



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

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

SUBJECT: **AWARD NOTICE**
CONTRACT # NAT11789
AIRPLANE SPRAYING FOR THE DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL - MOSQUITO CONTROL SECTION

DATE: MARCH 15, 2011

**TABLE OF CONTENTS
OF
KEY CONTRACT INFORMATION**

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

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.

2. VENDOR:

ALLEN CHORMAN AND SON, INC.
30475 East Mill Run
Milton, DE 19968
Contact: Allen Chorman/Jeff Chorman
Phone: (302) 684-2770
Fax: (302) 684-2766
Email: Chorspray@aol.com
Federal E. I. #: 51-0246418

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 NO.	APPROXIMATE AIR SPRAYING QUANTITY	UNIT PRICE	TOTAL PRICE
1.	8,000-10,000 ACRES USING 24 oz. PER ACRE CONCENTRATE OR DILUTED LIQUID LARVICIDE	\$ 5.40	
2.	25,000 ACRES WITH 1 QT. PER ACRE CONCENTRATE OR DILUTED LIQUID LARVICIDE	\$ 5.60	\$ 140,000.00
3.	5,000 ACRES WITH 5 LBS. PER ACRE GRANULAR LARVICIDE	\$ 10.75	\$ 53,750.00
4.	5,000 ACRES WITH 7.5 LBS. PER ACRE GRANULAR LARVICIDE	\$ 11.00	
5.	5,000 ACRES WITH 10 LBS. PER ACRE GRANULAR LARVICIDE	\$ 11.50	
6.	2,500 ACRES WITH 15 LBS. PER ACRE GRANULAR LARVICIDE	\$ 13.25	
7.	50,000 ACRES WITH 0.5-4.0 OZ. PER ACRE CONCENTRATE OR DILUTED LIQUID ADULTICIDE APPLIED AT 300 FT. SWATHS	\$ 2.50	\$ 125,000.00
8.	50,000 ACRES WITH 0.5-4.0 OZ. PER ACRE CONCENTRATE OR DILUTED LIQUID ADULTICIDE APPLIED AT 600 FT. SWATHS	\$ 2.00	
9.	50,000 ACRES WITH 0.5-4.0 OZ. PER ACRE CONCENTRATE OR DILUTED LIQUID ADULTICIDE APPLIED AT LEAST 1000 FT. SWATHS (using rotary atomizing nozzles)	\$ 1.50	

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, Mosquito Control Section, 89 Kings Highway, Dover, DE 19901. Such billing shall be submitted at least once a month and reflect unpaid billable acreage sprayed within approximately the last month prior to bill submission or since the last bill submission. These bills shall be based on the unit price offered for materials applied.

7. BASIS OF PAYMENT:

The contractor will be paid a unit price per acre for the actual acreage sprayed. The acreage for which payment will be made shall be computed by the Department from spray area maps furnished by the Department or from volume of liquid or weight of granular insecticides applied at calibrated application rates determined by the Department.

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 control resulting from incomplete application coverage due to equipment malfunction, pilot error, or unfavorable weather conditions that arise during application flights.

No charges will be imposed for cancellation of any flights other than for acreage effectively treated as determined by the Department.

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, conventional check, and/or other electronic means at the State's option, without imposing any additional fees, costs or conditions.

9. REQUIREMENTS:

This contract will be issued to cover the Airplane Spraying requirements for the Department of Natural Resources and Environmental Control - Mosquito Control Section. These applications will consist of mosquito control insecticides as granules or in a solution of oil, solvent, or water. This work is to be done at the time, in the amounts, and at the locations as directed by the Department, and in almost all cases, will more specifically apply to or involve the Mosquito Control Section within DNREC's Division of Fish and Wildlife.

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.

22. LAWS TO BE OBSERVED:

The Contractor shall save harmless the State and all of its representatives from all suits, actions, or claims of any character instituted or made on account of any injuries or damages alleged to have been sustained by any person or property as the result of the prosecution of the work provided for herein except (1) for alleged injuries to person, livestock, poultry, crops, or property attributable to the characteristics of the spraying material such as, but not necessarily limited to, its potency, and residual effects; (2) for any such alleged injuries from spray material which result due to weather conditions at the time of or after application; (3) for any such alleged injuries which result from any act or omission of the Contractor which was expressly ordered by the State.

The State of Delaware shall not be responsible for over spraying outside mapped boundaries, spraying at a heavier rate per acre than specified due to over-lapping applications and/or spraying at a heavier rate due to equipment malfunction or breakage.

Contractor shall develop an FAA approved congested area flight plan for aerial spraying over populated areas.

23. SUBLETTING OR ASSIGNMENT OF CONTRACT:

The Contractor shall give his personal attention to the faithful prosecution of the work and shall keep the same under his personal control. All Contract Specifications, Regulations, Laws, etc. that apply to the Prime Contractor also apply to all Subcontractors. All Subcontractors must be approved by the Department. The Contractor shall not assign by power of attorney or otherwise and shall not sublet the work or any part thereof without the previous written consent of the Department. The Contractor shall not either, legally or equitably, assign any of the monies payable under this agreement or his claim thereto unless by and with the written consent of the Department.

TECHNICAL SPECIFICATIONS

I. STATEMENT OF WORK:

During the contract period, the total anticipated acreage for adulticide and larvicide applications can amount up to a maximum 130,000 and 35,000 treated acres, respectively. Mosquito control aerial applications are achieved through a select combination of various product applications at rates and formulations listed in the attached Bid Price Quotation Form. Individual acreage for adulticide applications usually averages about 2,750 acres per treatment. Many adulticide applications in Kent and Sussex counties can exceed 3,840 acres per treatment. Individual acreage for larvicide applications usually averages about 1,000 acres per treatment.

Applications must be conducted 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 at least 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. In general, early morning and evening will be preferred for spraying, as conditions are usually more favorable during these hours.

The Contractor shall provide the required airplanes and qualified pilots, as described in the Technical Specifications, which upon notice given by the Agency should be able to take to air, weather permitting, within 24 hours from one of the approved local airport access facilities or from any contractor's central Delaware base of operations. Airplanes should be operationally capable to perform timely aerial application of insecticides as directed by the Agency and as specified in the final contract award.

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.

History shows that it is advantageous for the Contractor to establish a central Delaware base of operations. If established, the base shall be located within 20 statute miles of the Mosquito Control Section's facility in Milford, Delaware. The contractor's stated central Delaware base of operations should have full operational capabilities, to include all necessary airplane support equipment and personnel as described herein to enable airplane fueling, aircraft maintenance/repair, and loading/mixing of water and insecticides from the date of receipt of a State of a Delaware Purchase Order through November 30, 2011.

If a central Delaware base of operations cannot be established, then the contractor shall set up at one or more local airport access facilities (listed immediately below) a temporary, fully operational aerial application capability. This will include all necessary airplane support personnel and equipment as described herein required to enable airplane fueling, aircraft maintenance/repair, and loading/mixing of water and insecticides from the date of receipt of State of Delaware Purchase Order through November 30, 2011.

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

The Contractor shall make all arrangements to obtain, as may be needed for aerial spraying operations, the use of the following local airport access facilities:

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

The Mosquito Control Section reserves the right when making any aerial spray application, whether for larviciding or adulticiding, to select between using fixed-wing aircraft (airplane) versus rotary aircraft (helicopter), whereby the latter rotary platform is *not* part of this ITB *nor* its subsequent contract, but instead rotary aircraft use will be addressed via a separate ITB and associated contract. The decisions by Mosquito Control for which aerial platform to use for any aerial spray event will be based upon not only considerations by Mosquito Control of the application costs per acre when spraying, but also upon related factors such as applicator availability, applicator response time, size/extent of area to be sprayed, location of area to be sprayed, character of surrounding landscape, time of day for treatment, window of opportunity for treatment as determined by weather and other factors, type of insecticide to be applied, safety issues, public relation considerations, etc.

II. **EQUIPMENT SPECIFICATIONS:**

A. **GENERAL:**

1. All aircraft with necessary equipment shall be furnished and maintained by the Contractor. Aircraft 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. All aircraft dispersal equipment should indicate, as determined by the Agency test(s) or calibrations, a reasonably uniform distribution of insecticide at the specified rate of application, delivered at required spray droplet sizes and/or particle distribution (when using granular material). This should be in compliance with any U.S. Environmental Protection Agency requirements for insecticide handling/delivery. The contractor/applicator **must fully comply with all EPA or DDA pesticide application requirements and conditions (e.g. the handling/mixing/loading of naled must now be done using closed system technology and procedures)**. All pesticide handling/mixing/loading must be in full compliance with all State and Federal rules, regulations and laws. In the event the contractor cannot comply with handling/mixing/loading rules, regulations and laws, the Agency reserves the right to obtain another spray applicator to perform the work, with the contractor being held liable for the costs incurred.

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

2. **Each airplane and its calibrated application equipment will be visually inspected by the Program Manager or their appointed designee** at one of the required local airport access facilities or any contractor central Delaware base of operations prior to the respective airplane's first insecticide application. **Such inspections can also be conducted at other times as needed or as determined by the Program Manager (i.e. operational insecticide applications will not be made until after the airplane is calibrated to the Department's satisfaction). Testing and calibration of equipment shall be made at the contractor's expense.** The Agency shall not be charged for such equipment tests or calibrations.

B. **AIRCRAFT SPECIFICATIONS:**

1. The Department **will not approve or accept** the following:
 - **Single-engine** aircraft for **adulthood** applications
 - **DC-3** aircraft for **adulthood or larvicide** applications
2. Multi-Engine Aircraft and Application Equipment Specifications: The Contractor shall be required to furnish **at least one (1) multi-engine aircraft for application of adulthoods** which will meet FAA specifications for spraying over congested areas. Multi-engine aircraft shall be equipped with hydraulically or electrically driven Ultra-Low Volume (ULV) insecticide delivery systems with adjustable nozzles and tips.

Insecticide lines and nozzles shall be nylon or stainless steel and be resistant to the corrosive effects of naled and malathion. The ULV system shall be capable of dispersing 0.5-4.0 ounces of concentrate or diluted liquid adulthood per acre with uniform droplet size and swath pattern. Aerial applications shall be conducted with a minimum uniform swath width of 250 feet, satisfactory to the Agency, when applied from an approximate altitude range above ground of 75-125 feet. The aircraft insecticide tank(s) shall have a minimum capacity of 100 gallons. Pump capacity should be adequate in order to ensure proper insecticide line pressure. This is required to provide uniform swath width and droplet size. The ULV system shall be equipped with new pressure spray lines, nozzle bodies and nozzle tips, to be accomplished before spray calibration and aircraft inspection can be completed.

A multi-engine aircraft can be used to apply larvicides, in lieu of one of the two required single-engine larvicide aircraft referenced below. If such an aircraft is available for applying larvicides, then it should be in compliance with larvicide application equipment specifications outlined herein.

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

Please be advised that any multi-engine aircraft used for adulticide applications may be required by DNREC to be equipped with Micronair AU 5000 (or approved equal) rotary atomizing nozzles, if DNREC or a U.S. Environmental Protection Agency mandate requires a preponderance of smaller sized spray droplets less than 70 microns in diameter. The aircraft may also be required to be equipped with a spray management system that integrates real-time, on board meteorology and flow control (such as the WINGMAN GX, Flight Master, etc.) to help facilitate precise dispersal of small size adulticide droplets. The Contractor would be given reasonable time (as defined by DNREC) to accommodate such a change. This will enable continued adulticiding operations for adulticides utilized by the Department requiring a targeted spray droplet size dispersal spectrum similar to that produced by such nozzles and the accompanying spray management system.

3. Larvicide Aircraft and Application Equipment Specifications: The Contractor shall be required to provide **at least two Thrush Aero Commander, Agcat, or approved equal single-engine aircraft for granular and liquid larvicide applications** (a multi-engine aircraft can be substituted in place of one single-engine aircraft as discussed above). These aircraft shall have a minimum of 1,000 lbs. hopper capacity for applying material weighing between 20 to 30 lbs. per cubic foot. It shall be equipped with a "Transland" spreader attachment, or equal as approved by the Department, capable of dispersing 2-15 lbs. of granular larvicide per acre. Granular aerial applications shall be conducted with a uniform swath pattern for a minimum swath width of 60 feet, satisfactory to the Department, when applied from an approximate altitude range above ground of 50-75 feet.
4. **The Contractor shall have at least two (2) airplanes and qualified pilots**, of the total minimum number of three (3) required airplanes **available to concurrently perform larvicide or adulticide applications** as directed by the Department. They should upon notice given by the Department be able to take to air from one of the approved local airport access facilities or any contractor's central Delaware base of operations. They should also be operationally capable to start to perform insecticide applications as directed by the Department by at least twenty-four (24) hours after receiving a request to spray, weather permitting, with a strong preference for being able to commence spraying in less than 24 hours after receiving an initial request to spray. Subsequent to mobilization, under the Mosquito Control Section specified response time, all airplanes shall remain available at one of the approved local airport access facilities or any contractor's central Delaware base of operations. These airplanes shall be available at or be deliverable to one of the approved local airport access facilities or any contractor's central Delaware base of operations at all times between the date of receipt of a State of Delaware Purchase Order and November 30, 2011. Failure to meet the above requirements will be sufficient grounds for forfeiture of the Contractor's contract bond.

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

5. The Department shall determine the number of airplanes required under any pest or public health emergency. No additional compensation beyond the regular contract price will be made for such emergency work.

C. **SUPPORT EQUIPMENT AND PERSONNEL:**

The Contractor shall provide all necessary support equipment and personnel associated with airplane operations covered under the awarded contract. Necessary airplane support equipment shall include that needed for airplane fueling, maintenance/repair, and loading/mixing of water and insecticides, including fuel and mix trucks that can be utilized to enable operations/applications from various airport access facilities throughout the state

The Contractor shall have the necessary airplane support equipment available at any Contractor central Delaware base of operations or at a required local airport access facility when furnished airplanes 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 500 flying hours in mosquito control spraying or comparable work, such as forest insect control or agricultural spraying. **Pilots must be proficient at using a Differential Global Positioning System (DGPS) navigational 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. 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 AT LEAST TWO (2) YEARS AND 500 HOURS MINIMUM. PILOT CERTIFICATIONS AND/OR LOG BOOKS WITH NOTARIZED STATEMENTS MUST BE SUBMITTED WITH THE BID PROPOSAL. FAILURE TO PROVIDE THIS DOCUMENTATION WILL BE A CAUSE FOR REJECTION.

IV. **MATERIAL SPECIFICATIONS:**

Insecticides will be furnished by the Agency without expense to the Contractor. Insecticide liquids to be applied, as applicable and directed by the Agency for each individual product, "neat" or diluted in a solution of oil, water, or solvent may typically include Altosid, Abate, Spinosad, or Bti larvicides applied at two quarts or less concentrate or diluted per acre and Trumpet EC, Dibrom Concentrate, Anvil 10 + 10, Permanone, Zenivex, or Scourge adulticides applied at 0.5 to 4 ounces concentrate or diluted per acre. Insecticides to be applied in granular or pellet larvicide formulations may typically include Abate applied at 2 to 5 lbs. per acre and Bti applied at 4 to 15 lbs. per acre.

V. **DGPS NAVIGATION REQUIREMENT:**

The specified application aircraft for larviciding or adulticiding shall be equipped with a differential geographical positioning system (DGPS) navigational system (Ag-Nav II or approved equal). The DGPS navigational units should possess flight planning capabilities as well as provide swath and directional guidance to ensure precise aerial insecticide 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, 340 MB hard disk drive, and a 12 channel satellite receiver with an accuracy of at least 1 meter. **The DGPS navigation system shall incorporate a download system that utilizes solid state memory functionality such as a USB flash memory drive or a memory card and the most recent and updated version of available hardware/software to guide and track all flight/spray data.** 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 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.** DGPS navigational system units must be installed in at least one (1) multi-engine aircraft, in at least one (1) larvicide single-engine aircraft capable of applying liquid larvicides, and in at least one (1) larvicide single-engine aircraft capable of applying granular larvicides; or lacking such installation, the successful bidder must have at least two DGPS navigational units which shall be transferable to and operational in at least one (1) multi-engine aircraft, in at least one (1) larvicide single-engine aircraft capable of applying liquid larvicides, and in at least one (1) larvicide single-engine aircraft capable of applying granular larvicides.