



TO: DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
- MOSQUITO CONTROL SECTION

DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
- WILDLIFE SECTION

FROM: THOMAS J. MORAN
FISH AND WILDLIFE REGIONAL MANAGER
(302) 836-2555

SUBJECT: **AWARD NOTICE**, Addendum #1, effective March 15, 2012
CONTRACT # NAT11456-HELICOPTER
HELICOPTER SPRAYING AND SURVEILLANCE FOR THE DEPARTMENT OF
NATURAL RESOURCES AND ENVIRONMENTAL CONTROL - MOSQUITO
CONTROL & WILDLIFE SECTIONS

**TABLE OF CONTENTS
OF
KEY CONTRACT INFORMATION**

1. CONTRACT PERIOD:	2
2. VENDORS:	2
3. SHIPPING TERMS:	2
4. DELIVERY AND PICKUP:	2
5. PRICING:	2
ADDITIONAL TERMS AND CONDITIONS:	3

KEY CONTRACT INFORMATION

1. CONTRACT PERIOD:

The contract shall be valid for an approximate eight and a half (8.5) month period from March 15, 2011 through November 30, 2011.

Contract has been extended for one year effective through November 30, 2012.

2. VENDOR:

CHORMAN SPRAYING, LLC
30475 East Mill Run
Milton, DE 19968
Contact: Jeff Chorman/Allen Chorman
Phone: (302) 684-2770
Fax: (302) 684-2766
Email: Chorspray@aol.com
Federal E. I. #: 20-4517380

3. SHIPPING TERMS:

F.O.B. destination, freight pre-paid.

4. DELIVERY AND PICKUP:

As required.

5. PRICING:

Prices will remain firm for the term of the contract.

ITEM	DESCRIPTION	UNIT PRICE PER	TOTAL PRICE
* 1	COST FOR FLYING 200 HOURS Primary helicopter and secondary helicopter	\$ 1,050.00/HR	\$ 210,000.00
2	COST FOR <i>PHRAGMITES</i> SPRAYING WITH FIVE (5) GALLONS PER ACRE DILUTED Primary helicopter	\$ 26.75/AC	

ADDITIONAL TERMS AND CONDITIONS

6. BILLING:

The successful vendor is required to bill the Department of Natural Resources and Environmental Control, Division of Fish and Wildlife: a) Mosquito Control Section (for mosquito control related activities) or b) Wildlife Section (for *Phragmites* control related activities), 89 Kings Highway, Dover, DE 19901. Such billing shall be submitted at least once a month and reflect unpaid billable hours flown or acreage sprayed within approximately the last month prior to bill submission or since the last bill submission.

7. BASIS OF PAYMENT:

The determination for all payments shall be made by the Department and shall be final and binding on both parties. The Department reserves the right to withhold payment for unsatisfactory mosquito or *Phragmites* control resulting from incomplete application coverage due to equipment malfunction, pilot error or, if not accompanied by Department personnel, unfavorable weather conditions that arise during application flights.

The Contractor will be paid a unit price per hour for the actual flight time for spraying and surveillance associated with mosquito control operations.

The Contractor cannot charge time in the following instances:

- a. Ferry time for coming into or leaving Delaware (if located out-of-state).
- b. When transitioning from *Phragmites* surveillance and control program operations to mosquito surveillance and control program operations (when in the rare event that both operations are needed on the same day).
- c. For equipment tests or calibrations performed by the Contractor either independently, or as reasonably directed by the Department.

Additionally, no charges shall be imposed for cancellation of any flights.

For *Phragmites* spraying, the Contractor will be paid a unit price per acre for actual acreage sprayed at the five (5) gallons per acre rate. Acreage will be determined by the total volume of herbicide solution applied as measured by the required flow meter on the spray system and mutually agreed upon by the Department and Contractor. This price will include any surveillance and ferry flight time associated with the spraying operation.

8. ORDERING PROCEDURE:

Successful contractors are required to have either a local telephone number within the (302) area code, a toll free (800) number, or agree to accept collect calls. Each agency is responsible for placing their orders and may be accomplished by written purchase order, telephone, fax, or online systems. The contractor or vendor must accept full payment by procurement (credit) card and/or conventional check and/or other electronic means at the State's option, without imposing any additional fees, costs, or conditions.

9. REQUIREMENTS:

This contract is issued to cover the Helicopter Spraying and Surveillance requirements for the Department of Natural Resources and Environmental Control - Mosquito Control & Wildlife Sections.

10. HOLD HARMLESS:

The contractor agrees that it shall indemnify and hold the State of Delaware and all its agencies harmless from and against any and all claims for injury, loss of life, or damage to or loss of use of property caused or alleged to be caused, by acts or omissions of the contractor, its employees, and invitees on or about the premises and which arise out of the contractor's performance, or failure to perform as specified in the Agreement.

11. NON-PERFORMANCE:

In the event the contractor does not fulfill its obligations under the terms and conditions of this contract, the ordering agency may purchase equivalent product on the open market. Any difference in cost between the contract prices herein and the price of open market product shall be the responsibility of the contractor. Under no circumstances shall monies be due the contractor in the event open market products can be obtained below contract cost. Any monies charged to the contractor may be deducted from an open invoice.

12. FORCE MAJEURE:

Neither the contractor nor the ordering agency shall be held liable for non-performance under the terms and conditions of this contract due, but not limited to, government restriction, strike, flood, fire, or unforeseen catastrophe beyond either party's control. Each party shall notify the other in writing of any situation that may prevent performance under the terms and conditions of this contract.

13. DEPARTMENT'S RESPONSIBILITIES:

The Department shall:

- a. Examine and review in detail all letters, reports, drawings and other documents presented by the Contractor to the Agency and render to the Contractor in writing, findings and decisions pertaining thereto within a reasonable time so as not to delay the services of Contractor.
- b. Give prompt written notice to the Contractor whenever the department observes or otherwise becomes aware of any development that affects the scope or timing of the Contractor's services.

14. FORMAL CONTRACT AND/OR PURCHASE ORDER:

No employee of the Contractor(s) is to begin any work prior to receipt of a State of Delaware Purchase Order signed by authorized representatives of the agency requesting service, properly processed through the State of Delaware Accounting Office. A purchase order, telephone call, fax, or State credit card shall serve as the authorization to proceed with work in accordance with the bid specifications and the special instructions, once it is received by the Contractor(s).

15. SCHEDULE FOR PERFORMANCE OF WORK:

All work described in these specifications shall be completed with reasonable promptness. As used in this Section, the State of Delaware shall be the sole judge of the term "reasonable". If the Contractor does not begin the work in a reasonable amount of time, they will be notified that if they fail to initiate the work promptly, the contract may be terminated and the State will forthwith proceed to collect for non-performance of work.

16. TIME OF PERFORMANCE:

The services of the Contractor are to commence after receipt of a purchase order, and shall be undertaken and completed in such sequence as to assure their expeditious completion in the light of the purposes of the contract, but in any event all of the services required hereunder shall be completed no later than the time periods set out in any schedule contained in the project Scope of Work. Any such schedule shall be maintained by the Contractor unless amended, in writing, by both parties.

17. TERMINATION OF P.O.'s:

- a. Termination for Cause If, for any reasons, or through any cause, the Contractor fails to fulfill in timely and proper manner his obligations, or if the Contractor violates any of the covenants, agreements, or stipulations of this contract, the Agency shall have the right to terminate the P.O. by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least five (5) days before the effective date of such termination. In that event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports or other material prepared by the contractor in the performance of the P.O. shall, at the option of the Agency, become its property, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials which is usable to the Agency.
- b. Termination for Convenience The Agency may terminate the P.O. at any time by giving written notice of such termination and specifying the effective date thereof, at least fifteen (15) days before the effective date of such termination. In that event, all finished or unfinished documents, data, studies, surveys, drawings, models, photographs, reports, supplies, and other materials shall, at the option of the department, become its property and the Contractor shall be entitled to receive compensation for any satisfactory work completed on such documents and other materials which are usable to the Agency. If the P.O. is terminated by the Agency for convenience, the Contractor will be paid an amount which bears the same ratio to the total compensation as the services actually performed bear to the total services of the Contractor called for by the P.O., less payments or compensation previously made; provided, however, that if less than sixty (60) percent of the services covered by this contract have been performed upon the effective date of such termination, the Contractor shall be reimbursed (in addition to the above payment) for that portion of the actual out-of-pocket expenses (not otherwise reimbursed under this P.O.) incurred by the Contractor during the contract period which are directly attributable to the uncompleted portion of the services covered by this P.O.

18. CHANGES:

Both parties may, from time to time, require changes in the services to be provided by the Contractor under the Scope of Work. Such changes, including any increase or decrease in the amount of the Contractor's compensation, which are mutually agreed upon by and between the Agency and the Contractor shall be incorporated in written amendments to the Purchase Order.

19. RIGHTS AND OBLIGATIONS:

The rights and obligations of each party to this agreement shall not be effective, and no party shall be bound by the terms of this agreement, unless and until a valid executed purchase order has been approved by the Secretary of Finance, and all procedures of the Department of Finance have been complied with. A separate purchase order shall be issued for every project.

20. TERMINATION OF CONTRACT:

- a. Termination for Cause - If, for any reasons, or through any cause, the Contractor fails to fulfill in timely and proper manner his obligations under this Contract, or if the Contractor violates any of the covenants, agreements, or stipulations of this Contract, the State shall thereupon have the right to terminate this contract by giving written notice to the Contractor of such termination and specifying the effective date thereof, at least 5 days before the effective date of such termination. In that event, all finished or unfinished documents, data, studies, surveys, drawings, maps, models, photographs, and reports or other material prepared by the Contractor under this Contract shall, at the option of the State, become its property, and the Contractor shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and other materials which is usable to the State.
- b. Termination for Convenience - The State may terminate this Contract at any time by giving written notice of such termination and specifying the effective date thereof, at least 15 days before the effective date of such termination. In that event, all finished or unfinished documents, data, studies, surveys, drawings, models, photographs, reports, supplies, and other materials shall, at the option of the State, become its property and the Contractor shall be entitled to receive compensation for any satisfactory work completed on such documents and other materials, and which is usable to the State. If the Contract is terminated by the State as provided herein, the Contractor will be paid an amount which bears the same ratio to the total compensation as the services actually performed bear to the total services of the Contractor covered by this Contract, less payments of compensation previously made. Provided however that if less than 60 percent of the services covered by this Contract have been performed upon the effective date of termination, the Contractor shall be reimbursed (in addition to the above payment) for that portion of the actual out-of-pocket expenses (not otherwise reimbursed under this Contract) incurred by the Contractor during the Contract period which are directly attributable to the uncompleted portion of the services covered by this Contract.

21. PENALTY CLAUSE:

If the contractor, due to his own reasons or fault, shall neglect, fail or refuse to provide the number of aircraft specified herein within the hours requested, then the contractor shall forfeit to or pay the Department as liquidated damages for breach of contract, the sum of one (1) percent of the total bid price for each incident.

TECHNICAL SPECIFICATIONS

I. STATEMENT OF WORK:

Mosquito surveillance and control program operations take place regularly from March through October. The frequency of mosquito surveillance and control operational work with the use of a helicopter is weather dependent. For example, spraying to control the larvae of woodland mosquito species takes place on a fairly regular basis from mid-March to mid-April. Sporadic multiple or spot spraying (to control salt marsh mosquito larvae) and larval surveillance operation events involving helicopter use occur from mid-April through October. Adulticiding, spraying to control adult mosquitoes, can occur at any time depending on need. Fairly frequent or continuous *Phragmites* spraying events take place from August through October.

The Contractor will furnish the primary and secondary (if required) helicopter piloted by a qualified pilot as described in Pilot Specifications herein to one of the required local airport access facilities, any Contractor central Delaware base of operations, or to the Mosquito Control Section's facility located on 1161 Airport Road in Milford ready to take to the air and operationally capable to perform surveillance activities or pesticide applications (for mosquito or noxious vegetation control activities) as directed by the Agency within twenty-four (24) hours, weather permitting, upon notice given by the Agency.

During the *Phragmites* spraying season (early-August through October), a helicopter and crew must be ready to spray statewide Monday - Friday. Occasionally weekend work may be required. The majority of the work is along Delaware Bay from the Dover area north, but work is conducted statewide.

Application of pesticides and surveillance activities must be made as directed by the Agency. Pesticide applications will be made within the wind parameters set forth in the label for each particular product. The Agency will determine, by inspection, the time for each application, which must be made within 24 hours (barring unfavorable flying or spray conditions). It is of great importance that the successful Contractor be ready as soon as possible in applying mosquito control insecticides in order to prevent further development of the larvae, the flight of adults from their breeding grounds, and/or to lessen adult mosquito populations.

History shows that it is advantageous for the Contractor to establish a central Delaware base of operations. This base of operations should be located within 20 statute miles of the Milford Mosquito Control HQ's located at 1161 Airport Road in Milford, Delaware. This established central Delaware base of operations should have complete pesticide application plus helicopter support capabilities (described in Support Equipment and Personnel) that are required for helicopter fueling and helicopter maintenance/repair, plus loading/mixing of water and pesticides. This central Delaware base of operations should be operational in the above manner from the date of receipt of a State of Delaware Purchase Order through November 30, 2011.

I. **STATEMENT OF WORK (Continued):**

If the Contractor cannot establish the above stated central Delaware base of operations, then temporary arrangements must be made with a local Delaware airport facility to provide complete pesticide application operational plus helicopter support capabilities that are required for helicopter fueling and helicopter maintenance/repair, plus loading/mixing of water and pesticides, from the date of receipt of a State of Delaware purchase order through November 30, 2011. The Contractor will make all necessary arrangements with at least one of the local Delaware airport access facilities listed below, in order to obtain whatever might be needed from the airport facility for the Contractor to conduct the above stated program operations.

Local Delaware airport access facilities are:

- a. Greater Wilmington Airport
- b. Chandelle Estates Airport near Dover
- c. Georgetown Airport
- d. Summit Airport near Middletown
- e. Delaware Air Park, Cheswold
- f. Laurel Airport

The Agency can provide a temporary landing storage site at the Mosquito Control Section's HQ facility in Milford. Other field staging, landing, or loading sites might be used as approved by the Mosquito Control Section. Permission for any use of such additional sites will be obtained by the Mosquito Control Section.

The Mosquito Control Section reserves the right at its sole discretion not to use a helicopter when larvicide or adulticide spraying, or when performing aerial photography, but might instead use fixed-wing aircraft for such work, which is the subject of a separate fixed-wing contract. But undoubtedly some or even much helicopter use will occur, reflected above via the "typical" or representative annual flight hours.

The Contractor must be able to transport (via helicopter) Agency personnel to known or suspected mosquito breeding areas throughout the state. These areas will be inspected by landing on the wetlands or other type of terrain to allow the inspector to obtain larval samples. The inspector will determine if the area warrants treatment at that time. If treatment is required, breeding sites will be treated immediately if directed by Agency personnel. The pilot may be provided with map(s) or digital spray block(s) of other breeding sites that shall be treated at the direction of the Agency.

In the event the Contractor cannot respond when requested, the Agency reserves the right to obtain another spray applicator to perform the work, with the Contractor being held liable for the cost incurred.

II. **EQUIPMENT SPECIFICATIONS:**

Helicopters with necessary equipment shall be furnished and maintained by the Contractor. They shall be of a type approved by the Agency and must be maintained in first class condition. When fully equipped and loaded they must meet FAA approval. Aerial dispersal equipment must be approved by the Agency and shown by Agency test(s) or calibration(s) to give, as determined by the Agency, a reasonably uniform pesticide distribution at the specified rate of application. **Each helicopter and its calibrated application equipment will be visually inspected by the Program Manager or their appointed designee at, as designated by the Department, one of the required local airport access facilities or any Contractor central Delaware base of operations as described herein or at the Mosquito Control Section's facility located on 1161 Airport Road, Milford, Delaware prior to the respective helicopter's first pesticide application and at other times that may be needed as determined by the Program Manager (i.e. operational pesticide applications will not be made until after the helicopter is calibrated to the Department's satisfaction).** Testing and calibration of equipment shall be made at the Contractor's expense, and the Agency shall not be charged for such equipment tests or calibrations.

The helicopter shall meet the following minimum qualifications:

A. **PRIMARY HELICOPTER (mosquito control):**

1. Bell 47, Bell 206B, Bell-Soloy 47G-3B1, Hiller-Soloy 12-E, Hughes 500C, Schweizer 300 (or approved equivalent)
2. Total load capacity of at least 900 lbs. (personnel, fuel, materials, and application equipment) and have flight endurance of at least 2 hours when fully loaded.
3. At least a two place cabin, with all passenger seats equipped with safety lap belts and shoulder harnesses; safety helmets for all passengers, each outfitted with communication equipment that enables communication between the passenger and the pilot.
4. Helicopters, with attached spray equipment prescribed within this document, must possess an FAA approval for flight within congested areas.
5. Raindrop nozzles and rotary atomizing nozzles (for adulticiding) as required for specialized pesticide spraying as described herein.
6. Mirrors on the skid toes to help guide landing on soft mud and grass.
7. Electronic trigger timer to record actual spray time.
8. Reliable air to ground communication such that pilots can be reached in the air while conducting spray operations.
9. Must be able to work a full day away from the base of operations or in remote locations (e.g. remote fueling capability)
10. Helicopter must possess a GPS tracking system such that its current location and recent flight history can be accessed at any time by on- or off-site Agency staff online.

Granular Pesticide Dispersal Equipment: Minimum chemical payload capacity of 400 pounds. Chemical to be applied in a uniform 60 foot minimum swath at an altitude of 100 feet. Typical granular insecticides and application rates include Abate 2BG at five (5) pounds per acre or granular Bti at 7.5 or 10 pounds per acre. Any system used to apply granular insecticides must not have any flight restrictions related to populated areas, roads, schools, etc.

II. **EQUIPMENT SPECIFICATIONS (Continued):**

Liquid Pesticide Dispersal Equipment: Minimum liquid payload capacity of 50 gallons. Chemical to be delivered by hydraulic or electric pump into stainless steel, PVC, or plastic tubing and into raindrop, flat fan, or approved equal nozzles capable of applying a minimum 60 foot swath at an altitude of 30-100 feet. Typical liquid chemicals to be applied include Abate 4E, VectoBac 12AS, Teknar HPD, or Altosid Concentrate typically applied "neat" or at final dilution application rate of up to thirty two (32) ounces per acre. Additionally, Trumpet EC (naled) or other synthetic pyrethroids may also be used for adulticiding via rotary atomizing nozzles at up to 1 oz./acre.

- B. **PRIMARY HELICOPTER (*Phragmites* control):** Note that the specifications for helicopter and equipment are slightly different than for mosquito control activities.

1. Helicopter:

- a. Bell 47, Bell 206B, Bell-Soloy 47G-3B1, Hiller-Soloy 12-E, Hughes 500C (or approved equivalent)
- b. Total load capacity of at least 1,200 lbs. (personnel, fuel, materials, and application equipment) and have flight endurance of at least 2 hours when fully loaded.
- c. At least a two place cabin, with all passenger seats equipped with safety lap belts and shoulder harnesses; safety helmets for all passengers, each outfitted with communication equipment that enables communication between the passenger & pilot.
- d. Helicopters, with attached spray equipment prescribed within this document, must possess an FAA approval for flight within congested areas.
- e. Raindrop nozzles as required for specialized pesticide spraying as described herein.
- f. Mirrors on the skid toes to help guide landing on soft mud and grass.
- g. Electronic trigger timer to record actual spray time.
- h. Reliable air to ground communication such that pilots can be reached in the air while conducting spray operations.
- i. Must be able to work a full day away from the base of operations or in remote locations (e.g. remote fueling capability).
- j. Helicopter must possess a GPS tracking system such that its current location and recent flight history can be accessed at any time by on- or off-site Agency staff online.

2. Application Equipment:

1. Minimum liquid payload capacity of 100 gallons.
2. High volume liquid spray system capable of applying five (5) gallons per acre of herbicide mix in uniform swath of 50 feet.
3. Spray system must have a flow meter designed specifically for monitoring the flow rate and total volume applied.

3. Ground Support Equipment:

1. Batch truck will have separate mix and water tanks. Mix tank must have a minimum capacity of 300 gallons and water tank(s) must have the capacity to carry a minimum of 1,900 gallons of water separate from the mix tank.

II. **EQUIPMENT SPECIFICATIONS (Continued):**

2. Batch truck shall have a mechanical flow meter for recording total gallons delivered to helicopter.
3. Batch truck shall be capable of pumping herbicide from 30 gallon containers and rinsing drums and 2.5 gallon containers.
4. Batch truck shall have all appropriate placards in accordance with the Department of Transportation, State, and local requirements.
5. A spill containment kit shall be on board batch truck at all times.
6. Batch truck shall have a cell phone and radio capable of communicating with the helicopter.

C. **SECONDARY HELICOPTER (MOSQUITO CONTROL ONLY):**

It is desirable for bidders to own or have access to and be able to provide if/when needed a second helicopter fulfilling the same or nearly the same specifications as listed for the "PRIMARY HELICOPTER." However, a second helicopter is **not** required to bid upon this contract. The Agency's preference when making the vendor award will still be based upon comparisons of competitive bid prices; as such, the availability of a second helicopter should not influence the offer bid price. A bidder who can offer and provide a second helicopter might be viewed a bit more favorably than one who could not if submitted bid prices are equal. It would also be acceptable for a bidder to provide a second helicopter via sub-contracting for a second helicopter's use on an as needed basis, with the identification and use of any sub-contractors to be consistent with #26 of Special Provisions. The possibility for needing the use of a second helicopter will occur primarily during the mid-March to mid-April period. A second helicopter will likely not be needed during the mid-April through late October time period, with exception of a possible need for two helicopters on occasions in August or September when mosquito control and *Phragmites* control treatments might simultaneously need to be done, especially if one vendor might have won both the mosquito control and *Phragmites* control portions of the contract. If a second helicopter is available from mid-March through late-October, or any portions of time thereof, the bidding Contractor should make note of such availability. If offered, insurance requirements for the second helicopter will be the same as the primary helicopter.

D. **SUPPORT EQUIPMENT AND PERSONNEL:**

The Contractor is to provide all necessary helicopter support equipment and personnel associated with helicopter operations covered under the awarded contract. Necessary helicopter support equipment shall include that needed for helicopter fueling, maintenance/repair, and loading/mixing of water and pesticides, including fuel and mix trucks that can be utilized to enable operations/applications from various staging, landing, or loading sites throughout the state.

The Contractor shall have the necessary helicopter support equipment available at any Contractor central Delaware base of operations or at a required local airport access facility when furnished helicopters are present at said locations from the date of receipt of State of Delaware Purchase Order through November 30, 2011.

III. **PILOTS' SPECIFICATIONS:**

The Contractor shall furnish qualified and experienced pilots who have been engaged for at least two (2) years and at least 300 flying hours in mosquito control spraying or comparable work, such as forest insect control or agricultural spraying. **Pilots must be proficient at using a DGPS navigation system - uploading/downloading spray data, creating spray blocks, navigating, and troubleshooting.** Pilots shall possess a valid State of Delaware, Department of Agriculture, Pesticide Applicator Certificate in the Mosquito Control (5C) category and the Aquatic (5A) category. Moreover, the Agency may require the Contractor to replace any pilot whose work is found unsatisfactory and/or whose conduct and actions are detrimental to the Agency - regardless of experience or other qualifications.

IMPORTANT NOTE: PILOTS MUST CERTIFY THAT THEY HAVE FLOWN TWO (2) YEARS AND 300 HOURS MINIMUM. PILOT CERTIFICATIONS AND/OR LOG BOOKS WITH NOTARIZED STATEMENTS MUST BE SUBMITTED WITH THE PROPOSAL. FAILURE TO PROVIDE THIS DOCUMENTATION WILL BE A CAUSE FOR REJECTION.

IV. **MATERIAL SPECIFICATIONS:**

Insecticides and herbicides will be furnished by the Agency and delivered into the tanks of the helicopter at the landing site, without expense to the Contractor. When other materials (e.g. liquid carrier herbicides) furnished by the Agency are applied at five (5) gallons per acre with a uniform swath of 50 feet minimum, the Contractor will mix and load these materials at the expense of the Contractor. For *Phragmites* applications, the Contractor is required to mix the herbicide and rinse the barrels.

V. **DGPS NAVIGATION REQUIREMENT:**

The above specified helicopters shall be equipped with a differential geographical positioning system (DGPS) navigational system (Ag-Nav II or approved equal, with preference to Ag-Nav) possessing flight planning capabilities as well as providing swath and directional guidance to ensure precise aerial pesticide and *Phragmites* burning applications. The DGPS navigational system shall be capable of data logging both flight and pesticide application information. The DGPS shall consist of a computer console, moving map display, pertinent GPS and UHF antennas, and a light bar. The on-board computer shall have as a minimum: a 486-33 MHz processor, 4MB of working memory, 340MB hard disk drive, and a 12-channel satellite receiver with an accuracy of at least 1 meter. **The DGPS system shall incorporate a download system that utilizes solid state memory functionality such as a USB flash memory drive or a memory card and must use the most recent and updated version of available hardware/software to guide and track all flight/spray data.** This DGPS navigational system will primarily be used to guide and record flight paths and spray applications, and may be used to navigationaly direct spray applications if the desired spatial accuracy can be achieved. Upon request of the Agency, the Contractor shall provide the memory drives, memory cards, printouts or other types of readouts showing the information logged by the DGPS navigational system during any and all aerial spray or burn applications. **The successful bidder must also have the capability to electronically receive, download, transfer, and exchange all pre and post Ag-Nav (or approved equal) spray-related data.**

VI. **ADULTICIDING CAPABILITIES:**

The primary helicopter (and secondary helicopter, if provided) shall be equipped with rotary atomizing nozzles (such as Micronaire) so that each aircraft is capable of delivering aerial adulticide services. Each helicopter must have a payload capacity of at least 30 gallons of Dibrom Concentrate or Trumpet EC. All pumps and tubing must be compatible with the physical properties typical of naled formulations. Synthetic pyrethroids may also be aerially applied. All loading of the helicopter must be done through a closed loop system. Droplet calibrations must demonstrate compliance with all EPA chemical label requirements.

Additionally, vendors with spray offset technology (Flightmaster, Wingman) as it pertains to aerial adulticiding via rotary atomizing nozzles, may be given extra consideration when evaluating bid proposals. While the Mosquito Control Section does not require this technology at the time, it should be noted that we could if conditions or EPA regulation were to suddenly require such. It is understood by the State that adequate time would have to be allowed for any such vendor to comply with a new requirement of this magnitude. Such timeline for compliance would be agreed upon by both parties.