ENVIRONMENTAL PROTECTION AGENCY'S
PESTICIDE ENVIRONMENTAL STEWARDSHIP PROGRAM

"PARTNERSHIP STRATEGY DOCUMENT"

GEORGIA MOSQUITO CONTROL ASSOCIATION

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In partnership with the

AMERICAN MOSQUITO CONTROL ASSOCIATION

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I. **INTRODUCTION TO STRATEGY DOCUMENT.** This Pesticide Environmental Stewardship Program (PESP) "Strategy Document" is intended to describe the current policies and organizational structure of the Georgia Mosquito Control Association (GMCA) (see attached flow chart with description of pertinent committees) and to present a brief overview of the general control practices of its members. GMCA promotes the continued education of pesticide applicators and the judicious and responsible use of pesticides as means of reducing risks associated with pesticides. This document describes how the GMCA will strive to improve its ongoing policy of encouraging environmental stewardship.

II. **OVERVIEW OF THE GEORGIA MOSQUITO CONTROL ASSOCIATION.** The GMCA is a non-profit, technical, scientific and educational association composed of entomologists, public health officials, commercial pesticide applicators, environmental health specialists, public works employees, industry representatives, and others who are charged with, or interested in, the biology and management of mosquitoes and other vectors. The purpose of the GMCA is to:

- Promote Integrated Mosquito Management (IMM) methods in Georgia
- Disseminate information concerning mosquitoes to GMCA Members, to other mosquito control workers, and to the general public through publications and meetings
- Unite and coordinate common interest and efforts in managing problem mosquito populations throughout Georgia
- Protect livestock and wildlife from avoidable harm and establish integrated mosquito management practices that are appropriate for environmentally sensitive habitats
- Support, develop and enhance arthropod-borne disease surveillance in Georgia
- Assist in the prevention of arthropod-borne diseases in Georgia by all means possible

These GMCA goals are consistent with those of the PESP program. The PESP advocates the development and implementation of specific use/risk reduction strategies. These strategies may include reliance on biological pesticides and other approaches to mosquito management that are considered to be safer than traditional methodologies. Reduced pesticide risk and reduced pesticide use should be used where practicable and effective.

Reducing risk by minimizing pesticide use is an extremely worthwhile long-term goal. However, not all mosquito management agencies may be able to immediately embrace this concept for a number of reasons. Mosquito population size is affected primarily by environmental factors such as tides, rainfall, agricultural activities and wetland irrigation practices. Because mosquito management agencies cannot control these factors, insecticide applications may be needed to protect humans and livestock. Mosquito management workers, unlike other professional pesticide applicators, must deal with insect problems having both nuisance and public health implications. The situation has been exacerbated by introductions into the US of exotic mosquito species (*e.g., Aedes albopictus* and *Aedes japonicus*) that are capable of transmitting diseases. In addition, pesticide applications are usually the only way to quickly respond to public health problems posed by arthropod-borne pathogens. In Georgia, as in other parts of the United States, residential developments increasingly encroach on environmentally sensitive habitats such as natural and newly created wetlands, and on agricultural areas. These habitats frequently produce huge mosquito populations that impact people residing in the encroaching developments. Reducing these mosquito populations to protect residents and their animals is an ever-increasing burden for mosquito management agencies; relief efforts usually require pesticide applications.

III. POTENTIAL PROBLEMS FACING MOSQUITO MANAGEMENT IN GEORGIA AND NATIONWIDE.

A. RELATIVELY SMALL PESTICIDE MARKET. Mosquito control pesticides constitute a relatively small market so there is little economic incentive for chemical companies to invest tens of millions of dollars on the discovery, development and labeling of new mosquitocides. Typically, new products have become available for mosquito management when agriculture and urban pest products secondarily exhibit mosquito control properties. This practice, in combination with increasing emphasis on risk reduction, places mosquito management in an extremely difficult position. Manufacturers faced with the high costs of risk assessment studies, may drop their support for their secondary mosquito control product labels. In an effort to prevent this, Congress has voiced its support for the Food Quality Protections Act. Aiding Congress in this effort, GMCA & AMCA members have been working to provide the EPA with pertinent information as mosquito control insecticides are reviewed for re-registration. The GMCA will continue to provide leadership and support in this important area as a regional "PESP Partner under the AMCA's auspices."

B. INSECTICIDE RESISTANCE. Mosquitoes may rapidly develop insecticide resistance when exposed to only one active ingredient, **or when exposed to multiple active ingredients that have the same or very similar modes of action (e.g. the organophosphates temephos and naled).** Therefore, it is extremely important to maintain the current labels for different approved mosquitocides. It is increasingly important that mosquito control agencies practice sound resistance management techniques so that the limited assortment of pesticide tools that are available will continue to be effective. In this regard, the GMCA encourages mosquito agencies to regularly maintain and calibrate their spray equipment, avoid applications containing sub-lethal amounts of insecticides, rotate/alternate available insecticides, **and avoid using the same class of compounds (e.g. organophosphates) for both adulticiding and larviciding the same target population**. The GMCA also encourages the research and development of new products that are consistent with our environmental stewardship goals.

C. INTRODUCTION OF EXOTIC SPECIES AND DISEASE. Several mosquito species have been introduced into the US in recent years. *Aedes albopictus*, the Asian tiger mosquito, is the most widespread and problematic. In addition to being capable of transmitting endemic viruses such as Eastern Equine Encephalitis virus (EEEV) and West Nile virus (WNV), this species is capable of transmitting other viruses that could be introduced (eg. Chikungunya virus). *Aedes japonicus*, the Asian bush mosquito, is generally found in Japan, Okinawa and associated islands, Korea, Taiwan, South China, and Hong Kong. In 1998, it was detected in

the United States in New York and New Jersey. It is now found in at least twenty other states, including Georgia. Unpublished studies conducted at the U.S. Army Medical Research Institute of Infectious Diseases in Fort Detrick, Maryland, indicate that *Ae. japonicus* is also a competent vector of West Nile virus. It is likely that other mosquito species will be introduced, bringing with them new disease threats to both humans and animals.

IV. OVERVIEW OF A "TYPICAL" MOSQUITO CONTROL PROGRAM. It is difficult to provide a concise, generic overview of all mosquito control programs in Georgia, but certain components are shared by virtually all operational agencies. The larger Georgia agencies typically employ an Integrated Mosquito Management (IMM) approach to their control efforts. Due in part to the educational efforts of the GMCA, most smaller programs are also moving towards implementing varying degrees of integrated control. A "typical" IMM program evaluates surveillance data before judiciously using various combinations of permanent (source reduction) and temporary (sanitation, larviciding, adulticiding) control techniques. Biological control is an important and growing element of the GMCA's integrated management strategy. It is chiefly practiced by the introduction/re-introduction of native predaceous minnows (*Gambusia* spp) to mosquito-producing aquatic habitats. These control measures are for both routine pest mosquito outbreaks and during sporadic epidemics and epizootics caused by mosquito-transmitted pathogens. Continuing education, for both employees and the general public, is another important component of IMM programs. The combination of a better informed public and increasingly professional mosquito control workers significantly reduced both pesticide use and risk.

A. SURVEILLANCE ACTIVITIES. Surveillance is the most important aspect of mosquito control as it provides proof that there is a need for control and also that control is working. Mapping and record keeping are important components of surveillance. They provide a historic component, help to visualize the data being collected, and provide information needed for good management.

1. **SURVEILLANCE.** This encompasses a variety of activities including complaint monitoring, landing counts, and collection of adult and larval mosquitoes. All of these methods provide information about the number of mosquitoes (and potentially the species) causing problems for citizens in the area of control.

2. **MAPPING.** Mapping not only helps to put complaints into perspective, it also provides good records of what has been done and where within the service area such activities have occurred. Mapping can be as complex as a GIS or as simple as a paper map with pins.

3. **RECORD KEEPING.** Everything done by a mosquito control program should be recorded. This information helps in monitoring pesticide use, changes in mosquito populations, and changes in land use, as well as training, education, and other activities.

B. SOURCE REDUCTION. Source reduction (the removal or reduction of larval mosquito habitats) typically is the most effective and economical long-term method of mosquito control. These efforts minimize and/or eliminate the need for mosquito larviciding in the affected habitat and can reduce or eliminate the need for adulticiding in surrounding areas. Permanent source reduction involves complex ditching projects or the impoundment of areas to manipulate water levels. Temporary source reduction (sanitation) refers to the elimination of man-made containers and debris that serve as mosquito breeding sites. Both permanent and temporary activities should be properly planned and based on adequate surveillance data.

1. **SANITATION.** Discarded containers and tires are capable of holding water and producing mosquitoes, including species that can transmit pathogens to humans and other animals. Sanitation is a continual process of eliminating man-made mosquito breeding locations. Typically, sanitation efforts are most efficient when accomplished by individuals who can eliminate mosquito-breeding sites around their homes. Most Georgia mosquito control agencies work with local public health units to conduct education programs that inform the public about the importance of eliminating their own sources of mosquitoes.

2. **DITCHING.** Ditching and impounding have been used in a variety of habitat types (*e.g.* salt marsh, spoil sites) as alternatives to temporary control with pesticides, for many years. In impounded spoil sites, ditching lowers the water table and causes areas to drain before mosquitoes can emerge as adults. In degraded salt marshes, ditches can be dug through dykes or higher elevated land to let water flow into and out of the marsh in a more natural diurnal tidal rhythm. In addition, ditches allow mosquito-eating (larvivorous) fish to migrate into isolated depressions on high tides and following heavy rains. Dragline ditches, which make bucket-wide rectangular cuts, dominated permanent source reduction efforts from the 1920s through the 1980's. Rotary ditchers, which make narrower v-cuts with lower hydrological impacts, do not produce spoil piles like draglines, and are favored today. Impoundments selectively deprive some mosquito species of suitable egg-laying sites.

C. LARVICIDING. Larviciding, the application of insecticides to kill mosquito larvae by ground or aerial treatments, is typically more effective and target-specific than adulticiding, but less permanent than source reduction. Several insecticides, in a variety of formulations, are labeled for mosquito larviciding. Traditional compounds include the organophosphate temephos and surface oils (petroleum-based or monomolecular surface films). Since the mid 1970's, use of agents currently classified by the EPA as biopesticides has increased. These materials are, by definition, based on or derived from naturally occurring organisms, and are favored by public land management agencies. GMCA members typically include one or more commonly available biopesticide formulations in their operations. Biopesticides include the synthetic insect growth regulator (methoprene) and the microbial larvicides, *Bacillus thuringiensis israelensis* (Bti), and *Bacillus sphaericus*. The recently approved larvicide spinosad is considered to be a "reduced risk" pesticide.

Applications of the naturally occurring bacteria (*Bacillus sphaericus* and *Bti*) are increasingly popular. When introduced in concentrated form as a mosquito larvicide, *Bacillus sphaericus* bacteria kill mosquito larvae and replicate (recycle) utilizing the resultant carcasses. Larval population reductions continue until the target species reach such low numbers that the bacteria can no longer reproduce, with no apparent non-target or ill effects on the environment.

Important goals when applying larvicides are that the material should be specific for mosquitoes, minimize impacts to non-target organisms, and should be able to reach the target habitat. Larvicide formulations (*e.g.*, liquid, granular, solid) should be applied based on surveillance data or site history (some sites may be treated before flooding). An effective larviciding program is an important part of an integrated mosquito management operation. Accuracy of application is important since missing even a relatively small area can result in the emergence of a large mosquito brood that can quickly disperse and infest much larger areas. Unfortunately, limited funding, political boundaries, the presence of critical wildlife and plant habitats, and other factors can make it difficult to conduct optimal larviciding programs. The GMCA works with

appropriate agencies to develop effective larvicide strategies for mosquito management on public lands.

D. ADULTICIDING. Adulticiding, the application of insecticides to kill adult mosquitoes by ground or aerial applications has been a standard mosquito control practice for many years. Adulticiding based on surveillance data is an extremely important part of any IMM program. Adulticides are typically applied as ultra low volume (ULV) sprays where small doses of insecticides, atomized into fine particles, are dispersed either by truck-mounted equipment or from fixed-wing or rotary-wing aircraft. Ground or aerially applied thermal-fog (super-heated mixtures of oils and insecticides) is occasionally used in some areas.

Another adulticiding technique is called a "barrier treatment". The insecticide is sprayed onto plant and/or structure surfaces that mosquitoes may contact when resting. Barrier treatments are applied as high volume sprays with truck-mounted or hand-held spray equipment. Compounds with residual characteristics such as permethrin are commonly employed in some US locations and their use is growing. This technique is especially attractive to individual homeowners living in areas where *Ae. albopictus* is the primary problem. Residents living near mosquito producing habitats where residual insecticides can be applied along a property border can also achieve some control benefits using this technique.

Mosquito adulticiding differs fundamentally from most efforts to control other adult insects. Insecticides must drift through habitats in which mosquitoes are flying in order to achieve optimal control. In agriculture and in the structural pest industry, drift is avoided and pesticide applications are more akin to barrier treatments. Mosquito adulticiding lends itself to the criticism that non-target organisms can be affected by this technique. There are similar concerns about barrier treatments. Although this issue must be considered by mosquito management agencies, (especially those relying heavily on aerial adulticides), research has shown that properly applied adulticides have minimal non-target effects while providing important health and economic benefits to citizens.

Adulticides labeled for mosquito control in Georgia include the organophosphates chlorpyrifos, malathion, and naled; natural pyrethrins; and the synthetic pyrethroids etofenprox, permethrin, pralletron, resmethrin and sumithrin. The GMCA works with interested agencies to develop integrated strategies that may include the use of adulticides on public lands.

E. BIOLOGICAL CONTROL. Biological control (biocontrol) is the use of biological organisms to control pests, in this case, mosquitoes. Biocontrol is popular because of its potential to be host-specific with virtually no non-target effects.

Stocking larvivorous fish (*Gambusia species*) is a traditional biocontrol technique employed by Georgia mosquito control workers and throughout the US. Mosquitofish are aggressive, top-feeding, minnows **that** are highly effective at suppressing mosquito populations in permanent or semi-permanent water bodies. However, they are not recommended for all sites. Potential sites should be evaluated to determine whether additional fish predators are needed and whether these fish could move into and affect natural fish habitats. Site evaluations are available through the Georgia Cooperative Extension Service.

Other biocontrol agents have been tested for both adult and larval mosquito control, but are not operationally feasible. These include the construction and placement of both purple martin and bat colonies for adult control and the introduction of

predacious *Toxorhynchites* mosquitoes, predacious copepods, parasitic *Romanomermis* nematodes and *Laegenidium giganteum* fungi. Biocontrol, especially by the concentrated application of target-specific natural organisms, is an increasingly important mosquito management tool. More research and development is needed to expand the field of efficacious biocontrol agents.

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V. PUBLIC EDUCATION AND INFORMATION EFFORTS.

All of the larger mosquito control programs in Georgia are devoted to educating citizens about mosquito biology and control. Smaller programs often work with local public health units in order to provide this service. Public education usually involves presentations to civic associations, homeowner associations, and schools, plus frequent media events. Some Georgia mosquito management programs produce special public awareness stories/ads for television and radio and pay to have them aired. Many of these programs also participate in the annual Mosquito Awareness Week each June. The public is encouraged to eliminate mosquito-breeding sites and minimize reliance on pesticides to reduce mosquitoes around their homes. Some Georgia programs develop mosquito-related teaching aids and teaching plans that are used throughout the educational system. Educational materials emphasize the citizen's role in reducing mosquito numbers around the home through source reduction efforts, thereby minimizing pesticide use and risk in the state.

The Georgia State Division of Public Health participates in the education of mosquito control personnel by offering mosquito identification training twice a year in various parts of the state. This is part of the GMCA's ongoing effort to promote and support licensing of mosquito control workers.

VI. RECENT GMCA ENVIRONMENTAL STEWARDSHIP PROGRESS. The mosquito control community in Georgia, in collaboration with the AMCA, has recently made great strides in environmental stewardship. Strategies and actives include:

- Improved mosquito **SOURCE MAPPING AND DATA MANAGEMENT** accuracy by employing computers, geographical information systems, and GPS hardware.
- Increased use of formulations containing the biopesticides *Bti*, *Bacillus sphaericus*, and methoprene for **LARVICIDING.**
- Creation of a specific mosquito control pesticide applicators license category and the promotion of **TRAINING AND CERTIFICATION** for all personnel involved with pesticide applications.
- Dedication to **CONTINUING EDUCATION** programs to ensure personnel are equipped with up-to-date information about all aspects of mosquito control.
- Dedicated implementation of **PUBLIC EDUCATION** programs about mosquito control for both children and adults to inform them of self-help measures they can employ (*e.g.*, waste container disposal). These efforts have greatly enhanced our professionalism and demonstrated our concern for the environment.
- **COOPERATION WITH INDUSTRY AND GOVERNMENT.** For several decades, through research and cooperative efforts, mosquito management agencies have worked with various industries and other government entities to correct mosquito problems brought about by past practices. For example, there is a national planning and zoning trend to contain **STORMWATER** (rather than letting it flow into natural water bodies) that can cause mosquito problems. Cooperative efforts by mosquito agencies and local governments to design storm water systems that minimize mosquito production have been successful.

Mosquito management agencies under the umbrella of the GMCA have actively worked with industry and government to identify potential mosquito problems, investigate possible corrective actions, and implement appropriate solutions. Such positive, cooperative efforts will continue as part of the GMCA's participation in the PESP program.

VII. PROPOSED GMCA INITIATIVES TO MEET PESP GOALS AND OBJECTIVES. In an effort to reduce pesticide risk/use and further ongoing efforts already noted, the GMCA will strongly encourage its members to incorporate the following fundamental initiatives into their programs when appropriate:

- **SUREVILLANCE ACTIVITIES.** The GMCA will continue to promote the use of surveillance by all mosquito control programs in Georgia and will work to help find ways in which small programs can implement useful surveillance.

- **SOURCE REDUCTION.** An increased dedication to implementing source reduction projects will be stressed among the GMCA membership. This will include sanitation as it relates to mosquito control, in particular waste tire disposal. Although concerns over environmental issues have reduced the reliance on some types of source reduction efforts, this preventive approach remains an important tool for appropriate situations. Such work requires increased collaboration between mosquito control programs with environmental resource agencies. Source reduction can greatly reduce mosquito production and thus minimize need for pesticide use.

- **LARVICIDING.** The GMCA will continue to encourage increased use of biopesticides. Mosquito control professionals recognize that these agents are highly target-specific and are considered environmentally safe by land resource professionals. We recognize the need to utilize surface film agents and organophosphate products when appropriate and to rotate compounds as a pesticide resistance management technique. We will continue to promote the use of accurate guidance techniques when applying materials by aircraft. These can be as simple and enduring as placing flags that a pilot may use as reference points or as high-tech and modern as GPS guidance avionics. Aircraft guidance results in a more efficient and effective insecticide applications, and thus more sound environmental management.

- **ADULTICIDING.** Adulticiding, typically the IMM component of last resort, is extremely important. Lacking an understanding of other important parts of an integrated program, the general public typically associates mosquito management with spray trucks or aircraft.

  A mosquito adulticide program can be responsive to the PESP goals of reduced pesticide risk/use by spraying only when the need truly exists (verified through surveillance) and by accurately applying materials. As with larviciding, GPS-based avionics improve accuracy. The GMCA will encourage its members to incorporate the best available technology into their programs for ground and aerial adulticiding.

  We will also encourage members to avoid tank-mixing formulations using carriers that may pose environmental risks. In addition, there has been a tendency in recent years for some agencies to apply adulticides at rates that are more economically attractive than they are efficacious. Applying insecticides at doses lower than those that provide adequate control may result in the need for additional applications and pesticide resistance. In the long run, adulticiding with low rates can be counterproductive to environmental stewardship goals.

- **BIOCONTROL.** The GMCA will continue to encourage the use of predaceous *Gambusia* minnows when sites are appropriate. We also encourage, and where possible support, biocontrol research. Without additional studies and development, incorporating other biocontrol agents into day-to-day operations is not practical.

- **RESEARCH.** The key to meeting the scientific challenges of the mosquito management

community is through competent, well-focused applied research. We need to address topics as diverse as basic mosquito biology; wetland ecology; insecticide efficacy; non-target effects of mosquitocides; the biology, surveillance and control of mosquito-borne pathogens; molecular biology; and biocontrol. Without research, environmentally sound progress will be hindered. The GMCA will strongly encourage, and whenever possible, support applied research as the primary tool to deal with tomorrow's problems.

- **EDUCATION.** Educating GMCA members is the most important initiative in meeting PESP goals. The GMCA and other state mosquito management associations have made tremendous strides in recent decades to educate both our workers and the public about all aspects of our industry. This includes creating a specific mosquito control applicators license and providing continuing education on a regular basis throughout the state. In meeting PESP goals, the GMCA will strongly support the continuation of these education and certification programs to increase the level of professionalism and safety within the mosquito control industry.

  The GMCA will continue to upgrade worker and public knowledge through the internet, literature, workshops, and presentations at our annual conference. We are particularly proud of our new biannual newsletter and our informative website (www.GAmosquito.org). Through these avenues, the GMCA will effectively promote and achieve good environmental stewardship.

VIII. MEASURING PROGRESS IN MEETING PESP GOALS. We expect that the GMCA's evaluation plan will evolve over time. It will clearly identify trends, and quantify some items, such as amounts of pesticide used. Educational progress, including annual data on the number of presentations provided, students instructed and papers printed or published as they pertain to the PESP program can also be quantified.

The GMCA will measure progress in meeting PESP goals by supporting, encouraging and carefully monitoring initiatives listed in Section VI and annually providing a detailed report on progress in meeting PESP goals and objectives within these areas to AMCA. Progress will be verified through input from various GMCA committees and from its members located throughout the state. These efforts will be made in collaboration with the Georgia Division of Public Health, the Georgia Department of Agriculture, the Georgia Environmental Protection Division, and the University of Georgia, Cooperative Extension Service.

MEASURABLE COMPONENTS. These are program components to which numbers can be attached and evaluated to determine the impact of the GMCA's effort to reduce pesticide risk/use. The goal is to have all mosquito control programs use as many of the best management practices (as defined by the AMCA) as are feasible for the size and type of program.

- **SURVEILLANCE ACTIVITIES.** Because many small programs in Georgia currently utilize little to no surveillance when making mosquito control decisions, it is important to monitor the number of programs that add surveillance, mapping, and record keeping to their management practices. In addition, number of mosquitoes sent for arboviral testing can be measured, as can the results of testing.

- **SOURCE REDUCTION.** A variety of activities fall under this category. Those that are measurable include number of community outreach events, miles of ditches cleaned or number of ditching projects, and number of home visits.

- **LARVICIDING.** Measurable components include number of catch basins treated, amount of larvicide used, and larvicide distributed to the public.

- **ADULTICIDING.** Measurable components include type of adulticide used, amount of adulticide used, and acreage treated.

- **BIOCONTROL.** Use of *Gambusia* spp is not widespread in Georgia, but the number of programs using *Gambusia* spp, number of fish released and number of sites where fish are released are measurable.

- **RESEARCH.** Measurable components in this category include papers published, research projects reported on at the annual GMCA meeting, and number of students receiving scholarships to attend the GMCA meeting.

- **EDUCATION.** Education can be broken down into education of the public and education of mosquito control workers. Measurable components of public education programs include number of outreach events, number of media events, number of school programs, and number of home site visits. Measurable components of education of mosquito control workers includes number of people attending the GMCA annual meeting, numbers attending mosquito identification training, number of license exam training programs offered, and number attending vendor-provided programs.

In addition, the GMCA will track and submit activity data as outlined in the AMCA's Strategy Document. These are (1) working with managers of public lands, (2) worker training, and (3) surveillance & outreach.

IX. SUMMARY. The GMCA looks forward to this Pesticide Environmental Stewardship Partnership as part of our on-going efforts to reduce pesticide risk/use while recognizing that the environmentally sound use of insecticides will remain an important component of mosquito control's IMM programs for the foreseeable future. We recognize the benefits that this partnership can provide to our association, in particular in having an effective avenue of communication with the AMCA and EPA during the on-going process of registration (and re-registration) of mosquito control products. We hope this partnership will allow recognition of mosquito control's legitimate concern of having a decreasing number of products at our disposal while trying to fulfill our duty of providing citizens a professional and effective level of mosquito suppression services and an enjoyable environment in which to work and play.

ATTACHMENT

GMCA ORGANIZATIONAL DESCRIPTION

BOARD OF DIRECTORS: Responsible for making policy and financial decisions dealing with all aspects of the association's activities. Officers include: President, Vice-President, Secretary/Treasurer, Commercial Board Member, and three Directors.

GMCA MEMBERS PERTINENT TO PESP

PUBLIC HEALTH REPRESENTATIVE
Serves on the State of Georgia's "Arbovirus Emergency Response Group". Advises and assists the Board of Directors on developing educational materials. Responsible for all informational outlets of the association including the biannual newsletter, updating the website, and coordinating efforts among districts for arboviral surveillance.

COOPERATIVE EXTENSION REPRESENTATIVE
Responsible for tracking legislation affecting mosquito control activities. Provides training to extension agents regarding mosquito control. Works with the Georgia Department of Agriculture on pesticide applicator licensing issues.

AWARDS AND RECOGNITION COMMITTEE
Responsible for selecting recipients of the awards presented by the association. This includes two scholarships and the Oscar T. Fultz Fellowship Award.