

**COMMONWEALTH OF PENNSYLVANIA  
PENNSYLVANIA GAME COMMISSION  
BUREAU OF WILDLIFE HABITAT MANAGEMENT**

**FORESTRY DIVISION**

**SPRING 2023 COMPETING VEGETATION REMOVAL PROJECT**

**CONTRACT SPECIFICATIONS**

## INDEX

SECTION	TITLE	PAGE NUMBER
SECTION A.	SCOPE OF WORK .....	1
SECTION B.	LOCATION.....	1
SECTION C.	OPERATOR QUALIFICATIONS .....	1
SECTION D.	ADMINISTRATIVE REQUIREMENTS.....	1
SECTION E.	PURCHASE ORDER TERM .....	2
SECTION F.	GENERAL PURCHASE ORDER TASK(S).....	2
SECTION G.	PURCHASE ORDER SPECIFICATIONS	
	1. INQUIRY NUMBER .....	5
	2. PGC REGION OFFICES .....	6
SECTION H.	OBLIGATIONS OF THE COMMISSION.....	6
	1. COMMISSION PERSONNEL.....	6
	2. PREWORK BRIEFING.....	6
	3. PRESpray MEETINGS .....	6
	4. MAPS.....	7
	5. DAILY SPRAY EQUIPMENT RECORD .....	7
SECTION I.	OBLIGATIONS OF THE OPERATOR .....	7
	1. GENERAL.....	7
	2. PESTICIDE APPLICATION BUSINESS LICENSE.....	7
	3. PROOF OF INSURANCE .....	7
	4. REGISTERING TO DO BUSINESS IN PENNSYLVANIA.....	7
	5. SPRAY MATERIALS.....	8
	6. LOADING AND WATER DRAFTING ZONES .....	8
	7. MAINTENANCE .....	8
	8. SECURITY .....	8
	9. FIELD EXPENSES AND TRANSPORTATION.....	8
	10. SPILL CLEANUP EXPENSES .....	8
	11. SAFETY .....	8
SECTION J.	OPERATOR PERSONNEL .....	8
	1. PROJECT SUPERVISOR .....	8
	2. GROUND-SUPPORT PERSONNEL .....	9
	3. SPRAY EQUIPMENT OPERATORS.....	9

SECTION K.	APPLICATION SPECS, CONDITIONS, AND RESTRICTIONS..	10
1.	SAFETY .....	10
2.	LOGISTICS .....	10
3.	WEATHER RESTRICTIONS.....	10
4.	ACCURACY .....	11
5.	RECONNAISSANCE .....	11
6.	FERRY TIME .....	11
7.	MARKING .....	11
8.	SPRAY TIME POLICY .....	11
9.	TIME OF SPRAY RESTRICTIONS .....	11
10.	GROUNDSPEED .....	12
SECTION L.	HERBICIDES AND ADJUVANTS.....	12
1.	PURCHASING, STORAGE AND TRANSPORTATION .....	12
2.	MSDS .....	12
3.	HERBICIDES .....	12
4.	ACCEPTABLE GLYPHOSATE FORMULATIONS .....	12
5.	ACCEPTABLE SULFOMETURON METHYL FORMULATIONS .....	12
6.	ACCEPTABLE METSULURON METHYL FORMULATIONS .....	12
7.	ACCEPTABLE PRODIAMINE FORMULATIONS .....	12
8.	ACCEPTABLE TRICLOPYR FORMULATIONS .....	12
9.	ACCEPTABLE IMAZAPIC FORMULATIONS.....	13
10.	ADJUVANTS.....	12
11.	OPERATIONAL PROBLEMS.....	13
12.	CONTAINER DISPOSAL .....	13
13.	HERBICIDE MIXING .....	13
14.	SAFETY .....	14
SECTION M.	SPRAY EQUIPMENT.....	14
1.	“MACHINE ONLY” LINE ITEMS.....	14
2.	“HAND SPRAY” LINE ITEMS.....	15
3.	“CONVENTIONAL” LINE ITEMS.....	15
4.	“STEEP / DIFFICULT” LINE ITEMS .....	15
SECTION N.	GROUND-SUPPORT EQUIPMENT.....	16
1.	INSPECTION .....	16
2.	ACCESSORY EQUIPMENT.....	16
3.	EQUIPMENT CLEANED .....	16
4.	FIELD TRUCKS .....	16
5.	TANKS.....	17
6.	PUMPS .....	17
7.	METERS.....	17
SECTION O.	HOLD HARMLESS STATEMENT .....	18

SECTION P. INSURANCE AND LICENSE REQUIREMENTS .....	18
1. WORKMEN'S COMPENSATION INSURANCE .....	18
2. COMPREHENSIVE GENERAL LIABILITY SERVICE .....	18
3. AUTOMOTIVE LIABILITY INSURANCE .....	18
4. ENVIRONMENTAL IMPAIRMENT LIABILITY INSURANCE .....	18
5. SUBCONTRACTORS/LEASED EQUIPEMENT .....	19
SECTION Q. BIDDING .....	19
SECTION R. PERFORMANCE SECURITY REQUIREMENTS .....	19
SECTION S. OPERATOR REFERENCES.....	20
SECTION T. PAYMENT TERMS .....	20
SECTION U. INVOICES .....	20
SECTION V. PROJECT TERMINATION.....	20
APPENDIX "A" SPRAY BLOCK LIST AND MAPS.....	21

# SPECIFICATIONS

## A. SCOPE OF WORK:

The Pennsylvania Game Commission (PGC), Bureau of Wildlife Habitat Management, requires the services of an Operator for approximately a four (4) month period at specifically designated locations to provide ground application of herbicide in forested areas of the Commonwealth of Pennsylvania to aid in the establishment of stands of desirable trees by eliminating competing understory vegetation consisting primarily of hay scented fern, striped maple, beech brush, spicebush, mile-a-minute vine, and various species of grass. The types and categories of equipment, specific locations and the timing for herbicide application required for Purchase Order(s) are detailed in Section G. **All Purchase Orders require the Operator to provide the herbicide, labor, insurance, and all miscellaneous expenses to complete the operation. The Commission will reimburse the Operator based upon the surveyed acreage treated.**

Any questions concerning the technical aspects of this bid should be directed to the Chief Forester at 717-787-2039, (physical address listed below). Questions concerning the Request for Quote, the Purchase Order(s) or bidding procedures should be directed to the PGC Procurement Division at 717-787-6594.

Paul S. Weiss  
Chief, Forestry Division  
Pennsylvania Game Commission  
Bureau of Wildlife Habitat Management  
2001 Elmerton Avenue  
Harrisburg, PA 17110-9797  
717-787-2039  
Fax 717-787-6957

## B. LOCATIONS:

Maps outlining the proposed project areas are attached as *Appendix A*. For more specific information on the location, topography, acreage, equipment designations, and other detail on the treatment areas and to review topographic maps of these areas, contact the Regional Forester designated in Section G2.

## C. OPERATOR QUALIFICATIONS:

To bid on this project, an Operator must be a Licensed Pesticide Applicator or firm that is currently licensed with the Commonwealth and have the equipment and qualified equipment operators and mechanics for the make and type of equipment indicated in these specifications.

## D. CONTRACT ADMINISTRATIVE REQUIREMENTS:

All work must be completed by June 30, 2023.

The Commission reserves the right to evaluate the proposed spray operation, including but not limited to equipment operators, spray equipment and operating plan, and reject any part of the operation that in the Commission's said opinion will result in unsatisfactory performance. The Commission reserves the right to reject any or all bids.

1. As a further guarantee of faithful performance of the conditions set forth in this contract, the Successful bidder hereby agrees to furnish the Commission with Certified Check, Savings Account, Irrevocable Letter of Credit, or other security acceptable to the Pennsylvania Game Commission, in the sum of **\$5,000.00 per line item.**

2. ANY SECURITY POSTED HEREUNDER MUST HAVE AN EXPIRATION DATE A MINIMUM OF ONE YEAR BEYOND THE EXPIRATION DATE OF THE CONTRACT.
3. Failure to comply with any of the terms of the conditions of the contract may result in cancellation of the agreement and claim may be made against the surety or the security for all or part of the damages sustained by such noncompliance.
4. Any extension of time under the Contract, or forbearance of cancellation and claim against the surety will not result in a release of the surety or the Principal from their obligations under the Contract and the surety.

**E. PURCHASE ORDER(S) TERM:**

The contract term shall be for approximately four (4) months; starting date is March 1, 2023, and ends June 30, 2023. **Specific blocks have acceptable treatment periods specified within this overall contract term. Refer to Appendix A for details.** *Spraying will be prohibited any time the **Palmer Drought Index** for the county in which a spray block is located is negative two (-2) or lower, or during the period of hard frost.* The Commission will determine the exact application start date and the time period that application may take place depending upon the type of treatment. The Commission reserves the right to alter the delivery starting and ending date by up to fifteen (15) days.

**F. GENERAL PURCHASE ORDER TASKS:**

1. It is the purpose and intent of this document to provide specifications for herbicide, equipment, application, and other operational requirements necessary for a properly prepared and executed Purchase Order(s) and for securing proper equipment, dispersal systems, service facilities, qualified ground personnel, and qualified equipment operators capable of making a proper ground application of herbicide and performing necessary related functions.
2. The Commission estimates a total of **2,497** acres of government-owned lands in the Commonwealth of Pennsylvania, consisting of several scattered spray blocks that are proposed for treatment. More specific information about each area is found in Section G, Item 1 and *Appendix A*. The treatment areas generally consist of uncut forest stands or stands that have recently received shelterwood harvests. In general, the areas are low-use areas, where proper and careful herbicide application is essential to allow the establishment of desirable trees. A list of the addresses and phone numbers of each Pennsylvania Game Commission Regional Offices involved in this project are given in Section G, Item 2.
3. **STARTING DATE** –Based upon previous experience, the estimated starting dates for each spray block are listed in *Appendix A*. The contract is scheduled to be completed in about four (4) months, depending upon weather conditions. It is possible that the starting dates for the contract could be one (1) to fifteen (15) days later than those given in Section E. The Program Supervisor must make changes in the starting dates listed in *Appendix A* in writing. Five days advance notice will be given to the Operator of the date on which to report.
4. **EQUIPMENT RECALL** - The Operator may be recalled to treat any areas that were missed or to retreat areas because of faulty application, wash-off, or inadequate herbicide effectiveness. The Program Supervisor will resolve any disputes between the Operator and the Field Project(s) Coordinator.
  - a. The Operator may be compensated for any recall spraying or respraying that results from wash off not to exceed five (5) percent of the total contracted acreage. Determining the five (5) percent compensation limit will be undertaken by the Program Supervisor with input provided by the Field Project(s) Coordinator for each Region as described below.

The re-treatment percentage will be determined by running transect lines through the vegetative control block perpendicular to the treatment pattern sampling an area thirty three (33) feet wide on both sides of the transect line. The area of transect lines that are unacceptable will be determined as a percentage of the total area of transect lines on a per block basis. The length and orientation of the transect lines will be determined by the hand compass and pacing method of surveying. Any block with more than fifteen (15) percent of the area rated as unacceptable must be retreated.

- b. Recall spraying and respraying resulting from misses and faulty application will be at the Operator's expense. The Operator will be required to treat, without any additional compensation; areas not treated due to skips, faulty application or equipment limitations that were not immediately readily apparent after initial application. The Field Project(s) Coordinator will make this decision within three (3) weeks of the initial application and will transmit a final written decision to the Operator with the exact locations and time frames that these areas must be retreated. Thereafter, the Operator will be required to complete the retreatment by the date specified in the Field Project(s) Coordinators letter. These areas may be treated with the Operator's primary spray equipment, small backpack type mist blowers, ATV mounted sprayers, or equivalent acceptable equipment at the Operator's option. The re-treatment percentage will be determined on a per block basis by the Field Project(s) Coordinator as described below.

The re-treatment percentage will be determined by running transect lines through the vegetative control block perpendicular to the treatment pattern sampling an area thirty three (33) feet wide on both sides of the transect line. The area of transect lines that are unacceptable will be determined as a percentage of the total area of transect lines on a per block basis. The length and orientation of the transect lines will be determined by the hand compass and pacing method of surveying. Any block with more than fifteen (15) percent of the area rated as unacceptable must be retreated.

- 5. **FAILURE TO PERFORM** - The Operator will be required to treat all acreage specified in the Purchase Order(s) within the service delivery dates.
  - a. **SUITABLE WEATHER** - Failure to successfully treat or re-treat an area in a timely fashion may result in a penalty of one hundred twenty (\$120.00) dollars per acre. The Operator must be prepared to spray any time the weather is deemed suitable by the Commission. The Operator will be granted, without penalty, a total of fifty (50) hours of failure to spray when conditions have been determined to be favorable by the Commission unless otherwise authorized in writing by the Program Supervisor. The penalty will apply if the Operator fails to comply to and complete all terms of the Purchase Order(s) and has used up the fifty (50) hour grace period. The Operator may be absent only with the written approval of the Field Project(s) Coordinator during periods of suitable spray weather. Failure to spray time will be noted on the Daily Spray Record and the penalty value assessed the Operator after the delivery date has passed.
  - b. **WORK HABITS** - Operator personnel are expected to work in a safe, diligent manner. During suitable weather or when suitable weather is expected within one hour, project personnel are expected to be at the scheduled treatment area. Rest periods of fifteen (15) minutes are recommended every two (2) hours of treatment time. A lunch break of thirty (30) minutes is recommended after four (4) hours of treatment time. A second thirty (30) minute break is recommended after eight (8) hours of treatment time. Treatment time of more than ten (10) hours a day is not recommended. Failure to commence treatment within fifteen minutes of the start of suitable weather may result in a penalty of seventy-five cents (\$.75) per minute. Break time in excess of the recommended time may result in a penalty of seventy-five cents (\$.75) per minute. The Operator will be granted, without penalty, a cumulative total of two (2) hours of late starts and excessive break time. Late starts and

excessive break time are separate from, but may be concurrent to failure to spray times. Late starts and excessive break time will be noted on the Daily Spray Record and the penalty value deducted from Operator Payments.

- c. **TREATMENT AREA** - Operator personnel are expected to know the location of treatment areas. Material applied off designated sites or to any sensitive area by the Operator will result in a separate penalty of one hundred dollars (\$100.00) per acre, or fraction thereof, per incident. All application costs associated with such incidents are the responsibility of the Operator and cannot be charged to the Commonwealth. The Program Supervisor may also deem such incidents a spill. Off site and sensitive area treatment areas will be noted on the Daily Spray Record and the penalty value deducted from Operator Payments.
6. **DAMAGE TO COMMONWEALTH PROPERTY** - The Operator shall be responsible for any damage to Commonwealth property resulting from the improper use of equipment for this spray operation. The Operator will be given one (1) written warning that damage is becoming excessive and if the action continues damages will be assessed.
- a. **TIMBER DAMAGES** –When, in the opinion of the Field Project(s) Coordinator, damage to the residual stand becomes excessive the Operator shall pay the Commission a fair base current value determined by the Field Project(s) Coordinator per unit of volume. If this value for damage due to Operator’s carelessness or negligence is less than \$10.00 per tree then a minimum charge of \$10.00 per tree will be made whether the tree is commercial, non-commercial, merchantable or non-merchantable.
  - b. **COMMISSION FACILITIES** - Operator shall immediately repair, in a manner that meets with the approval of the Field Project(s) Coordinator, any damage to Game Land roads and other facilities, including access roads, resulting from their use for this spray operation, general wear and tear excepted. Field Project(s) Coordinator may notify the Operator in writing to temporarily discontinue use of any of the above whenever, in their opinion, such action is necessary to prevent serious damage.
7. **EXPERIMENTAL SPRAYING** - The Commission may request a successful bidder to conduct a small amount of experimental spraying. This would be done to gain knowledge and experience with new herbicides, formulations, equipment, and/or technology to evaluate their operational potential. In such cases, equitable compensation would be negotiated on a per acre basis, if extra work or expense were involved.
8. **MINIMUM APPLICATION REQUIREMENTS** – The Commission has established minimum spray swath widths and a ground speed requirement listed in Section K (10). The Operator will be required to apply spray machines as listed in these Sections. If the Operator’s spray machine is capable of exceeding the limits listed, the Operator must prove to the Commission’s satisfaction that adequate coverage is safely maintained on target vegetation. The Program Supervisor may then modify in writing the spray widths and the ground speed listed in Section K (10) of this contract for the remainder of the contract.
9. A separate report on the Operator's designated personnel and equipment to be used on the project must be submitted to the Program Supervisor. **The report must be formatted and include all information as follows:**

Purchase Order(s) Number:  
Operator:  
    Name of Operator  
    Name of President or Owner (specify)  
    Address  
    Telephone Number  
SubOperator(s):



Name of SubOperator  
 Name of President or Owner (specify)  
 Address  
 Telephone Number  
 On-Site Project Supervisor:  
 Name  
 Address  
 Telephone  
 Person Holding Pesticide Applicators License(s)  
 Name(s)  
 Spray Equipment Operators  
 Names  
 Glyphosate Formulation:  
 Trade Name  
 Sulfometuron Methyl Formulation:  
 Trade Name  
 Metsulfuron Methyl Formulation:  
 Trade Name  
 Prodiamine Formulation:  
 Trade Name  
 Triclopyr Formulation:  
 Trade Name  
 Imazapic Formulation:  
 Trade Name  
 Spray Equipment:  
  
 Owner  
 Make/Model  
 Spray System Make  
 Tank Capacity (Gallons)  
 Operating Load Capacity (Gallons)  
 Inspection Location  
 Description of Ground-support Equipment

**G. INDIVIDUAL PURCHASE ORDER(S) SPECIFICATIONS**

1. **Inquiry Number: Spring 2023 PGC Herbicide Spraying - See *Appendix A* for maps and further information.**
  - a. Counties Involved: Warren, Venango, Clinton, Bedford, Huntingdon, Dauphin, Perry, York, Sullivan, Wayne, Lancaster, Lebanon, Schuylkill, Cameron, Elk, McKean, Clearfield, Lycoming, Centre
  - b. Regions Involved: North West, North Central, South Central, North East, South East
  - c. Type of Areas to Be Treated: State Game Lands. Total Acres: 2,497 Acres. See attached "SPRING 2023 HERBICIDE SPRAY INFORMATION"
  - d. Estimated Starting Date: March 1, 2023
  - e. Estimated Completion Time: Approximately Four (4) months

- f. Herbicides:
  - 1. Glyphosate (*Accord* or equivalent) – Minimum of 50 % Active Ingredient
  - 2. Sulfometuron methyl (*Oust XP* or equivalent) - Minimum of 75% Active Ingredient
  - 3. Metsulfuron Methyl (*Escort* or Equivalent) Minimum of 60% Active Ingredient
  - 4. Prodiamine (*Proclipse* or Equivalent) Minimum of 65% Active Ingredient
  - 5. Triclopyr (*Garlon 3a* or equivalent) – Minimum of 44% Active Ingredient
  - 6. Imazapic (*Plateau* or equivalent) - Minimum of 23% Active Ingredient
- g. Adjuvants: A non-ionic surfactant of at least 80 percent active ingredient (16 ounce AI/A)
- h. Loading Zones: Multiple loading zones are required. See Section I.6 and Section N for details on deadlines and equipment/personnel requirements.

**2. REGIONAL OFFICES**

Northwest Region  
 Scott Wolbert, RF  
 PO Box 31  
 Franklin, PA 16323  
 814-432-3187

Northcentral Region  
 Gary Glick, RF  
 P.O. Box 5038  
 Jersey Shore, PA 17740  
 570-398-4744

North East Region  
 Warren Harris, RF  
 3917 Memorial Hwy  
 Dallas, PA 18612  
 570-675-1143

Southcentral Region  
 Roy Bucher, RF  
 8627 William Penn Hwy  
 Huntingdon, PA 16652  
 814-643-1831

South East Region  
 Randall Bauman, RF  
 253 Snyder Road  
 Reading, PA 19605  
 610-926-3136

**H. OBLIGATIONS OF THE COMMISSION**

- 1. **COMMISSION PERSONNEL** - The Commission will furnish personnel to supervise and direct the spray operation in the following capacities:
  - a. **PROGRAM SUPERVISOR** - The Chief of the Forestry Division in the Bureau of Wildlife Habitat Management is responsible for the overall operation of the vegetation control program and represents the Commission in settling minor contractual matters.
  - b. **FIELD CONTRACT COORDINATORS** - These persons are Regional Foresters or their designee who serve as the Commission's field liaison with the Operator and are responsible for reviewing and approving/disapproving the spraying operations plan, verifying calibration of all spray equipment, verifying acceptable spraying conditions, and conducting quality control checks on the spray equipment and application during the spraying operations. This person is responsible for coordinating the activities of all people working on the program within a region and communicating with the Operator's project supervisor concerning any operational problems or changes in plans. He/she also provides daily reports of the operation to the program supervisor.
- 2. **PREWORK BRIEFING** - The Commission will conduct a pre-work briefing for the Operator and any subOperators on a date to be specified by the Program Supervisor. The Program Supervisor will meet individually with each Operator on that date prior to the briefing to review the required items and information for accuracy. A joint briefing will then be held between the Program

Supervisor, the Operators' and subOperators' representatives, and any other invited persons to discuss, among other things, Purchase Order(s) specifications, project deadlines, and program safety. Participation at this meeting is required for the Operator and all subOperators working on the Purchase Order(s). Field Project(s) Coordinators may attend this meeting at their option.

3. **PRESPRAY MEETINGS** - The Field Project(s) Coordinator will hold periodic meetings in addition to the pre-work conference with Operator and subOperator personnel to discuss, among other things, logistics, deadlines, safety, to verify spray equipment calibration, check Operator's Purchase Order(s) compliance, and examine Operator's equipment.
4. **MAPS** - The Commission will supply for use by the Operator, copies of 7 1/2-minute USGS topographic quadrangle maps, aerial photographs, or other suitable images on which the areas to be treated have been delineated. The Commission will also supply for operational purposes, copies of maps on which treatment areas have been drawn.
5. **DAILY SPRAY EQUIPMENT RECORD** – The Operator will keep an accurate record of the herbicide solution metered into the spray equipment and the acreage treated. A copy of the Daily Spray Equipment Record, signed by the spray equipment operator, will be provided to the Commission. The Operator will not be paid for any herbicide treatment applied in unauthorized areas or jettisoned accidentally or in emergencies. The spray equipment operator's signature indicates agreement with the data on the form. Payment is based upon agreed surveyed acreage treated, not gallons sprayed.

#### **I. OBLIGATIONS OF THE OPERATOR**

1. **GENERAL** - The Operator is obligated to furnish spray equipment, spray materials, support equipment, and personnel necessary to produce herbicide application in accordance with the Request for Quote, the Purchase Order(s) Specifications, and the Purchase Order(s). Other sections in these Purchase Order(s) Specifications give more specific information on the equipment and personnel required. The Operator maintains responsibility for an entire project even if another organization is providing part of the equipment and personnel.
2. **PESTICIDE APPLICATION BUSINESS LICENSE** - The Operator must show proof of a valid Pesticide Application Business License issued by the Pennsylvania Commission of Agriculture (PADA) in the category appropriate for ground spraying of forests.
3. **PROOF OF INSURANCE** - The Operator must provide proof of insurance as specified in Section Q for equipment owned, leased, rented, subcontracted, or otherwise utilized by the Operator and for all personnel hired, subcontracted, or otherwise employed by the Operator.
4. **REGISTERING TO DO BUSINESS IN PENNSYLVANIA** - Out-of-state incorporated Operators and out-of-state incorporated subcontractors must obtain a certificate of authority from the Pennsylvania Commission of State before doing business in the Commonwealth, in accordance with Section 103 of the Act of December 21, 1988, (P. L. 1444, No. 177), as amended, known as the Business Corporation Law of 1988, 15 Pa. C.S.A. 4101 et seq. This section states the manner for procuring a certificate of authority to do business in the Commonwealth and states certain activities the performance of which by an out-of-state business corporation is not considered to be doing business in the Commonwealth for purpose of procuring a certificate of authority. One such excluded activity is "conducting an isolated transaction completed within a period of 30 days and not in the course of a number of repeated transactions of like nature" [15 Pa. C.S.A.4122 (a)(10)]. Contact the Pennsylvania Commission of State, Corporation Bureau, 308 North Office Building, Harrisburg, PA 17120 (717-787-1057) for instructions and the necessary form. A copy of the approved registration must be provided to the Commission.

5. **SPRAY MATERIALS** - The Operator is responsible for the purchase of the herbicide and any adjuvant used in this project. Specific details on herbicides and adjuvant are given in Section L.
6. **LOADING AND WATER DRAFTING ZONES** - The Operator must notify the Commission Field Project(s) Coordinator at project inception of the equipment loading and water drafting zones selected for use. Enough suitable loading zones must be secured prior to project inception so locating additional or alternative sites is not necessary during the spray application period. Loading zones must be adequate to accommodate the size and type of equipment used to supply water to the treatment area. The Commission reserves the right to reject any loading or water drafting zones it regards as unsuitable.
7. **MAINTENANCE** - The Operator must maintain a readily available on-site inventory of commonly needed spare parts and spare equipment including, but not limited to, pumps, pump seals, and other components to provide current maintenance on the spray system and equipment, the mixing and pumping system, the support trucks, and the storage tanks and to provide for immediate replacement of critically needed parts and equipment. Routine maintenance must be conducted only at times that will not interfere with the spray operation. Care must be taken to prevent leakage of spray material at all times.
8. **SECURITY** - If guard service for the spray equipment and/or support equipment is required or desired, the Operator must provide the necessary personnel.
9. **FIELD EXPENSES AND TRANSPORTATION** - Costs incurred in the operation and maintenance of all Operator equipment is the responsibility of the Operator. Expenses incurred by all Operator personnel including arrangements for food, lodging, and transportation are the responsibility of the Operator. The Operator is responsible for providing a means of ground transportation for Operator personnel. The Operator must secure all required bonds and permits for all roads and bridges needed to access spray areas prior to beginning operations.
10. **SPILL CLEANUP EXPENSES** - The Operator is responsible for all cleanup activity and costs resulting from any contamination caused by the accidental or intentional spilling, leakage, or dumping of herbicide, fuel, oil, or any other contaminant from Operator supplied equipment. Operator will indemnify and hold harmless the Commonwealth for any such incident. See Section O. PA Operator will provide adequate insurance. See Section P (4).
11. **SAFETY** - The Operator is required to conduct all operations in a safe manner and to have a well-defined, written safety plan. The Operator must provide essential safety equipment including, but not limited to, properly sized and coded fire extinguishers and spill-containment materials and supplies. All Operator and Commission personnel must be briefed by the Operator in their use. **By February 15th, the Operator must supply the program supervisor with a copy of the Operator's safety plan along with a written narrative explaining how the Operator will deal with a major (100+ gallons) fuel and/or herbicide spill at the loading site and a major dump of herbicide in a spray block.** Commonwealth must review and approve safety plan.

## J. OPERATOR PERSONNEL

1. **PROJECT SUPERVISOR** - The Operator must designate one of its personnel to serve as the on-site project supervisor and to represent the company in all contractual matters that require prompt attention. This person must be familiar with all equipment being used and, as necessary, must be certified or registered as required by the Pennsylvania Pesticide Control Act rules and regulations of the Pennsylvania Commission of Agriculture.

If the project involves the use of no more than one loading zone at any given time, a spray equipment operator or ground-support person may serve as the project supervisor. If the project

involves the simultaneous use of two or more loading zones, the project supervisor must not be assigned to regularly operate spray equipment or serve as ground support for any equipment.

2. **GROUND-SUPPORT PERSONNEL** - The Operator must supply properly qualified and trained ground support personnel per loading zone unless otherwise specified in writing by the Program Supervisor. These personnel will drive all necessary support vehicles, handle and mix herbicides, help apply the herbicide solution, operate and maintain the equipment used to transfer and mix herbicides, and properly fuel, service, and maintain each piece of spray equipment. The Operator will have at least one (1) qualified spray equipment operator on site per loading zone at all times.

All ground-support personnel must be familiar with the equipment's spray system and knowledgeable of calibration techniques. Providing people with no training or no prior experience is not permitted. All personnel provided by the Operator must understand and be fluent in English. All ground personnel involved with the mixing of herbicide must be supervised, certified, or registered as required by the Pennsylvania Pesticide Control Act rules and regulations of the Pennsylvania Commission of Agriculture.

All ground-support personnel must be equipped and trained to take proper action in an emergency. These people must observe all safety precautions in handling and mixing the herbicides and in refueling the spray equipment. The Operator is required to replace any ground support person who, in the opinion of the Commission, does not demonstrate the knowledge and capability to perform his/her duties.

### 3. **SPRAY EQUIPMENT OPERATORS**

- a. **QUALIFICATIONS** - The Operator must provide equipment operators that are qualified to operate the spray equipment specified in the bid in a safe and efficient manner while keeping damage to the residual stand to a minimum. The Commission reserves the right to decide when damage is becoming excessive.
- b. **EQUIPMENT OPERATORS LIST** - The Operator must provide the Commission with a list of all spray equipment operators slated for use on the project as designated in Section F.8.
- c. **MAP COMPREHENSION** - Each equipment operator must demonstrate proficiency at reading and navigating from the maps or other images used to identify and locate treatment areas.
- d. **PESTICIDE APPLICATOR CERTIFICATION** - Each spray equipment operator must be certified in the appropriate category by the Pennsylvania Commission of Agriculture for the type of spraying being done.
- e. **CONTROLLED SUBSTANCE USE** - Any employee observed by the Commission using or in possession of any non-prescription, controlled substance such as, but not limited to, marijuana, hashish, cocaine, heroin, and/or amphetamines shall be immediately dismissed from the project. Such findings will be reported to the appropriate law enforcement agency.
- f. **ALCOHOL CONSUMPTION** - Any employee observed by the Commission consuming alcohol or exhibiting symptoms of alcohol intoxication or impairment or any other intoxication or impairment will be immediately suspended for 24 hours. A second occurrence will result in dismissal from the project.
- g. **COMMISSION'S RIGHT TO REJECT** - The Commission reserves the right to reject the Operator's use of any spray equipment operator who, in the Commission's opinion, has performed unsatisfactory in previous operations whether in Pennsylvania or elsewhere.

- h. EQUIPMENT OPERATOR RESPONSIBILITY** - The spray equipment operator is responsible for the accurate and proper application of the herbicide spray to the designated site using good application delivery procedures as generally recognized as correct by professionals in the ground application industry.

The spray equipment operator is responsible at all times for the safe operation of the spray equipment. The equipment operator is responsible for the identification and avoidance of all hazards in the operation area. The equipment operator must make a reconnaissance walk over each spray block to identify and locate any such hazards prior to treating the block.

- i. SPRAY EQUIPMENT OPERATOR PROTECTIVE GEAR** - All spray equipment operators and ground personnel must wear protective gear provided by the Operator as specified by the specimen label requirements.
- j. RADIO COMMUNICATIONS** - The Operator must provide for radio communication with all Operator employees on the job site and at least one (1) radio for Commission personnel to use.

## **K. APPLICATION SPECIFICATIONS, CONDITIONS, AND RESTRICTIONS**

- 1. SAFETY** - Commission and Operator personnel are required to conduct themselves in a safe manner at all times. The Commission and Operator will prepare detailed safety plans that will be reviewed with all involved Commission and Operator personnel prior to the start of the spraying operations. The Operator must provide spray equipment suitable for the safe application of herbicide on all types of terrain encountered on the project(s).
- 2. LOGISTICS** - Once on site and under contract to the Commission, each piece of spray equipment and its operator, ground-support equipment, and crew are under the logistical direction of the Field Project(s) Coordinator.
- 3. WEATHER RESTRICTIONS** - Using the following guidelines, the Commission will determine when weather conditions are acceptable for spraying operations to be conducted. Information supplied by the Commission's field personnel and the Operator's spray equipment operator are used in making this determination.
  - a. WIND VELOCITY** - Wind velocity must be 10 mph or less in the open or 4-mph or less under a forest canopy when measured in or near the spray block with a hand-held wind gauge. If excessive drifting of the spray cloud occurs because of higher wind velocity above the forest canopy, spray operations must be suspended even though surface-level wind conditions meet the above conditions. Caution must also be exercised when dead calm conditions exist because of the formation of temperature inversion layers. Under such conditions, the smaller droplets in the spray cloud will remain suspended and will not settle into the forest floor. Spray operations must be curtailed until such conditions clear.
  - b. PROBABILITY OF PRECIPITATION** - Probability of precipitation within two (2) hours after the completion of spraying must be 50 percent or less. This probability of precipitation is provided by Flight Service Weather (1-814-234-9412), National Weather Service (use closest local source), or other contracted weather forecasting source.
  - c. RELATIVE HUMIDITY** - Relative humidity must be high enough to prevent evaporation of the smaller droplets in the spray cloud before they contact the foliage (large droplets may still be deposited). Spray deposition must be monitored closely when relative humidity drops below 50 percent with spraying curtailed when excessive evaporation is detected.

- d. **AIR TEMPERATURE** - Air temperature in the shade at approximately five feet above the ground must be 40 to 80 degrees Fahrenheit. Spraying may continue above 80 degrees Fahrenheit if thermals are not developing and the spray cloud is settling into the forest floor without excessive evaporation.
  - e. **WET FOLIAGE** - Foliage must not be dripping wet either from precipitation or overnight dew.
  - f. **PALMER DROUGHT INDEX** – Spraying will not be permitted in any spray block where the Palmer Drought Index for the county is –2 or lower. Spraying may resume when the drought index rises above –2.
4. **ACCURACY** - The Operator must guarantee a complete and accurate coverage of the designated areas within the spray block. The spray application is monitored for accuracy by Commission personnel who look for uniform coverage and acceptable droplet size in the designated areas. All blocks must be sprayed as specified in the Appendix. If any designated area is missed or improperly treated, it must be re-sprayed at the Operator's expense, or the penalty (Section F.5) will be assessed at the appropriate rate.

Care must be exercised in keeping all spray material within the designated block boundaries and away from areas designated as being sensitive to the spraying. Care must also be exercised by the spray equipment operator in keeping spray drift out of open water. Any sensitive areas sprayed will have a penalty (Section F.5) assessed at the appropriate rate.

5. **RECONNAISSANCE** - A reconnaissance walk may be required by the spray equipment operator over each spray block prior to treatment to ascertain the block layout and to identify and avoid any hazards. If the spray equipment operator has difficulty in conducting adequate reconnaissance and/or in orienting with the spray blocks, the Operator is required to supply a ground guide to preview all spray blocks prior to spraying.

Where it is agreed to be advantageous by the Commission and the Operator, the Commission may provide a person familiar with the area to help conduct the reconnaissance to locate and delineate boundaries of the spray areas. Reconnaissance is provided by the Operator and is not billed separately to the Commission.

6. **FERRY TIME** - Ferry time to and from the job or between loading zones in the project area is provided by the Operator and is not billed separately to the Commission.
7. **MARKING** - The boundary of each spray area will be surveyed and the area computed with an error of closure in the 1 in 300 range. **Payment will be based on the Commission's surveyed acreage.**
8. **SPRAY TIME POLICY** - Because of the short spray window available, it is essential that advantage be taken of any acceptable spray weather within the limits imposed by foliage development, work-hour limits, certain time-of-spray restrictions and safety considerations. Therefore, spraying should take place whenever weather conditions permit, including evenings and weekends.
9. **TIME-OF-SPRAY RESTRICTIONS** - Spraying must be curtailed at certain times in certain situations to avoid potential conflicts with land users.
- a. Spraying is not permitted near state, federal or other parks and/or campgrounds from noon on Friday through Sunday or from noon the day proceeding a holiday through the holiday unless special arrangements have been made with the park manager. These special arrangements must include a written waiver signed by the park manager attesting that persons utilizing that area are not being exposed to herbicide treatment against their will or without their knowledge.

- b. Spray operations may be curtailed whenever the Commission determines that fatigue is becoming excessive.

10. **GROUNDSPEED** - Spray equipment ground speed may not exceed 1.5 miles/hour when applying herbicide to spray blocks.

#### L. HERBICIDES AND ADJUVANTS

1. **PURCHASING, STORAGE, AND TRANSPORTATION** - The Operator must purchase the herbicide used on this project, pay all applicable sales and use taxes, and arrange for delivery of the product to a suitable site where it will be secure and protected from damage. The Operator must assure that adequate supplies of herbicide are strategically located in the project area to assure an efficient operation. The Operator must also assure that its personnel and Commission personnel are aware of the locations of these supplies.

Commonwealth property may be used to store spray material and equipment if prior arrangements are made with the Regional Forester.

The Operator is also responsible for handling and transporting the herbicide from the storage site to the equipment-loading zone.

2. **MSDS** - The Operator must keep a copy of the Material Safety Data Sheet (MSDS) available on site throughout the course of the project for any herbicide or other materials requiring an MSDS that are supplied by the Operator for the project.
3. **HERBICIDES** - All spraying will be conducted with glyphosate, sulfometuron methyl, triclopyr, prodiamine, imazapic, and metsulfuron methyl herbicides with the acceptable formulations identified below. Section G provides details on the acres to be treated with each material on each project and the dilution rates to be used.
4. **ACCEPTABLE GLYPHOSATE FORMULATIONS** - All glyphosate will be applied diluted in water at a final spray volume of twenty-five (25) fluid gallons per acre. Areas that are treated with supplemental spray equipment will have glyphosate applied diluted in water at a final spray volume of eight (8) fluid gallons per acre.
5. **ACCEPTABLE SULFOMETURON METHYL FORMULATIONS** - All sulfometuron methyl will be applied diluted in water at a final spray volume of twenty five (25) fluid gallons per acre. Areas that are treated with supplemental spray equipment will have sulfometuron methyl applied diluted in water at a final spray volume of eight (8) fluid gallons per acre.
6. **ACCEPTABLE METSULFURON METHYL FORMULATIONS** - All metsulfuron methyl will be applied diluted in water at a final spray volume of twenty five (25) fluid gallons per acre. Areas that are treated with supplemental spray equipment will have sulfometuron methyl applied diluted in water at a final spray volume of eight (8) fluid gallons per acre.
7. **ACCEPTABLE PRODIAMINE FORMULATIONS** - All Prodiamine will be applied diluted in water at a final spray volume of twenty five (25) fluid gallons per acre. Areas that are treated with supplemental spray equipment will have Prodiamine applied diluted in water at a final spray volume of eight (8) fluid gallons per acre.
8. **ACCEPTABLE TRICLOPYR FORMULATIONS** - All Triclopyr will be applied diluted in water at a final spray volume of twenty five (25) fluid gallons per acre. Areas that are treated with supplemental spray equipment will have Prodiamine applied diluted in water at a final spray volume of eight (8) fluid gallons per acre.



- 9. ACCEPTABLE IMAZAPIC FORMULATIONS** - All Imazapic will be applied diluted in water at a final spray volume of twenty five (25) fluid gallons per acre. Areas that are treated with supplemental spray equipment will have Prodiamine applied diluted in water at a final spray volume of eight (8) fluid gallons per acre.
- 10. ADJUVANTS** - A non-ionic surfactant of at least eighty (80) percent active ingredient (AI) applied at a rate of 16 ounces AI/A.
- 11. OPERATIONAL PROBLEMS** - The Operator must determine what, if any, operational problems exist with any product. These problems may include handling, mixing, storage, transportation, and spraying difficulties. To the best of the Commission's knowledge at this time, no adverse characteristics exist with any of the listed products. It is the Operator's responsibility to insure a trouble-free operation with the material purchased. If a delivered product presents operational problems, it must be immediately replaced.
- 12. CONTAINER DISPOSAL** - The Operator is responsible for the proper disposal of all herbicide and adjuvant containers as specified on the product label.
- 13. HERBICIDE MIXING**
- a. WHEN TO MIX** - All herbicides must be mixed at the work-site as needed only in quantities sufficient to keep the spray equipment in operation. Mixing is done during the pre-spray check in the morning and while the spray equipment is out spraying. At no time is the quantity of mixed material at the work-site permitted to exceed the capacity of the mix tank. The decision to mix herbicide as well as the quantity to mix is the responsibility of the Operator. Material not mixed in the presence of Commission personnel may not be used. Any material left in the tank as the spray equipment is moved to different sites must have written verification from the Commission stating the time and date that mixing took place. Any material deemed unsuitable must be properly disposed of at the Operator's expense as outlined in the specimen label.
- b. MIXING PROCEDURES** - All herbicides must be mixed in strict accordance with the herbicide manufacturer's recommendations. Detailed mixing procedures along with allowable storage periods for the mixed herbicide are prepared by the Commission for the formulations used based upon the manufacturer's recommendations and are given to all personnel involved in herbicide mixing. All herbicide mixtures must be agitated for at least fifteen (15) minutes prior to spraying.
- c. TIME LIMITS ON HOLDING MIXED HERBICIDE** - Mixed material must be sprayed within the following time limits established by the Commission. The Commission will not compensate the Operator for any herbicide that must be disposed of due to the time limits on holding mixed batches being exceeded.
- 1. SULFOMETURON METHYL** - Mixed batches of sulfometuron methyl may be sprayed within 24 hours of mixing without concern as long as the batch is properly re-agitated. Any mixed batch held beyond 24 hours must be properly disposed of and a new batch mixed. The cost of this additional herbicide is the responsibility of the Operator.
- 2. GLYPHOSATE, METSULFURON METHYL** - Mixed batches may be applied up to forty-eight (48) hours after mixing has taken place. The tank the material is stored in must be parked in the shade when not in use.
- d. WATER** - The Operator must supply and transport the water used for mixing. Only water sources approved by the Commission may be used. The Operator must perform a pH test on each water source and include that information when apprising the Commission of each water source's location.

14. **SAFETY** - The Operator must follow all safety procedures that apply to general pesticide handling and to the specific material being used. Persons handling the sulfometuron methyl formulation or the open containers in which it is packaged must wear rubber gloves provided by the Operator. Persons must also be wearing long sleeved shirts, long pants and shoes plus socks.

## M. SPRAY EQUIPMENT

### 1. "MACHINE ONLY" LINE ITEMS

- a. **EQUIPMENT** - All equipment to be used in or upon any spray equipment must meet all state and federal safety regulations. Spray equipment must be able to complete the project in adequate time. **Spray equipment must be capable of applying herbicide a minimum spray width of 40 feet from each side of the machine for a total of 80 feet and 15 feet in height in open conditions. Consecutive spray passes must obtain coverage of the vegetation to a height of 15 feet which will result in some double application in the zone where 2 passes overlap.** The spray rig must be capable of navigating the terrain and forest conditions specified in this contract. Most often this requires a rubber tired or tracked machine capable of traversing through and over downed trees and rocks. The Commission reserves the right to reject any piece of equipment that in its opinion will not adequately complete the job.
- b. **INSPECTION** - Commission personnel will inspect the Operator's spray equipment to determine if they meet the Specifications. Performance tests, as necessary, will be conducted at a location mutually agreed upon by Commission personnel and the Operator. The Operator assumes all expenses incident to operation of the spray equipment and the equipment operator's time during these tests. The Commission may request this inspection be held as many as sixty (60) days prior to the scheduled start of spraying. On-site inspection on the reporting date may be acceptable if approved in advance by the Commission.
- c. **EQUIPMENT REFUELING** - Any refueling of the spray equipment done while the engine is running must be done by hose line and nozzle only. Fueling from containers will be permitted only during complete engine shutdown. Proper fueling and bonding procedures as approved by the National Fire Protection Association must be followed.
- d. **LOADING** - The equipment operator is responsible for the proper loading of the spray equipment. Loading is under the equipment operator's direction and must be inspected by the equipment operator before leaving the loading zone. The weight must not exceed the maximum gross weight specified by the equipment manufacturer. The equipment operator must compensate for any adverse conditions.
- e. **TANKS** - Leak proof, corrosion-resistant tanks with exterior filler openings must be used. The location and size of tanks must not impair ground worthiness by overloading or displacing the center of gravity beyond acceptable limits. Filler openings or necks must be large enough to prevent surging during filling. Tanks must be vented to the outside. Tanks must be able to draw spray material on slopes of at least twenty (20) percent.
- f. **PUMPING SYSTEM** - The pumping system must be securely attached and capable of maintaining the pressure required insuring the even distribution of the herbicide. All plumbing and pumps must be large enough to handle the required flow. All parts, including pump seals, must be chemically and abrasively resistant to the spray material being used.
- g. **PRESSURE GAUGES** - An accurate liquid-filled spray pressure gauge must be located so that the equipment operator can easily read it.

- h. **FLOW METERS** - An accurate liquid filled flow meter must be located so that the equipment operator can easily read it. The Commission's representative on site will measure the fluid levels of all tanks at the start and end of each load and block. The Operator will be required to park the spray equipment on a level area as specified by the Commission for these measurements.
- i. **NOZZLES** - The nozzle delivery system will be designed to meet the Commission's spray objectives. Nozzle delivery angle should be adjustable from horizontal to at least 45 degrees above horizontal. The Operator will work with the Commission's Monitoring Specialist to achieve the specified results. This will typically entail two or three different types of nozzles arranged in a specific order.
- j. **SHUTOFF** - To avoid contamination of areas not scheduled for treatment, the entire spray system must be leak proof and have a positive shutoff mechanism capable of eliminating dripping from the nozzles.
- k. **SYSTEM CLEANING** - The equipment spray system, including tanks, must be cleaned of all foreign material and flushed with water prior to the start of the spray operation. The spray system must be flushed following spraying on a daily basis to prevent drying of spray material. The Operator must daily clean all screens, check for leaks and clogs, verify pump pressure, and monitor flow rate. **Spray equipment used to spray non-native invasives must be cleaned prior to entering State Game Lands if coming from an area with invasives.**

## 2. "HAND SPRAY" LINE ITEMS

- a. **SPRAY EQUIPMENT** - spray equipment must meet the following minimal specifications.
- b. **BACKPACK MIST BLOWER** - The mist blower must be able to discharge spray material thirty-three (33) horizontal feet and twenty-five (25) vertical feet. Additional requirements are a three (3) gallon translucent formula tank with content level marks, a five (5) horsepower engine and the ability to dispense granular chemicals.
- c. **ATV MOUNTED SPRAYER** - The sprayer system must be able to deliver spray material twenty-five (25) horizontal feet and twenty (20) vertical feet. Additional requirements are the ability to dispense granular chemicals, a twenty five (25) gallon translucent formula tank with content level marks, a 12 volt diaphragm pump, a pressure gauge and switch, a spotgun capable of being adjusted from straight stream to hollow cone, a spray boom and a brass "T" valve to switch from spot gun to spray broom.

## 3. "CONVENTIONAL" LINE ITEMS

- a. **SPRAY EQUIPMENT** – For spray blocks listed under "Conventional" line items, the operator may use equipment that meets specifications under the **MACHINE** requirements or equipment that meets specifications under **HAND SPRAY** requirements at their discretion. The Commission reserves the right to reject any piece of equipment that in its opinion will not adequately complete the job.

## 4. "STEEP / DIFFICULT" LINE ITEMS

- a. **SPRAY EQUIPMENT** – For spray blocks listed under "Steep / Difficult" line items, the operator may use equipment that meets specifications under the **MACHINE** requirements or equipment that meets specifications under **HAND SPRAY** requirements at their discretion. The Commission reserves the right to reject any piece of equipment that in its opinion will not adequately complete the job.

## **N. GROUND-SUPPORT EQUIPMENT**

- 1. INSPECTION** - In order to execute the Agreement, the Operator must supply the Commission with specifics on the ground support equipment the Operator will provide. Commission personnel may inspect this equipment and, at the Operator's expense, conduct performance tests, as necessary, at a mutually agreed-upon site 60 days or less prior to the start of spraying operations.
- 2. ACCESSORY EQUIPMENT** - All accessory equipment, including any vehicles necessary for transporting the herbicide from storage or from one operational site to another, are the responsibility of the Operator. Accessory equipment supplied by the Operator includes, but is not limited to, trucks, herbicide storage and/or mixing tanks (equipped for agitation and recalculation), pumps, hoses, metering devices, and similar equipment necessary for mixing the herbicide and loading the spray equipment. The Operator must also supply two (2) readily accessible and properly sized and coded fire extinguishers for each vehicle.
- 3. EQUIPMENT CLEANING** - All equipment that comes in direct contact with the herbicide must be kept thoroughly clean and free of residues and foreign particulate matter.

### **4. FIELD TRUCKS**

- a. LIGHT-DUTY TRUCK** - The Operator must supply a vehicle for each ground crew to use for transporting personnel, moving herbicides, running for parts, and similar duties. If the Operator-provided nurse truck is unsuitable for conducting these errands in an expeditious manner, the Operator must provide a pickup truck or other acceptable vehicle. Commission-owned vehicles may not be used for these purposes.
- b. NURSE TRUCKS** - A truck or trucks equipped for mixing and transporting herbicide are required for each independently working spray equipment or a group of spray equipment working from a single loading zone. Truck and trailer combinations are acceptable if they meet all requirements of the Pennsylvania Department of Transportation, do not exceed local road and bridge weight limits, and do not present maneuverability problems at the designated field work-sites. Each independently working spray equipment or group of spray equipment working from a single loading zone must have sufficient ground-support equipment and personnel to adequately service it/them without causing any production delays.

The field truck or trucks supplying each spray rig must be designed to separately carry the herbicide concentrate, water, additives, and equipment fuel to the work-site. The quantities transported to the work-site must be sufficient to supply spray equipment working from that site for five hours of spraying without exceeding the truck or road legal weight limits. Because access is very limited to a number of spray blocks, the Operator must make arrangements for a nurse truck that can handle limited access. Many roads and bridges leading into spray blocks have weight restrictions and tight turning radiuses.

All trucks transporting equipment fuel or other hazardous materials must be placarded and supplied with shipping papers as required under the U. S. Department of Transportation's Hazardous Materials Regulations (HAZMAT).

Each mix truck must be supplied with drum wrenches if barrels are being used.

## 5. TANKS

- a. **GENERAL** - All tanks used to transport and mix herbicides must be leak-proof and corrosion resistant. Filler openings and air vents must be adequate to prevent surging during filling. All tanks must be equipped with properly fitting covers or hatch plates that must be kept closed except when filling or circulating to reduce the chance of contamination with foreign materials.
- b. **MIX TANK** - The mix tank must have a capacity of at least 1.5 times the load capacity of the spray equipment it supplies. However, the mix tank must not be so large that it would be impossible to use it to mix smaller quantities sufficient to supply the spray equipment on a per load basis only. This minimizes the risk of mixing too much herbicide at one time and having problems with storage of mixed herbicides. The mix tank must not contain any baffles or other obstructions that restrict agitation in any portion of the tank. The system must be designed to produce a swirling action that will mix and agitate the herbicide solution throughout the tank and not allow the material to precipitate out of solution. All return lines on the re-circulation system must enter below the surface of the mixture to reduce foaming problems and assure proper agitation. All tanks used to batch-mix herbicide must have visual calibration markings or a dipstick calibrated at 25-gallon or finer intervals for use as a double check of the meters. All tanks must have flow meters visible to both the Operator and Commission personnel.
- c. **CLEANING** - All tanks must be thoroughly cleaned and free of rust, residues, and particulate matter such as grit and sand. All tanks must be inspected by the Commission before being filled with herbicide or water.

## 6. PUMPS

- a. **WATER PUMP** - Each truck used to transport water must be equipped with a pump capable of drafting water a vertical distance of at least ten feet. The truck must be equipped with a non-collapsing suction hose, an anti-siphon device or check valve, a coarse screen, and a bucket. The configuration must be such that water being taken into the truck can be metered if needed, and it must pass through a strainer no coarser than 50 mesh.
- b. **CIRCULATION PUMP** - The pump used for circulation, mixing, and loading must produce a sufficient flow rate to fill the spray equipment it supplies in a maximum of three minutes without producing high pressures.
- c. **NUMBER OF PUMPS** - The same pump may be used for all purposes if a single truck is used for mixing and for transporting water and herbicide, provided all requirements are met. If a separate truck is used for any of these purposes, it must have its own pump.
- d. **PUMP SEALS** - All pump seals must be chemically and abrasively resistant to the spray material being used.
- e. **PROHIBITED PUMPS** - No high-pressure piston pumps or hand pumps are permitted.

## 7. METERS

- a. **GENERAL** - The mixing system must be designed to accurately meter water, herbicide concentrate, and the mixed herbicide. If the mixing system or herbicide storage system is designed such that air could be sucked into the lines and cause erroneous meter readings, the meter must be equipped with an air eliminator.

A strainer no finer than 30 mesh must be installed in line to screen the solution prior to entering the meter.

The meter must be capable of safely handling the flow rate necessary for loading the spray equipment.

Meters with lighted digital displays that are difficult to see in direct full sunlight are not acceptable.

- b. **CALIBRATION** - The Operator must provide evidence that all metering devices employed have been inspected and calibrated by a licensed inspector within two months prior to the start of the spraying operation. At or before the time the Operator's spray equipment are calibrated, the Operator must supply the Commission's Field Project(s) Coordinator with a copy of the inspector's calibration report for each meter used in the project.

The spray equipment must be calibrated to deliver spray material at three (3) designated spray widths found in the Appendices. The Operator will work with the Commission's Monitoring Specialist to achieve the specified results.

**O. HOLD HARMLESS:**

Operator shall be responsible for and agrees to indemnify and hold harmless the Commonwealth from and against damages to property or injuries (including death) to any persons and other losses, damages, expenses, claims, demands, suits, and actions by any party against the Commonwealth in connection with the work performed by Operator.

**P. INSURANCE AND LICENSE REQUIREMENTS:**

The Operator shall purchase and maintain at its expense the following types of insurance, issued by companies acceptable to the Commonwealth. Operator must provide proof of insurance as specified in Items 1, 2, 3 and 4 for equipment owned, leased, rented, subcontracted, or otherwise utilized by the Operator and for all personnel hired, subcontracted, or otherwise employed by the Operator.

Such policy(s) shall name the Commonwealth as an additional insured. Prior to the commencement of work under the Purchase Order(s), Operator must provide the Commonwealth with current Certificates of Insurance. These Certificates shall contain a provision that coverage's afforded under the policy shall not be canceled or changed until at least thirty (30) days prior written notice has been given to the Commonwealth.

1. **WORKMEN'S COMPENSATION INSURANCE** sufficient to cover all of the employees of Operator working to fulfill the terms of the project.
2. **COMPREHENSIVE GENERAL LIABILITY INSURANCE**, including bodily injury and property damage insurance, to protect the Commonwealth and the Operator from claims arising out of the performance of the Purchase Order(s). The amount of bodily injury insurance will not be less than \$300,000.00 for injury to or death of persons in a single occurrence. The amount of property damage insurance shall not be less than \$300,000.00 per occurrence of property damage.
3. **AUTOMOTIVE LIABILITY INSURANCE**, including bodily injury and property damage insurance to protect the Commonwealth and the Operator from claims arising out of the performance of the Purchase Order(s). The amount of bodily injury insurance shall not be less than \$300,000 for injury to or death of persons in a single occurrence. The amount of property damage insurance shall not be less than \$300,000 per occurrence of property damage.
4. **ENVIRONMENTAL IMPAIRMENT LIABILITY INSURANCE** - covering environmental impairment caused by negligence in an amount of \$500,000 per occurrence. This specific type of insurance may be substituted by any riders to any of the aforementioned insurance, provided it services the same benefit and purpose. These provisions must cover the PA Commonwealth, as well, for any liability.

5. **SUBOPERATORS/LEASED EQUIPMENT** - If any work under the Purchase Order(s) is subcontracted or otherwise performed by anyone other than the Operator or performed with equipment subcontracted or leased by the Operator, the Operator must provide liability insurance as specified under its own policy(s) in order to provide coverage for any persons and/or equipment so subcontracted or leased or the Operator must provide evidence that the specified liability insurance for any persons and/or equipment so subcontracted or leased is provided for under a policy(s) maintained by the sub-Operator or lessor.

## Q. BIDDING

1. **RECEIVING AND OPENING BIDS** - The bid shall be awarded on a **line item basis**. Bids must be submitted via the PA Supplier Portal, to be found at [www.pasupplierportal.state.pa.us](http://www.pasupplierportal.state.pa.us) Faxed bids and mailed bids will NOT be accepted.

Bids will be publicly opened on **XXXXX, 2023 at 2:00 PM.**, at the Pennsylvania Game Commission, 2001 Elmerton Ave., Harrisburg, PA 17110-9797.

The **per acre price** shall include the cost of herbicides, labor, insurance, and all miscellaneous expenses necessary for the completion of the tasks. Prices bid shall be in dollar and cents only.

2. **BID RESULTS** - Bidders can obtain results at [www.emarketplace.state.pa.us/bidtabs.aspx](http://www.emarketplace.state.pa.us/bidtabs.aspx)

The posted results will contain the information of the apparent bidders, and all bids are under review until final award of the purchase order.

Quantities herein are only estimates and may increase or decrease dependent upon the needs of the Commission. Operator shall be paid at the unit price bid for actual services performed.

The Commission reserves the right to reject any or all bids and award contracts as it determines to be in the best interest of the Commission.

## R. PERFORMANCE SECURITY REQUIREMENTS

As a further guarantee of faithful performance of the conditions set forth in this contract, the Successful Bidder(s) hereby agrees to furnish the Commission with Certified Check, Savings Account, Irrevocable Letter of Credit, or other security acceptable to the Pennsylvania Game Commission, in the sum of **\$5,000.00 per line item**.

ANY SECURITY POSTED HEREUNDER MUST HAVE AN EXPIRATION DATE A MINIMUM OF ONE YEAR BEYOND THE EXPIRATION DATE OF THE CONTRACT.

Performance Security is due no later than 30 days after notice of the bid award. Time is of the essence with regard to the provision of Performance Security. At the option of the PGC, failure to provide an acceptable Surety within 30 days will result in cancellation of the contract and the PGC may declare the bidder ineligible on future projects.

Failure to comply with any of the terms or conditions of the contract may result in cancellation of the agreement and claim may be made against the surety or the security for all or part of the damages sustained by such noncompliance.

## S. OPERATOR REFERENCES

After bid opening and prior to awarding the Purchase Order(s), the Commission has the right to request three (3) references (name, addresses and telephone numbers) of similar work performed in the previous two (2) years as proof of qualifications to perform the work involved in the project(s).

## T. PAYMENT TERMS:

Payment shall be on a reimbursement basis for actual services performed. **Payment will be made on the basis determined by the Commission's surveyed acreage treated.**

## U. INVOICES

Original invoices must be sent to:

Commonwealth of PA – PO Invoices  
P.O. Box 69180  
Harrisburg, PA 17106

A copy must be sent to:

David J. Gustafson  
Chief, Forestry Division  
Pennsylvania Game Commission  
Bureau of Wildlife Habitat Management  
2001 Elmerton Avenue  
Harrisburg, PA 17110-9797  
[dgustafson@pa.gov](mailto:dgustafson@pa.gov)

All invoices must have the **Purchase Order Number, dates of service, as well as the Operator's SAP Vendor Number** on the invoice. The name and address listed on the purchase order must match each invoice. Failure to provide this information may result in a delay of payment.

## V. PURCHASE ORDER(S) TERMINATION

The Commonwealth may terminate the Purchase Order(s) for its convenience if the Commonwealth determines termination to be in its best interest. Operator shall be paid for work completed.



# ***APPENDIX A***

**COMMONWEALTH OF PENNSYLVANIA  
PENNSYLVANIA GAME COMMISSION  
BUREAU OF WILDLIFE HABITAT MANAGEMENT**

**FORESTRY DIVISION**

**SPRING 2023 COMPETING VEGETATION REMOVAL PROJECT**



PGC 2023 (FY22) Spring Herbicide - Forestry

Line 1 - NW Region Hand Application - 261

Line 2 - NC Region Conventional - 728 Acres

Line 3 - NC Region Hand Application - 79 Acres

Line 4 - NC Region Machine Only - 148 Acres

Line 5 - SC Region Hand Application - 413 Acres

Line 6 - SC Region Machine Only - 181 Acres

Line 7 - NE Region Hand Application - 292 Acres

Line 8 - SE Region Conventional - 179 Acres

Line 9 - SE Machine Only - 216 Acres