



State of New Jersey

DEPARTMENT OF THE TREASURY
DIVISION OF PURCHASE AND PROPERTY
Purchase Bureau
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October 19, 2009

Gypsy Moth Spraying And Sketch Mapping

Request for Information

INTRODUCTION

The State of New Jersey, Department of Treasury, Division of Purchase and Property on behalf of the Department of Agriculture, in correlation with cooperative purchasing partners is seeking information from qualified service providers of Aerial Insecticide Application and Aerial Survey, of the State Gypsy Moth Program, in the most cost efficient manner that provides greater management oversight, accountability and monitoring of the procured services.

Intent

Various municipalities and counties have tentatively agreed to participate in this control program for their respective properties. A final written agreement between the governmental agency and a vendor is necessary before any spraying begins. All vendors are hereby advised that the State will not assume any liability (including payments) for any treatment other than on State properties.

Vendors , will be required to furnish aircraft, personnel, and facilitating equipment to apply insecticide for the control of gypsy moth infestation per program requirement Unit I in addition to sketch mapping requirements per program requirement Unit II.

Important note: Information provided in response to this RFI is not subject to the Open Public Records Act because it consists of information which, if disclosed, would give an advantage to competitors or bidders.

Kindly be advised that no questions will be addressed in reference to this RFI.

This RFI seeks responses from entities that provide the product and services reflected in the specifications below in order to develop a clear and detailed RFP.

Please email responses with the **Gypsy Moth Spraying And Sketch Mapping** Program, RFI to: pat.locane@treas.state.nj.us. Responses are requested by November 12, 2009

RESPONSE

The Division of Purchase and Property requires responding vendors to comment and summarize its concerns or additional requirements that may be implemented with the following specifications:

All services shall be performed as described here-in. Deviations will not be considered unless a vendor can explain in detail that the deviation is of material benefit to the State and provides service levels at least equal to those specified.

A vendor must be certified and licensed by the FAA and all other Federal, State, Municipal and Local Agencies.

CERTIFIED PESTICIDE APPLICATOR AND RESPONSIBLE PERSON REGRISTRATION

Requirement Unit I, a pesticide applicator is required by the New Jersey Department of Environmental Protection (DEP), to obtain proper certification for the insecticide material to be use.

It shall be incumbent upon a vendor to satisfy all New Jersey Department of Environmental Protection pesticide licensing and registration requirements within ten (10) calendar days of notification of the State's intent to award a contract for services requiring said licensing and registration. Failure to comply with this requirement within the stipulated time frame will be cause for the rejection of its bid proposal.

Vendors must own at least 70% of the aircraft required and guarantees that he/she will not lease or otherwise subcontract the remainder of the aircraft equipment or pilots needed for the performance requirements of program from any commercial pesticide operator or applicator business whose registration is suspended by any governmental agency.

OPERATING PERFORMANCE STANDARDS FOR RESPONSIBLE CONTRACTORS:

Operating Standards:

- A. All equipment meeting RFP requirements.
- B. Pilots possessing the proper certification for agricultural flying.
- C. Obtaining the necessary FAA and State clearance, for all pilots and aircraft.

- D. Reporting on date as directed and providing all required equipment, personnel, facilities by the starting date.
- E. Personnel reporting to work on time daily and remaining on the job until officially released.
- F. Cooperation in following instructions, based on contract specifications.
- G. Avoiding repeated delays caused by malfunction of equipment or delays in loading between trips which affect the total overall length of time to perform the contract.

REQUIREMENTS:

Vendors shall provide various aerial spraying services for the control of gypsy moth infestation to The State of New Jersey in accordance with the following performance requirements as listed below and the program description and requirements. In accordance with these requirements the contractor shall provide the following:

- A. Aircraft
- B. Pilots
- C. Airport facilities as required
- D. Proper aircraft maintenance
- E. All required fuel
- F. Any and all personnel, equipment and services associated with providing the aerial spraying service described herein, including but not limited to the following:

- F(1) Insecticide and Diluents
- F(2) Material Transportation
- F(3) Pesticide Storage Areas
- F(4) Mixing Equipment
- F(5) Loading Equipment
- F(6) All Aircraft Boundary Markers (4 foot diameter triple latex balloons).
- F(7) Pressure Gauges for Helium Tanks
- F(8) Helium Tanks

G. Unicom radios for communication with aircraft, and to monitor aircraft communications with base airport, FAA flight service stations as well as weather stations within the treatment areas.

H. National Oceanographic and Atmospheric Administration (NOAA) weather reporting equipment including, but not limited to; the parameters of rain fall, wind speed and direction; and temperature.

PAYMENT OF LANDING AND OTHER ASSOCIATED FEES:

Vendors shall select the airport(s) he will use and make the necessary arrangements with the proper authority for the:

- A. Use of each required airport
- B. Payment of all landing and other associated fees for airport use.

- C. Payment for any and all repairs or damages that result from contractor's aircraft, equipment, contamination, or personnel.
- D. Immediate removal of all aircraft and equipment from the airport(s), unless other satisfactory arrangements are made with the airport authorities.
- E. Policing aircraft loading areas to restrict access by unauthorized persons.
- F. Maintaining the areas by the contractor in a clean and orderly fashion during their use and cleanup after use.

ESTIMATED HOURS AND STATE'S RIGHT TO EXPANSION:

The number of flying hours indicated for each program requirement and description are estimated hours only. The State may order expansion service in the amount up to 50% of the estimated number of hours on each individual schedule.

FACILITIES SURVEYS AND INSPECTIONS:

The State reserves the right at any time during normal work hours to inspect a vendor's work location. This inspection may include, but is not limited to, pre-award or post contract award survey.

Should the result of any inspection made by state authorities indicate that the material/services supplied does not meet specifications; a vendor shall immediately rectify the situation at no additional cost to meet those requirements.

LICENSES AND PERMITS:

Vendors shall be required to secure, pay for and maintain, during the term of this contract, all licenses, permits, certifications, inspections, authorizations, or any documents required by federal government, state government, county and municipal governments to perform this contract. A vendor shall also supply the State with written evidence that such licenses, permits, certifications, inspections, authorizations or other required documents have been obtained, prior to contract award and any time during the term of this contract.

AIRCRAFT MAINTENANCE/PILOT PROFICIENCY AWARD CRITERIA:

Federal Aviation Administration (FAA) approved maintenance records are necessary for the safe operation of the aircraft. Maintenance shall be performed in accordance with all applicable requirements of the federal government including, but not limited to, maintenance programs and manuals approved by the FAA.

Vendors shall provide fully qualified and proficient pilots who have met all applicable requirements of the federal and state governments.

INSPECTION AND APPROVAL OF EQUIPMENT:

All aircraft equipment and storage facilities are subject to inspection and approval by a representative of The State of New Jersey designated by the Director of the Division of Plant Industry. Vendors must specify where aircraft equipment and storage facilities are available for inspection within one (1) week after notification. Any costs for travel and expenses to inspect equipment and aircraft shall be borne by the contractor.

PROOF OF AIRCRAFT OWNERSHIP:

Proof of aircraft ownership or evidence of a satisfactory lease agreement must be provided as requested at anytime during the term of the contract.

CERTIFICATION/LICENSE:

A vendor must be certified under federal aviation regulations parts 135, 137 and/or part 133 as appropriate. A vendor must possess license(s), certificate(s) and registrations) required by N.J.A.C. 7:30.6.2(a), 7:307.2(a), 16:54 and 16:55 as appropriate.

Vendors shall provide a copy of each required certificate, license, or registration as required by the State at anytime during period of the contract.

COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS:

A vendor must comply with all applicable FAA and State of New Jersey Regulations

CURRENT AIRWORTHINESS CERTIFICATE:

A current FAA air worthiness certificate must be displayed in each aircraft being operated in conjunction with this contract

INSTALLATION OF SPECIAL EQUIPMENT ON AIRCRAFT:

The installation of any special equipment specified must be FAA approved. Aircraft used in the program must be equipped with a differential GPS receiver to accurately pinpoint spray blocks in the gypsy moth aerial application program. The spray aircraft pilot shall also be familiar and capable of using the DGPS equipment.

PERSONNEL REQUIREMENTS:

PROVIDE THE FOLLOWING PERSONNEL:

- A. A representative at each airport being utilized shall have full authority to make decisions for the vendor and direct all operations. They shall be stationed at the airport for the duration of the contract and shall be available for consultation at all times as requested by the contract administrator.
- B. Pilots qualified, certificated in accordance with applicable FARS and capable of completing flight activities as scheduled. Pilots shall possess a currently valid FAA commercial or high pilot certificate and maintain currency in accordance with Federal Aviation Regulations (PARS). Pilots shall meet all requirements of the operator's certificate necessary for conducting operations specified in this RFP and possess an appropriate medical certificate as required by the FARS. Each pilot must also hold an instrument, multi-engine or rotor-craft-helicopter rating(s) where applicable.
- C. In addition to the above the pilot shall meet the following minimum experience requirements which shall be verified by a personal or company log book when requested by the State:

1. SINGLE ENGINE - AERIAL APPLICATION AIRCRAFT

- A. Total time, including following 1200 hrs
- B. Pilot in command 500 hrs
- C. In class of aircraft to be flown 10 hrs
(make and model)

2. SINGLE ENGINE - OBSERVATION AIRCRAFT

- A. Total time, including following 700 hrs
- B. Pilot in command 500 hrs.
- C. In class of aircraft to be flown 10 hrs.
(make and model)

3. MULTI-ENGINE -PILOT IN COMMAND

- A. Total time, including following 1500 hrs.
- B. Pilot in command 1000 hrs.
- C. Pilot in command multi engine 500 hrs.
- D. In class of aircraft to be flown 10 hrs.
(make and model)
- E. Multi engine rating
- F. Instrument rating as appropriate

4. MULTI-ENGINE -CO PILOT

- A. Hold a valid FAA commercial pilot certificate

- B. Hold a valid FAA multi-engine rating
- C. Hold a current FAA instrument rating as appropriate
- D. Total time 500 hrs.

5. ROTOCRAFT-HELICOPTER

- A. Total time including following 1200 hrs
- B. Pilot in command rotorcraft-helicopter 900 hrs
- C. In each class of aircraft to be flown 150 hrs
(make and model)
- D. Turbine helicopter - if applicable 100 hrs

6. ADDITIONAL PILOT REQUIREMENT FOR AERIAL APPLICATION AIRCRAFT-
ROTORCRAFT

- A. More than 350 hours aerial application experience, of which at least 100 certified hours was devoted to forest treatment. Each pilot shall certify the hours devoted to each program, the State it was conducted in and the year it was conducted.

7. The pilot in command is responsible for the safety of the aircraft, its occupants and cargo. He shall operate the aircraft in accordance with FAA requirements and safety regulations. He shall comply with the direction of the state representative, except when in his judgment, such compliance will be in violation of applicable Federal or State regulations.

- D. Personnel to mix insecticide and to load and service the aircraft.
- E. FAA licensed "Airframe and Power plant" mechanic on staff, certified in accordance with the applicable FARs, capable of repairing and maintaining spray and observation aircraft throughout the duration of the contract. A copy of the license shall be submitted upon request by the State representative.

INSECTICIDE MIXING EQUIPMENT:

Vendors shall provide the following;

Clean tank trucks for mixing insecticide in sufficient quantities to ensure uninterrupted aircraft operation. Each tank truck shall be equipped with a pump of at least 50 gallons per minute capacity arranged so that it can be used to load or unload the tank.

Mixing equipment as required in the unit specifications. Each mixing unit shall have a cylindrical mixing tank that shall have a bottom inlet located near the outlet and be equipped with a sparyer tube or a similar device so installed that the insecticide swirl when circulated. Agitation paddles are not required. The tank will have a hole on the top side through which the insecticide and diluents can be emptied. Provisions are to be made to accurately measure each batch of insecticide formulation mixed, either by means of calibrated measuring sticks, sight gauge, or other acceptable means.

An engine driven centrifugal pump shall be attached to each tank to mix and circulate the insecticide. This pump may be used to add diluents to the tank through fitting and valve combinations. It may also be used to load the aircraft.

AIRCRAFT LOADING FACILITIES:

Vendors shall provide the following aircraft loading facilities:

- A. Pumps capable of loading each aircraft at a minimum rate of 50 gallons per minute, unless the mixing pump is used for this purpose. Also have one spare pump available for use in case of pump malfunction.
- B. Meters of adequate capacity to accurately measure the insecticide into each aircraft. The contractor shall provide evidence that each meter has been inspected and calibrated by a licensed inspector within one month prior to beginning the application operations.
- C. Air eliminator.
- D. Loading nozzles or couplings and all plumbing necessary to complete the loading installation.
- E. The 25-mesh strainer should be inserted in the pressure end of the loading hose in order to strain the insecticide before loading into the aircraft.
- F. Positive shut-off, quick-disconnect couplings, valves, or attachments so installed as to reduce loss of insecticide during loading or uncoupling.

INSECTICIDE DISPERSAL SYSTEM:

A vendor shall be certified under federal aviation regulations part 137 and/or part 138 as appropriate. Additionally, must possess license(s), certificate(s) and registration(s) required by N.J.A.C. 7:30.6.2(a), 7:30.7.2(a), 16:54 and 16:55 as appropriate. Each spraying aircraft shall have:

- A. An insecticide dispersal system that has been cleaned thoroughly inside. All hoses shall be in good condition and shall be a chemical resistant type such as neoprene.
- B. Leakproof insecticide tank(s). **Caution**, insecticide may loosen some sealants and plug the spraying system.
 - (1) The tank(s) in each aircraft shall have a sump no larger than 6 gallons capacity, so attached that the tank(s) can be emptied completely in flight or on the ground.
 - (2) An unloading valve in the bottom of each aircraft tank sump, and in the bottom of the spray tank in all other aircraft, so that the tank(s) can be drained completely while the aircraft is parked. This valve is needed to determine calibration, to drain insecticide following a breakdown and on completion of the program. When suspensions are

used and there is a breakdown or shutdown due to weather, the valve is needed to transfer the load into another aircraft or into the insecticide mixing tank.

- C. A pump that will provide the required flow rate at not less than 35 P.S.I. during spraying operations to assure uniform flow and proper functioning of the nozzles. Gear, centrifugal, or other rotary types of pumps will be acceptable.
 - (1) Each centrifugal pump shall be so mounted and designed that the pump will prime itself with no more than 25 gallons of insecticide for swath checking and calibration.
 - (2) Pumps with a pumping capacity greater than 25 percent above the required flow rate shall have a bypass system that connects that spraying pump outlet with the pump inlet. This bypass shall be equal in size to the pump outlet. The bypass commonly used to circulate materials in the spray tank will be used.
- D. A leakproof spraying system capable of spraying the insecticide uniformly. Nozzles shall be spaced generally uniformly across a span approximately equal to 3/4 of the wingspan. If the total boom length equals the wingspan a nozzle shall be attached in each end of the boom.
- E. A positive shutoff system that will prevent dribble from the nozzles.
- F. Bleed lines in any point that may trap air on the pressure end of the spraying system.
- G. A spraying system pressure gauge with an operating range from zero to 100 P.S.I.
- H. A 25-mesh screen in the spraying system.
- I. A dispersal system that has a sufficient number of stainless steel 80-degree flat fan nozzle tips required for the application rate specified in the unit needs as follows:
 - (1) Orifice size for each nozzle tip for category b and c fixed wing and category C and D helicopter aircraft shall have a flow rate from 0.8 to 1.0 gallon per minute at 40 P.S.I. or as otherwise required by the state representative.
 - (2) Orifice size for each nozzle tip for all other aircraft shall have a flow rate of 0.6 gallon per minute at 40 P.S.I. or as otherwise required by the state representative.
 - (3) No nozzle screens are required.
 - (A) Provision shall be made on all aircraft so that nozzle direction can be changed when it is necessary to change droplet sizes.
 - (B) Should the contractor choose to use spinning nozzles he shall provide at least four spinners for each aircraft.

COMMUNICATIONS REQUIREMENT

Each spraying aircraft and each observation aircraft shall be equipped with a fully operative two-way VHP radio capable of transmitting and receiving on VHF122.75 MHZ. The VHF transceiver must be capable of providing a quality level of output so as to assure easily made and easily understandable communication by both pilot and state representative. Each observation aircraft must have an operational intercom unit to allow clear communication between the pilot and state representative.

FAA AND NEW JERSEY REGULATIONS:

Compliance with all applicable FAA and State of New Jersey Regulations. This includes any current regulations issued by the FAA regarding aircraft and insecticide safe guarding and security as well as any rules and/or recommendations issued by the national association of aerial applicators or any other responsible agency.

All BT products purchased for use on the departments program shall be new material, manufactured within the last six months or the date of application. This shall be certified by Affidavit from the manufacturing company. A must provide chain of custody documentation of the insecticide from his point of manufacture to delivery.

All spray aircraft must be disabled when not in use (prop locks) to prevent unauthorized operation. All aircraft doors and hoppers also must be sealed after daily operations.

All insecticide holding containers, hoppers, mixing tanks, pumps, hoses and similar equipment must have all possible points of entry sealed and secured when not in use.

Notwithstanding Para. 137.51(b) 4 (pars), when congested areas are included in the area (s) to be sprayed, only multi-engine aircraft or rotorcraft as defined by the state representative will be used. The contractor shall, prior to the starting date, complete all flight tests required by the FAA to operate his multi-engine aircraft over congested areas. The government representative will reject any aircraft that has not completed such tests prior to the starting date.

INSECTICIDE USAGE:

An estimate of the amount of insecticide that is jettisoned for any reason shall be made by the State government and the cost thereof deducted from any monies due.

If it becomes necessary to terminate the contract prior to completion of the specified operational hours because of biological or entomological reasons, the contractor shall not be entitled to any compensation as a result of termination if through his own fault he is behind in the projected work schedule. The work schedule and determination of liability will be based on progress reports.

An estimate of the amount of insecticide lost due to spillage, overflowing of tanks, leakage of tanks, or loading devices, due to the contractor's negligence, will be made by the State representative and the cost thereof deducted from any amounts due.

FLIGHT LIMITATIONS:

There will be no formation flying over residential areas unless otherwise designated by State representatives.

Swath Checks: Swath Checks will be conducted when there is reason to believe that the spraying system will not produce a uniform deposit pattern or the spraying system will not produce swath as wide as that shown for each aircraft type listed in the section entitled aircraft categories.

There may be areas within the program boundaries that will not be sprayed. Such areas will be designated by the State representative. Each pilot will be briefed thoroughly and every effort must be exerted to avoid spraying such areas.

The height of flight for each category aircraft on each program will be specified by the state representative.

OPERATIONAL HOURS:

The program requirement and description will specify the number of operational hours a contractor will be allowed to complete a contract. Operational hours are defined as those hours during a day when satisfactory aerial spraying can be done. Operational hours will include all aircraft loading and ground time between trips, but will not include aircraft loading time prior to the approved starting time or after operations are shut down nor will it include the minutes beyond the last half hour of operations.

On a day when operations are conducted without interruption or suspension requested by the state representative, the operational hours charged for that day will begin when the first aircraft is cleared for takeoff and will continue until the last aircraft lands. However, if during a day, the state representative suspends operations due to wind or other reasons, and then clears the aircraft to continue operations later in the day, the operational hours charged for the day will be for the total hours used during those operating periods, less the minutes beyond the last hour of operations.

A contractor who fails to spray on an operational day will be charged for each operational hour he could have sprayed up to a maximum of 6 hours for each such day.

When the contract gallons are increased up to 25 percent, the number of operational hours allowed to complete the program will be increased proportionately.

On an operational day when all or any aircraft on the program cannot operate for reasons beyond the control of the contractor, a proportional adjustment will be made in the operational hours charged for that day. Such conditions would include: (1) when one or more aircraft are grounded for lack of guidance furnished by the government, (2) certain areas may not be ready for spraying, or

(3) when one or more aircraft are grounded due to fog or poor visibility in their areas while others can operate. Example: if there are 4 aircraft on a program and 2 can spray, the operational hours charged would be 1/2 of those used on that day.

Spraying shall be done, weather permitting from 5:30 a.m. until 2:00 p.m. and evening spray time (5:30 p.m. -8:00 p.m.) as determined by the state with agreement of the municipality or cooperating agency. There shall be a one hour shutdown each morning as determined by the state representative to reduce exposure to school children.

The word "day", as used in this contract, means calendar day. Unless ordered otherwise by the state representative during the program, operations may be conducted 7 days per week.

OBSERVATION AIRCRAFT:

The contractor shall provide three four-place observation aircraft (CESSNA 172 or approved equal) and pilots for the duration of the program, equipped as follows:

- A. Aircraft must be equipped with a fully operative two-way radio capable of transmitting and receiving on vhf 122.75 MHZ. The vhf transceiver must be capable of producing a quality level output so as to assure easily made and easily understandable communication by both pilot and state representative. The aircraft must also have an operational intercom unit to allow clear understandable communication between the pilot and state representative.
- B. The aircrafts shall be equipped with airborne GPS navigational units to accurately pinpoint spray blocks in the gypsy moth aerial application program. The observation aircraft pilot shall be capable of using the GPS navigational equipment.
- C. Aircraft shall be equipped with a device to record flight hours and be capable of safe operation from the airport(s) used by the spraying aircraft.
- D. Aircraft shall be in good mechanical condition with a current 100-hour inspection approval. The aircraft will not qualify for acceptance when its engine time has reached manufacturer's recommended overhaul time. New or overhauled engines shall have been flown a minimum of 5 hours before use on a program. Should a 100-hour inspection be performed on the aircraft during the course of the program, the contractor shall test fly the aircraft prior to carrying government personnel. Current logbooks shall be provided to verify aircraft and engine time inspections.
- E. The aircraft engine shall be equipped with a standard muffler. The maximum noise level in the cabin shall be such that the occupants can converse without using earphones.
- F. Each observation aircraft and its pilot shall be stationed at the airport, specified by the state representative throughout the period of the contract to carry state personnel for the monitoring of spraying operations and other program related activities.

POST PROGRAM COMPLETION AIRCRAFT REQUIREMENTS:

There shall be available for five (5) working days after the completion of the program, one application aircraft and pilot, one observation aircraft and pilot, and one mixing unit in the event that missed areas or skips are detected.

PILOT FLIGHT SUIT:

All pilots shall be provided with a safety approved helmet and fire retardant (Nomex) flight suit and gloves.

SPRAY BOUNDARY MARKERS:

Spray boundary markers shall be provided, if required by program requirements, or unit descriptions, to each municipality or agency, which shall consist of triple latex rubber balloons (4 feet in diameter) filled with helium and fastened to paddles with light weight nylon cord. Helium tanks shall be fitted with special reduced pressure hoses so they can be used to inflate balloons.

THE STATE'S RESPONSIBILITIES:

Provide maps, briefing, information and guidance for the pilot of the areas to be treated with insecticide.

Provide and maintain an accurate daily flight record and furnish the contractor with a copy.

Coordinate the distribution of helium tanks; pressure hose, paddles, and light weight cord, if required by program requirements (see program requirements and descriptions).

Arrange for the cooperating counties and agencies to pay the contractor for each acre upon which bacillus thuringiensis is acceptably applied at the dosage rates outlined in the unit.

ROLE OF STATE'S REPRESENTATIVE:

The state's representative may reject any aircraft deemed not suitable for this contract. Qualifying tests of aircraft may be conducted by the state's representative to assure that operational standards are met. All operational costs incurred in conducting these tests will be borne by the contractor. All aircraft and equipment proposed for use in this contract will be inspected prior to the award date of the contract.

- A. The state's representative may reject, at any time, any pilot or other employee whom he finds unqualified or incompetent, violates contract provisions, or operates an aircraft or equipment in a negligent or unsafe manner.
- B. The state representative shall determine the time, date and sequence, for spraying individual areas. The time to start and stop spraying each day shall also be determined by the state representative.

- C. Should the contractor wish to provide additional aircraft and pilot(s) that meet all contract requirements, he may do so provided it is agreeable to the state representative. No adjustments will be made in the contract price for providing additional aircraft.
- D. The starting date shown in the program description and specific requirements (part two) is an estimated date when all aircraft, personnel, and facilitating equipment must be ready to begin spraying. The official starting date, to be specified by the state representative after award is made, will be the latest date on which the contractor shall be fully prepared to begin spraying.
- E. The state representative shall determine whether program progress is satisfactory. When contractor has not completed spraying 40 percent of the insecticide within 40 percent of the operational hours allowed, he will be required to furnish up to two additional aircraft within 3 calendar days after request by the state representative. Such aircraft shall be of the same category as those specified in the description; shall meet all contract requirements, including qualified pilot(s) to operate the aircraft; and shall be fully operational within 1 day after reporting. No adjustment will be made in the contract price for furnishing such additional aircraft.
- F. Reconnaissance flights: the state representative shall be authorized to accompany the pilot of the spray aircraft on reconnaissance flights when required, to orient the spray pilot and delineate the spray area boundaries.

INDEMNIFICATION AND INSURANCE REQUIREMENTS ARE EXPANDED TO INCLUDE THE FOLLOWING ADDITIONAL REQUIREMENTS:

INDEMNIFICATION

The state government will not assume any responsibility whatsoever for loss or damage of equipment owned or operated by the contractor, his agents, or employees of subcontractor or for the injury to or death of the contractor, his agents or employees of contractor. The contractor will be responsible for any negligent or wrongful acts or omissions of the contractor, his employees, agents or subcontractors and employees or agents of the subcontractor(s) incident to the performance of this contract. The contractor will hold and save the state harmless from all liability for any death or damage to all persons (other than the liability of the state to agriculture/environmental protection employees directly engaged in performing work under this contract as provided under the federal employee's compensation act or to real or personal property), including negligent use of spray material which results from the operation of, or incident to, equipment furnished by the contractor. The contractor will not be responsible for any negligent or wrongful acts or omissions to The New Jersey Department of Agriculture and New Jersey Department of Environmental Protection, their employees, The New Jersey Department of Agriculture Cooperators or their employees.

INSURANCE CERTIFICATES:

- A. The vendor shall secure and maintain in force for the term of the contract insurance as provided herein. The certificates of insurance for all coverage's and renewals provided in the certificate shall not be cancelled or amended for any reason except after thirty (30) days written notice to the state of new jersey as follows:

- B. Within ten (10) days of notification of intent to award, the contractor shall provide the state with valid certificates of insurance coverage in accordance with the provisions herein. Said certificates shall include a signed certification stating as follows: "I certify that I reviewed the insurance specifications of the contract for which this certificate is issued and that the insurance contracts identified herein meet all of said contract specifications.

ADDITIONAL INSURANCE INFORMATION (FOR GYPSY MOTH SPRAYING):

- A. Aviation/aircraft liability insurance as broad as the standard coverage forms currently in use in The State of New Jersey which shall not be circumscribed by any endorsements limiting the breadth of coverage. Limits of liability shall not be less than one million dollars (\$1,000,000.00) per occurrence combined bodily injury and property damage; and chemical drift liability coverage with a minimum limit of \$100,000 per claim/\$300,000 per incident combined bodily injury and property damage.

- B. These coverage's shall be applicable while the aircraft is on the ground, taxiing and in the air.

- C. The vendor shall protect his own aircraft for any physical damage to the aircraft; the state shall not be responsible for any physical damage to the aircraft.

- D. THE POLICY (S) SHALL BE ENDORSED:
 - (1) The policy is primary insurance on behalf of the additional named insured, The State of New Jersey et al, and any coverage purchased by The State of New Jersey is acknowledged to be excess of and non-contributory to this policy's coverage.

 - (2) Violation of any policy warranty, restriction or condition of coverage by the contractor shall not constitute such on behalf of The State of New Jersey et al and coverage will remain in effect of the additional named insured, The State of New Jersey.

- E. THE POLICY SHALL BE ENDORSED FOR:
 - (1) Aerial application, crop dusting, spraying, and/or to include passengers.

- F. All required insurance coverage's must be in effect no later than 12:01 a.m. on the day of the start of the contract and remain in effect for the duration of the contract, include any extensions.
- G. Liability insurance must remain in effect for the duration of the contract, including any extensions, and for ninety (90) days following termination of all work.

PROGRAM DESCRIPTION AND SPECIFIC REQUIREMENTS OF UNIT I

GYPSY MOTH SUPPRESSION PROGRAM - NEW JERSEY DEPARTMENT OF AGRICULTURE:

DESCRIPTION OF OVERALL PROGRAM:

The areas proposed for aerial treatment during the spring through June shall be one unit divided into two subunits by region. These shall be known as sub-unit A (south) and sub-unit B (north). Prospective bidders must bid on both subunits in order to receive consideration.

| Sub-Unit | Counties Treated | Material | B.I.U.'s | Acres |
|----------|--|------------------------|----------|--------|
| A | Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Middlesex, Monmouth, Ocean and Salem | Bacillus Thuringiensis | 38 | 42,327 |
| | Statelands | | 38 | 755 |
| | Federal Properties | | 38 | 6,316 |
| B | Essex, Hunterdon, Morris, Passaic, Sussex, and Warren | Bacillus Thuringiensis | 38 | 10,725 |
| | Statelands | Bacillus Thuringiensis | 38 | 1,123 |

Note: The quantities listed above or +/- 25%

THE INSECTICIDE REQUIRED

The insecticide to be used will be B.T.K. (Foray-76B,) to be applied at a dosage rate of 38 B.I.U. neat applications at a rate of 64 oz. (depending on formulation) per acre.

The manufacturer of this insecticide is Valent Biosciences Corporation (Foray/Dipel): P.O. Box 2673 Canal Stream , IL 60132-2673 sales rep: Steven Nicholson (613)-376-1070.

AIRCRAFT CATEGORIES

Aircraft are divided into the following categories as designated by 65-M-Aphis (aircraft categories). See note* below:

CATEGORY B - FIXED WING
SWATH WIDTH

| | |
|------------------------|-----------|
| Curtiss C-46 | 350 Feet |
| Douglas C-47 or DC-3 | 300 Feet |
| Lockheed Lodestar PV-2 | 300 Feet |
| Martin 404 | 350 Feet |
| Douglas B-26 | 300 Feet. |

Aircraft shall have a safe carrying capacity of at least 200 gallons

CATEGORY C - FIXED WING
SWATH WIDTH

| | |
|--------------------------------------|--------------|
| Turbine Thrush | 100 Feet |
| Commander Thrush (800 HP & Above) | 100 Feet |
| Twin Beech D-18 | 100 Feet |
| Gruman C Agcat (800 HP & Above) | 100 Feet |
| Piper Aztec | 100 Feet |
| Dromader | 125-150 Feet |
| Kingair | 125-150 Feet |
| Airtractor (400-600 series) | 125-150 Feet |

Aircraft shall have a safe carrying capacity of at least 200 gallons

Category C - Helicopters
Swath Width

| | |
|----------------------|----------|
| Bell 212 Or 205a | 100 Feet |
| Alouette III | 75 Feet |
| Hughes 500 | 75 Feet |
| Sikorsky S-55T & T8T | 100 Feet |
| Bell 204 | 75 Feet |

Aircraft shall have a safe carrying capacity of at least 125 gallons

Category D – Fixed Wing
Swath Width

| | |
|--|----------|
| Cessna Agcarryall & Agpickup | 75 Feet |
| Cessna Agtruck & Agwagons | 75 Feet |
| Commander Thrush & New Air Tractor (Snow) | 100 Feet |
| Commander Quail | 75 Feet |
| Gruman Agcats (Long Wing) | 100 Feet |
| Gruman Agcats (200-300 HP) | 75 Feet |
| Murray MA-1 | 100 Feet |
| Piper Brave | 75 Feet |
| Piper Pawnee (230-260 HP) | 75 Feet |
| Stearman (450-600 HP) | 75 Feet |
| Weatherly | |
| Grumman Agcats(400-600 HP) | 100 Feet |

Aircraft shall have a carrying capacity of at least 150 gallons

Category D - Helicopters

| | |
|----------------------|-------------|
| | Swath Width |
| Sikorsky S-55 & S-58 | 100 Feet |
| Hiller Selay Uhize | 75 Feet |
| Bell 206 | 75 Feet |

***Note: For aircraft other than those listed, the State Representative shall establish the category and swath width for each type.**

PROGRAM REQUIREMENTS FOR UNIT I, SUB-UNIT A:

DESCRIPTION:

Contractor to provide the pesticide B.T. K. (Foray 76B), material transportation, pesticide storage areas, mixing equipment marking equipment (including minimum of five hundred (500), 4 foot diameter triple latex balloons on the reporting date and additional balloons as needed), minimum of forty (40) helium tanks on the reporting date and additional tanks as they are needed (they shall be 99.995% high purity, size H245, certification from the supplier shall be required that they are 4 foot triple latex balloons and size H245-99.995 90 high purity helium).

Twenty-five (25) male or female fitting, minimum five hundred (500) paddles, and additional as needed, with two hundred (200) feet light weight cord per paddle, adapters, filler hoses, and other related equipment, (including one pressure gauge for helium tanks), all aircraft personnel and services necessary for the aerial application of insecticide at the following dosage.

| Insecticide | A.I./Acre | Application | Final Rate Per Acre | County | Approx. Acres Plus or Minus 25% |
|--------------------|------------------|--------------------|---------------------------------------|--------------------|--|
| B.T. (Foray 76B) | 38 B.I.U. | Neat | 64 oz. Depending on Formulation | Atlantic | 5,088 |
| | | | | Burlington | 12,938 |
| | | | | Camden | 2,531 |
| | | | | Cape May | 2,989 |
| | | | | Cumberland | 3,848 |
| | | | | Gloucester | 2,613 |
| | | | | Middlesex | 1,619 |
| | | | | Monmouth | 2,112 |
| | | | | Ocean | 8,093 |
| | | | | Salem | 496 |
| | | | | (Statelands) | 755 |
| | | | | (Federal Lands) | 6,316 |
| | | | | TOTAL | 49,398 |

Location

Spray blocks located in the counties of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Middlesex, Monmouth, Ocean and Salem. To review detailed U.S.G.S. topographic maps showing treatment areas, contact address of using agency.

Sensitive Areas

Sensitive areas shall be designated by the state representative. For this reason precision flying in a safe aircraft is required for all operations.

AIRCRAFT REQUIRED:

- A. Fixed Winged Plan: Two Gruman AG Cats (400-600 HP) Category "D" fixed wing (or approved equal) with a safe carrying capacity of at least 150 plus gallons calibrated for B.T. spray. PLUS two (2) Category "C" fixed wing aircraft with a safe carrying capacity of at least 200 gallons, calibrated for B.T. spray, for us in congested areas. Bidders should plan for two (2) additional Category "D" aircraft if spray acreages increases before the term of the contract expires.

- B. Rotor Wing Plan: Six helicopter, Category C or D Helicopters (or approved equal) with a safe carrying capacity of at least 125 plus gallons calibrated for B.T. spray. Bidders should plan for two (2) additional Category "C" or "D" helicopters if spray acreage increases before the term of the contract expires.

OPERATIONAL DAYS: 27 DAYS

Note: All aircraft shall be equipped with fully operative two-way radio capable of transmitting and receiving 122.75 MHZ. The vhf transceiver must be capable of producing a quality level of output so as to assure easily made and easily understandable communications by both pilot and state representative.

PROGRAM REQUIREMENTS FOR UNIT I, SUB-UNIT B:

DESCRIPTION:

Must provide the pesticide B.T. K. (Foray 76B), material transportation, pesticide storage areas, mixing equipment marking equipment (including minimum of fifty (200), 4 foot diameter triple latex balloons on the reporting date and additional balloons as needed), minimum of fifteen (15) helium tanks on the reporting date and additional tanks as they are needed (they shall be 99.995% high purity, size h245, certification from the supplier shall be required that they are 4 foot triple latex balloons and size h245-99.995 90 high purity helium).

Four (4) male or female fitting, minimum two hundred (200) paddles, and additional as needed, with two hundred (200) feet light weight cord per paddle, adapters, filler hoses, and

other related equipment, (including one pressure gauge for helium tanks), all aircraft personnel and services necessary for the aerial application of insecticide at the following dosage.

| Insecticide | A.I./Acre | Application | Final Rate Per Acre | County | Approx. Acres Plus or Minus 25% |
|--------------------|------------------|--------------------|---------------------------------|---------------|--|
| B.T. (Foray 76B) | 38 B.I.U. | Neat | 64 oz. Depending on Formulation | Essex | 189 |
| | | | | Hunterdon | 64 |
| | | | | Morris | 1,301 |
| | | | | Passaic | 102 |
| | | | | Sussex | 6,775 |
| | | | | Warren | 2,294 |
| | | | | (Statelands) | 1,123 |
| | | | | TOTAL | 11,848 |

Location

Spray blocks located in the counties of Essex, Hunterdon, Morris, Passaic, Sussex and Warren. To review detailed U.S.G.S. topographic maps showing treatment areas, contact address of using agency.

Sensitive Areas

Sensitive areas shall be designated by the state representative. For this reason precision flying in a safe aircraft is required for all operations.

AIRCRAFT REQUIRED

- A. Fixed Winged Plan: One (1) Gruman AG Cat (400-600 HP) Category "D" fixed wing (or approved equal) with a safe carrying capacity of at least 150 plus gallons calibrated for B.T. spray. PLIS one (1) Category "C" fixed wing aircraft with a safe carrying capacity of at least 200 gallons, calibrated for B.T. spray. Bidders should plan for one (1) Category "D" aircraft if spray acreages increases before the term of the contract expires.
- B. Rotor wing Plane: Two (2) helicopters, Category C or D helicopters (or approved equal) with a safe carrying capacity of at least 125 plus gallons calibrated for B.T. spray plus

one Category "C" fixed wing aircraft if needed. Plan an additional Category "C" or "D" helicopter if spray acreage increases before the term of the contract expires.

OPERATIONAL DAYS

7-21 DAYS

Note: All aircraft shall be equipped with fully operative two-way radio capable of transmitting and receiving 122.75 MHZ. The vhf transceiver must be capable of producing a quality level of output so as to assure easily made and easily understandable communications by both pilot and state representative.

SKETCH MAPPING REQUIREMENT: UNIT II

PERFORMANCE REQUIREMENTS

All of the flying is done in June and July. The estimated average flying time is fifty (50) hours. Cost per hour should include pilot and aircraft.

Recommended aircraft: one (1) CESSNA 172, high-wing, single engine aircraft, or approved equal capable of accommodating pilot and 3 passengers.

Such aircraft shall commence operations from the contractor's New Jersey Based Airport.

The contractor shall provide experienced pilot, and aircraft to delineate gypsy moth infestation and aerial survey of forest/state land conditions. The state shall provide maps, briefing, information and guidance for the contractor as to the areas to be sketch mapped, as well as designate the height of the flight for each category.

The sketch mapping may also include a survey of bee colonies, plant disease locations as well as aerial surveys of other forest and state land conditions.

ADDITIONAL PILOT QUALIFICATION:

One hundred and fifty (150) hours experience in using topographic maps (scale: 1" 24,000) for either aerial sketch mapping or forest pest spraying.

ADDITIONAL AIRCRAFT EQUIPMENT REQUIREMENTS:

(A) The aircraft shall be equipped with an airborne GPS Navigational receiver to accurately pinpoint flight lines used to delineate gypsy moth infestations. The GPS systems shall be installed at contractor's expense in accordance with current federal aviation administration advisory circulars and by approved for use in air navigation.

- (B) Aircraft shall be equipped with an operational intercom system to allow good communication between the pilot and the state representative.
- (C) Pilot shall have 25 hours experience with GPS navigational system
- (D) The pilot shall have all required flight lines calculated and entered in the GPS receiver prior to the first flight of each day.
- (E) Hours of flight shall begin at 7:00 a.m. till the termination for the day, unless hours are otherwise directed by the state representative.
- (F) There will be no smoking in the aircraft during flights to conduct sketch map and other observation surveys.

AIRCRAFT LEASE AGREEMENTS:

- A. Copy of aircraft lease agreements - both wet (with pilots) and dry (without pilots) - must be included as a part of the bid response proposal, if the bidder proposes to use leased aircraft, in whole or in part, in performance of the requirements of this request for proposal.
- B. The lease agreement must list the parties, including principals, and include all terms and conditions of the agreement including but not limited to operation and maintenance of the leased aircraft; and proficiency training of pilots (if applicable) during the contract period.

