate, undocumented, off-target, or otherwise not in compliance with the treatment specifications, to the extent correction or re-treatment is safe, lawful, and directed in writing.
14. If an Unmanned Aircraft System is proposed, do not use it unless specifically approved in writing by the District and BLM, and comply with OPM-35, the DOI Covered UAS Assessment Guide, applicable National Defense Authorization Act restrictions, FAA requirements, and all project-specific approvals.

## 2. Compensation.

A. The total compensation payable to the Contractor under this Agreement, including New Mexico gross receipts tax and all labor, supervision, Tebuthiuron 20P, aircraft or approved UAS costs, landing-facility coordination, equipment, mobilization, insurance, documentation, reporting, GIS deliverables, overhead, and incidentals, shall not exceed \$\_\_\_\_\_. This amount is a maximum and does not guarantee any minimum acreage or payment. The Contractor shall be paid only for work that was authorized in writing, satisfactorily completed, fully documented, inspected, and accepted by the District.

B. Payment is contingent upon the availability and continued authorization of applicable federal award funds, compliance with the funding award, and the Appropriations Paragraph below. The District is not obligated to pay for work performed before written authorization to proceed or after suspension, termination, expiration, or exhaustion or withdrawal of available funding.

C. Invoices must be submitted within fifteen (15) days after completion of the invoiced work and by the final invoicing deadline established in writing by the District. Each invoice must identify the authorized treatment polygon, accepted acres, unit price, service dates, separately stated NMGR, and all supporting Pesticide Application Records, calibration records, loading and product records, flight logs, GPS tracks, GIS deliverables, photographs, and incident reports required by the Agreement.

D. Submission or receipt of an invoice does not constitute acceptance or create an obligation to pay. The District may inspect, verify, dispute, reject, withhold, reduce, or recover payment for unauthorized, unverified, undocumented, duplicate, deficient, off-target, or noncompliant work. If the District determines that invoiced services are unacceptable, it shall issue a written letter of exception in accordance with applicable law. Payment for accepted work will be made in accordance with applicable prompt-payment

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requirements after acceptance and receipt of sufficient federal funds. Final payment is contingent upon completion and acceptance of all closeout deliverables. The District shall not incur late charges, interest, or penalties except when expressly required by applicable law.

### **3. Term.**

This Agreement shall take effect on \_\_\_\_\_, or on the date of the last required signature, whichever is later, and shall terminate on \_\_\_\_\_, unless earlier terminated pursuant to Paragraph 4 (Termination) or Paragraph 5 (Appropriations). Work may begin only after execution of this Agreement, satisfaction of all pre-work requirements, and issuance of written authorization to proceed by the District.

### **4. Termination.**

A. Termination. This Agreement may be terminated by either of the parties hereto upon written notice delivered to the other party at least thirty (30) days prior to the intended date of termination. Except as otherwise allowed or provided under this Agreement, the District's sole liability upon such termination shall be to pay for acceptable work performed prior to the Contractor's receipt of the notice of termination, if the District is the terminating party, or the Contractor's sending of the notice of termination, if the Contractor is the terminating party; provided, however, that a notice of termination shall not nullify or otherwise affect either party's liability for pre-termination defaults under or breaches of this Agreement. The Contractor shall submit an invoice for such work within thirty (30) days of receiving or sending the notice of termination. Notwithstanding the foregoing, this Agreement may be terminated immediately upon written notice to the Contractor if the Contractor becomes unable to perform the services contracted for, as determined by the District or if, during the term of this Agreement, the Contractor or any of its officers, employees or agents is indicted for fraud, embezzlement or other crime due to misuse of state funds or due to the Appropriations paragraph herein. THIS PROVISION IS NOT EXCLUSIVE AND DOES NOT WAIVE THE STATE'S OTHER LEGAL RIGHTS AND REMEDIES CAUSED BY THE CONTRACTOR'S DEFAULT/BREACH OF THIS AGREEMENT.

B. Termination Management. Immediately upon receipt by either the District or the Contractor of notice of termination of this Agreement, the Contractor shall:

1. Not incur any further obligations for salaries, services or any other expenditure of funds under this Agreement without written approval of the District;
2. Comply with all directives issued by the District in the notice of termination as to the performance of work under this Agreement; and

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3. Take such action as the District shall direct for the protection, preservation, retention or transfer of all property titled to the District and records generated under this Agreement.

Any non-expendable personal property or equipment provided to or purchased by the Contractor with contract funds shall become property of the District upon termination and shall be submitted to the District as soon as practicable.

## **5. Appropriations.**

The terms of this Agreement are contingent upon sufficient appropriations for the performance of this Agreement. If sufficient appropriations are not available, this Agreement shall terminate immediately upon written notice being given by the District to the Contractor. The District's decision as to whether sufficient appropriations are available shall be accepted by the Contractor and shall be final. If the District proposes an amendment to the Agreement to unilaterally reduce funding, the Contractor shall have the option to terminate the Agreement or to agree to the reduced funding, within thirty (30) days of receipt of the proposed amendment.

## **6. Status of Contractor.**

The Contractor and its agents and employees are independent contractors performing professional services for the District and are not employees of the State of New Mexico. The Contractor and its agents and employees shall not accrue leave, retirement, insurance, bonding, use of state vehicles, or any other benefits afforded to employees of the State of New Mexico as a result of this Agreement. The Contractor acknowledges that all sums received hereunder are reportable by the Contractor for tax purposes, including without limitation, self-employment and business income tax. The Contractor agrees not to purport to bind the State of New Mexico unless the Contractor has express written authority to do so, and then only within the strict limits of that authority.

## **7. Assignment.**

The Contractor shall not assign or transfer any interest in this Agreement or assign any claims for money due or to become due under this Agreement without the prior written approval of the District.

## **8. Subcontracting.**

The Contractor shall not subcontract, assign, transfer, or delegate any portion of the work without prior written disclosure to and approval by the District. The Contractor shall identify each proposed subcontractor, the work and dollar amount to be subcontracted,

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and the subcontractor's licenses, insurance, exclusions status, and qualifications. The Contractor remains fully responsible for every act, omission, cost, record, and compliance obligation of each subcontractor. The Contractor shall incorporate into each subcontract all provisions of this Agreement and all federal award provisions required to flow down to that tier. Unauthorized subcontracting or assignment constitutes a material breach and grounds for immediate termination and recovery of resulting costs.

## **9. Release.**

Final payment of the amounts due under this Agreement shall operate as a release of the District, its officers and employees, and the State of New Mexico from all liabilities, claims and obligations whatsoever arising from or under this Agreement.

## **10. Confidentiality.**

Any confidential information provided to or developed by the Contractor in the performance of this Agreement shall be kept confidential and shall not be made available to any individual or organization by the Contractor without the prior written approval of the District.

## **11. Product of Service -- Copyright.**

All materials developed or acquired by the Contractor under this Agreement shall become the property of the District and shall be delivered to the District no later than the termination date of this Agreement. Nothing developed or produced, in whole or in part, by the Contractor under this Agreement shall be the subject of an application for copyright or other claim of ownership by or on behalf of the Contractor.

## **12. Conflict of Interest; Governmental Conduct Act.**

A. The Contractor represents and warrants that it presently has no interest and, during the term of this Agreement, shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance or services required under the Agreement.

B. The Contractor further represents and warrants that it has complied with, and, during the term of this Agreement, will continue to comply with, and that this Agreement complies with all applicable provisions of the Governmental Conduct Act, Chapter 10, Article 16

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NMSA 1978. Without in anyway limiting the generality of the foregoing, the Contractor specifically represents and warrants that:

1. In accordance with Section 10-16-4.3 NMSA 1978, the Contractor does not employ, has not employed, and will not employ during the term of this Agreement any District employee while such employee was or is employed by the District and participating directly or indirectly in the District's contracting process;

2. This Agreement complies with Section 10-16-7(A) NMSA 1978 because:

(I) the Contractor is not a public officer or employee of the District;

(II) the Contractor is not a member of the family of a public officer or employee of the District;

(III) the Contractor is not a business in which a public officer or employee or the family of a public officer or employee has a substantial interest; or

(IV) if the Contractor is a public officer or employee of the District, a member of the family of a public officer or employee of the District, or a business in which a public officer or employee of the District or the family of a public officer or employee of the District has a substantial interest, public notice was given as required by Section 10-16-7(A) NMSA 1978 and this Agreement was awarded pursuant to a competitive process;

3. In accordance with Section 10-16-8(A) NMSA 1978:

(I) the Contractor is not, and has not been represented by, a person who has been a public officer or employee of the District within the preceding year and whose official act directly resulted in this Agreement; and

(II) the Contractor is not, and has not been assisted in any way regarding this transaction by, a former public officer or employee of the State whose official act, while in State employment, directly resulted in the District's making this Agreement;

4. This Agreement complies with Section 10-16-9(A) NMSA 1978 because:

(I) the Contractor is not a legislator;

(II) the Contractor is not a member of a legislator's family;

(III) the Contractor is not a business in which a legislator or a legislator's family has a substantial interest; or

(IV) if the Contractor is a legislator, a member of a legislator's family, or a business in which a legislator or a legislator's family has a substantial interest, disclosure has been made as

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required by Section 10-16-9(A) NMSA 1978, this Agreement is not a sole source or small purchase contract, and this Agreement was awarded in accordance with the provisions of the Procurement Code;

5. In accordance with Section 10-16-13 NMSA 1978, the Contractor has not directly participated in the preparation of specifications, qualifications or evaluation criteria for this Agreement or any procurement related to this Agreement; and

6. In accordance with Section 10-16-3 and Section 10-16-13.3 NMSA 1978, the Contractor has not contributed, and during the term of this Agreement shall not contribute, anything of value to a public officer or employee of the District.

C. Contractor's representations and warranties in Paragraphs A and B of this Article 12 are material representations of fact upon which the District relied when this Agreement was entered into by the parties. Contractor shall provide immediate written notice to the District if, at any time during the term of this Agreement, Contractor learns that Contractor's representations and warranties in Paragraphs A and B of this Article 12 were erroneous on the effective date of this Agreement or have become erroneous by reason of new or changed circumstances.

D. If it is later determined that Contractor's representations and warranties in Paragraphs A and B of this Article 12 were erroneous on the effective date of this Agreement or have become erroneous by reason of new or changed circumstances, in addition to other remedies available to the District and notwithstanding anything in the Agreement to the contrary, the District may immediately terminate the Agreement.

E. All terms defined in the Governmental Conduct Act have the same meaning in this Article 12(B).

### **13. Amendment.**

A. This Agreement shall not be altered, changed or amended except by instrument in writing executed by the parties hereto and all other required signatories.

B. If the District proposes an amendment to the Agreement to unilaterally reduce funding due to budget or other considerations, the Contractor shall, within thirty (30) days of receipt of the proposed amendment, have the option to terminate the Agreement, pursuant to the termination provisions as set forth in Article 4 herein, or to agree to the reduced funding.

#### **14. Merger.**

This Agreement incorporates all the agreements, covenants and understandings between the parties hereto concerning the subject matter hereof, and all such covenants, agreements and understandings have been merged into this written Agreement. No prior agreement or understanding, oral or otherwise, of the parties or their agents shall be valid or enforceable unless embodied in this Agreement.

#### **15. Penalties for Violation of Law.**

The Procurement Code, Sections 13-1-28 through 13-1-199, NMSA 1978, imposes civil and criminal penalties for its violation. In addition, the New Mexico criminal statutes impose felony penalties for illegal bribes, gratuities and kickbacks.

#### **16. Equal Opportunity Compliance.**

The Contractor agrees to abide by all federal and state laws and rules and regulations, and executive orders of the Governor of the State of New Mexico, pertaining to equal employment opportunity. In accordance with all such laws of the State of New Mexico, the Contractor assures that no person in the United States shall, on the grounds of race, religion, color, national origin, ancestry, sex, age, physical or mental handicap, or serious medical condition, spousal affiliation, sexual orientation or gender identity, be excluded from employment with or participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity performed under this Agreement. If Contractor is found not to be in compliance with these requirements during the life of this Agreement, Contractor agrees to take appropriate steps to correct these deficiencies.

#### **17. Applicable Law.**

The laws of the State of New Mexico shall govern this Agreement, without giving effect to its choice of law provisions. Venue shall be proper only in a New Mexico court of competent jurisdiction in accordance with Section 38-3-1(G) NMSA 1978. By execution of this Agreement, Contractor acknowledges and agrees to the jurisdiction of the courts of the State of New Mexico over any and all lawsuits arising under or out of any term of this Agreement.

#### **18. Workers Compensation.**

The Contractor agrees to comply with state laws and rules applicable to workers compensation benefits for its employees. If the Contractor fails to comply with the Workers

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Compensation Act and applicable rules when required to do so, this Agreement may be terminated by the District.

## **19. Records and Financial Audit.**

The Contractor shall maintain complete project, financial, pesticide-application, product, loading, calibration, flight, landing-facility, personnel, subcontractor, invoice, GIS, and supporting records for at least three (3) years after submission of the final expenditure report applicable to the federal award, or for any longer period required by 2 CFR § 200.334, the federal award, litigation, claim, audit, investigation, records hold, or applicable law. The District, BLM, Department of the Interior, federal awarding agency, Inspectors General, Comptroller General of the United States, New Mexico Office of the State Auditor, and their authorized representatives shall have timely access to applicable records, personnel, aircraft, equipment, and project locations for inspection, interview, copying, monitoring, and audit. The District may audit billings before or after payment, and payment does not prevent rejection or recovery of excessive, duplicate, unsupported, unallowable, illegal, or otherwise improper payments.

## **20. Indemnification.**

The Contractor shall defend, indemnify and hold harmless the District and the State of New Mexico from all actions, proceedings, claims, demands, costs, damages, attorneys' fees and all other liabilities and expenses of any kind arising out of the performance of this Agreement and caused by the negligent act or failure to act of the Contractor, its officers, employees, servants, subcontractors or agents, including claims involving aviation operations, pesticide application, chemical drift, overspray, off-target treatment, bodily injury, property damage, environmental damage, or use of an airstrip or landing area. In the event that any action, suit or proceeding related to the services is brought against the Contractor, the Contractor shall, as soon as practicable but no later than two (2) days after receiving notice, notify legal counsel for the District and the Risk Management Division of the New Mexico General Services Department by certified mail.

## **21. New Mexico Employee's Health Coverage.**

A. If Contractor has, or grows to, six (6) or more employees who work, or who are expected to work, an average of at least 20 hours per week over a six (6) month period during the term of the contract, Contractor certifies, by signing this Agreement, to have in place, and agrees to maintain for the term of the contract, health insurance for those employees and offer that health insurance to those employees if the expected annual value in the aggregate of any and all contracts between Contractor and the State exceed \$250,000.



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B. Contractor agrees to maintain a record of the number of employees who have:

1. accepted health insurance;
2. declined health insurance due to other health insurance coverage already in place; or
3. declined health insurance for other reasons.

These records are subject to review and audit by a representative of the State.

C. Contractor agrees to advise all employees of the availability of State publicly financed health care coverage programs by providing each employee with, as a minimum, the following website link to additional information:

<http://insurenwnewmexico.state.nm.us/>

## **22. Employee Pay Equity Reporting.**

Contractor agrees if it has ten (10) or more New Mexico employees OR eight (8) or more employees in the same job classification, at any time during the term of this contract, to complete and submit the PE10-249 form on the annual anniversary of the initial report submittal for contracts up to one (1) year in duration. If the Contractor has 250 or more employees, Contractor must complete and submit the PE250 form on the annual anniversary of the initial report submittal for contracts up to one (1) year in duration.

For contracts that extend beyond one (1) calendar year, or are extended beyond one (1) calendar year, Contractor also agrees to complete and submit the PE10-249 or PE250 form, whichever is applicable, within thirty (30) days of the annual contract anniversary date of the initial submittal date or, if more than 180 days has elapsed since submittal of the last report, at the completion of the contract, whichever comes first.

Should Contractor not meet the size requirement for reporting at contract award but subsequently grow such that they meet or exceed the size requirement for reporting, Contractor agrees to provide the required report within ninety (90) days of meeting or exceeding the size requirement. That submittal date shall serve as the basis for submittals required thereafter.

Contractor also agrees to levy this requirement on any subcontractor(s) performing more than 10% of the dollar value of this contract if said subcontractor(s) meets, or grows to meet, the stated employee size thresholds during the term of the contract. Contractor further agrees that, should one or more subcontractor(s) not meet the size requirement for reporting at contract award but subsequently grow such that they meet or exceed the size requirement for reporting, Contractor will submit the required report, for each such

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subcontractor, within ninety (90) days of that subcontractor meeting or exceeding the size requirement.

Subsequent report submittals, on behalf of each such subcontractor, shall be due on the annual anniversary of the initial report submittal. Contractor shall submit the required form(s) to the State Purchasing Division of the General Services Department, and other departments as may be determined, on behalf of the applicable subcontractor(s) in accordance with the schedule contained in this paragraph.

Contractor acknowledges that this subcontractor requirement applies even though Contractor itself may not meet the size requirement for reporting and be required to report itself.

Notwithstanding the foregoing, if this Contract was procured pursuant to a solicitation, and if Contractor has already submitted the required report accompanying their response to such solicitation, the report does not need to be re-submitted with this Agreement.

### **23. Invalid Term or Condition.**

If any term or condition of this Agreement shall be held invalid or unenforceable, the remainder of this Agreement shall not be affected and shall be valid and enforceable.

### **24. Enforcement of Agreement.**

A party's failure to require strict performance of any provision of this Agreement shall not waive or diminish that party's right thereafter to demand strict compliance with that or any other provision. No waiver by a party of any of its rights under this Agreement shall be effective unless express and in writing, and no effective waiver by a party of any of its rights shall be effective to waive any other rights.

### **25. Notices.**

Any notice required to be given to either party by this Agreement shall be in writing and shall be delivered in person, by courier service or by U.S. mail, either first class or certified, return receipt requested, postage prepaid, as follows:

To the District:

Jaimie Scott, District Manager

301 McWilliams Road

Aztec, NM 87410

To the Contractor:

[CONTRACTOR LEGAL NAME]

Address

Phone #

## 26. Insurance and Licensing.

A. Before execution and throughout performance, the Contractor shall maintain all insurance, endorsements, licenses, registrations, certificates, waivers, exemptions, approvals, and authorizations required by the RFP, Appendix I, the Statement of Work, the approved product label, and applicable law. Required coverage includes, as applicable, aircraft or UAS liability covering pesticide application, drift, overspray, and chemical liability; commercial general liability; automobile liability; workers' compensation and employers' liability; and all additional-insured, waiver-of-subrogation, notice, and endorsement requirements.

B. Certificates of insurance alone do not amend policy terms or establish compliance. Upon request, the Contractor shall provide endorsements and relevant policy provisions. Cancellation, lapse, material reduction, or loss of required insurance, licensing, registration, certification, exemption, or operational authority shall be reported immediately and constitutes grounds for suspension or termination.

## 27. Federal Award Contract Provisions.

A. Federal Award. This Agreement is made under a federal financial assistance award administered by the District in connection with the Bureau of Land Management. The Contractor is a contractor of the District and is not a federal contractor, subrecipient, agent, employee, or third-party beneficiary of BLM, the Department of the Interior, or the United States. The Federal Government is not a party to this Agreement and assumes no contractual liability to the Contractor or any subcontractor.

B. Remedies for Breach. In addition to termination and other remedies stated in this Agreement, the District may suspend work, require correction or re-performance, reject nonconforming work, withhold or reduce payment, recover improper payments and damages, obtain substitute performance, and pursue all other administrative, contractual, legal, and equitable remedies for breach or noncompliance. Remedies are cumulative.

C. Termination. This Agreement is subject to termination for cause and convenience as provided in Paragraph 4, including the manner of termination and basis for settlement, consistent with Appendix II to 2 CFR Part 200.

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D. Contract Work Hours and Safety Standards Act. To the extent applicable, the Contractor and covered subcontractors shall comply with 40 U.S.C. §§ 3701–3708 and implementing regulations, including applicable overtime and working-condition requirements.

E. Clean Air and Water. If the Contract Price exceeds \$150,000, the Contractor shall comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act, 42 U.S.C. §§ 7401–7671q, and the Federal Water Pollution Control Act, 33 U.S.C. §§ 1251–1387. The Contractor shall report violations to the District, the federal awarding agency, and the appropriate EPA Regional Office and shall include this requirement in covered subcontracts.

F. Debarment and Suspension. The Contractor certifies that it, its principals, and its proposed subcontractors are not listed as excluded in the System for Award Management. The Contractor shall not enter into a covered transaction with an excluded or ineligible party and shall immediately notify the District of any proposed or actual suspension, debarment, exclusion, or ineligibility.

G. Byrd Anti-Lobbying Amendment. If the Contract Price exceeds \$100,000, the Contractor shall execute and comply with the certification required by 31 U.S.C. § 1352. The Contractor shall not use federal appropriated funds to influence or attempt to influence covered federal officials in connection with a federal award and shall disclose lobbying with non-federal funds as required. This requirement shall flow down to each applicable tier.

H. Prohibited Telecommunications and Video-Surveillance Equipment. The Contractor shall comply with 2 CFR § 200.216 and shall not provide or use covered telecommunications equipment or services as a substantial or essential component of any system or as critical technology as part of this Agreement.

I. Domestic Preferences. To the greatest extent practicable and consistent with law, the Contractor shall provide a preference for the purchase, acquisition, or use of goods, products, and materials produced in the United States in accordance with 2 CFR § 200.322 and shall include this requirement in applicable subcontracts and purchase orders.

J. Recovered Materials. When applicable, the Contractor shall comply with 2 CFR § 200.323 and Section 6002 of the Solid Waste Disposal Act, including applicable requirements for procuring EPA-designated items containing the highest practicable percentage of recovered materials.

K. DOI Covered UAS. No UAS may be used unless specifically approved in writing by the District and the BLM Farmington Field Office. The Contractor shall comply with all applicable Department of the Interior covered-UAS restrictions, OPM-35, the DOI Covered

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UAS Assessment Guide, FAA requirements, and project-specific approvals. Selection, award, or District review does not independently constitute operational approval.

L. Nondiscrimination and National Policy Requirements. The Contractor shall comply with all federal civil-rights, nondiscrimination, trafficking-in-persons, and other national-policy requirements expressly applicable to contractors under the federal award.

M. Flow-Down and Award Terms. The Contractor shall comply with each additional provision of the federal award that is expressly incorporated into this Agreement or identified in a written amendment and shall incorporate all mandatory provisions into each covered subcontract or purchase order. If a mandatory federal requirement conflicts with another contract term, the mandatory federal requirement controls to the extent of the conflict.

## **28. Order of Precedence.**

In the event of a conflict, the following order of precedence applies: (1) applicable law and mandatory federal award requirements; (2) written contract amendments; (3) this Agreement; (4) formal RFP addenda; (5) Appendix A – Statement of Work; (6) the remaining RFP documents and appendices; and (7) the Contractor's accepted proposal, clarifications, and cost proposal, except to the extent a later document is expressly incorporated and states that it controls.

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## 29. Authority.

If Contractor is other than a natural person, the individual(s) signing this Agreement on behalf of Contractor represents and warrants that he or she has the power and authority to bind Contractor, and that no further action, resolution, or approval from Contractor is necessary to enter into a binding contract.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date of the last signature below.

By: \_\_\_\_\_ Date: \_\_\_\_\_

Jaimie Scott  
District Manager

By: \_\_\_\_\_ Date: \_\_\_\_\_

Name of Contractor/Person Signing

Title