AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM
Gunnison County Legal Instrument # _____

Date of Request:	3/12/2013	**Contractual Deadline:**		**Received in Administration:**	3/12/2013
Desired Agenda Date:		**Amount of Discussion Time Desired:**	None.		
Action Requested:	Please review for BOCC approval.				
Parties to the Agreement:	Gunnison County / Colorado Mosquito Control, Inc.				
Term Begins:	1/1/2013	**Term Ends:**	12/31/2015	**Grant Contract #:**	

Summary: 2013-2015 Gunnison County Mosquito Control Services Renewal Proposal; Colorado Mosquito Control, Inc.; 1/1/13 thru 12/31/15; $247,650

Recommendation: BOCC approval.

Fiscal Impact: $247,650 ($82,550 for each year during the three-year contract) w/ 2% escalator

Submitted by: County Manager's Office **Return To:** County Manager's Office

Finance Department Review: ● Required ○ Not Required

Comments:
$82,550 included in 2013 adopted budget.

Signature: [illegible] Discharge Date: 3/15/13

County Attorney Review: ● Required ○ Not Required

RECEIVED MAR 15 2013 COUNTY ATTORNEY

Comments:
OK DB 3/15/13

Certificate of Insurance Required
Yes X No ____ Initials DB

Signature Discharge Date

Returned to Administration: 3/15/13. **Original Returned:**

County Manager Approval:

Signature MB 3/19/13 Date 3-15-13

● Consent Agenda ○ Regular Agenda Time Allotted: _____

8

Revised January 2011

Gunnison County Mosquito Control Services Renewal Proposal

March 6, 2013

Advanced Pest Management of Colorado, Inc. d/b/a

Colorado Mosquito Control, Inc.

695 North 7th Ave. Brighton, Colorado 80601
Contact: Michael W. McGinnis, President
Toll-Free (877) 276-4306 (303) 558-8730 Fax 558-8734
E-Mail: mmcginnis@comosquitocontrol.com
Visit our Website: www.comosquitocontrol.com

2013-2015 Proposal For Mosquito Control Services Gunnison County

Advanced Pest Management of Colorado, Inc. d/b/a

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EXECUTIVE SUMMARY

Colorado Mosquito Control, Inc. (CMC) is pleased to offer the following bid proposal for the 2013-2015 Gunnison County Mosquito Control Program. CMC understands that Gunnison County seeks to provide the highest quality public services to its residents. We believe that CMC has proven our ability to provide such high quality services over the past 23 years and hopes to continue in 2013 and well into the future.

The 2012 mosquito season clearly shows that West Nile Virus is here to stay. In most states the numbers have decline from the initial spike, but in 2007, 2015 and this past year the numbers have surged again. Here in Gunnison County, with our high numbers of Culex tarsalis mosquitoes we really do not know what the future holds, but the consensus is that WNV will continue to rise and fall in the future. This proposal has been designed not only with WNV (and other mosquito-borne disease) in mind, but with a solid Integrated Pest Management (IPM) framework which addresses not only disease vectors, but all mosquito species that may vector diseases in the future and that certainly decrease the quality of life for residents today.

In the years since the Gunnison County Mosquito Control District's (GCMCD) inception, and the hiring of CMC as the program contractor, the GCMCD under the operation and management of CMC has developed into one of the foremost environmentally sensitive and technologically advanced Integrated Mosquito Control Programs in the United States.

Colorado Mosquito Control has designed, implemented, pioneered, refined and pushed to new technological levels, a comprehensive mosquito control program based on the sound scientific principles of IPM and the environmental goals of Gunnison County. In addition to the operational objectives of environmentally sound larval and adult mosquito control, CMC has also successfully implemented public education and informational brochures to help residents discover the importance of effective mosquito control on the public health and quality of life in their community. Other important support services have included: a diverse informational Website, Call Notification and Shutoff program and implementation of CMMS™, CMC's proprietary and unique historical database system as well as a GIS (Geographic Information System). These services and more have expanded the scope and breadth of the Gunnison County Mosquito Control Program operation dramatically over the last 23 years.

CMC has a long (27 year) history of offering high quality, large scale, full service mosquito control and disease surveillance programs to numerous Colorado municipalities. CMC has survived and enjoyed significant growth over time with no marketing or sales. There are several good reasons for this fact that include: our great people and their honesty and integrity, experience and expertise in our field, investment in technology and training, and the cost-effective high quality services that we always provide.

The following proposal will extend the same high quality surveillance, control and supplementary programs that CMC has successfully built and operated for Gunnison County over the past 23 years. Thank you for the opportunity.

Section I. The Basics

Environmental Mosquito Management

To control insect pests during the 1960's and 70's, pest control operators and farmers in both urban and rural agricultural environments leaned heavily toward the use of chemical insecticides. Pesticides have resulted in many astounding successes in controlling human insect-borne diseases, in the dramatic increase in food production worldwide, and in improving the quality of life for billions of people. However, this heavy reliance on chemicals has also spurred major concerns about the safety of these chemicals toward man and the natural environment. These sometimes real, and sometimes perceived environmental concerns have led to a major shift philosophically and practically toward the concept of Integrated Pest Management (IPM). There are several accepted definitions for IPM, here are two of the best:

Integrated Pest Management:
"A process consisting of the balanced use of cultural, biological, and chemical procedures that are environmentally compatible and economically feasible to reduce pest populations to a tolerable level"

Developments in mosquito control, over the past decade, have provided the necessary tools to allow the implementation of a true Integrated Pest Management Program in Gunnison County these include biological larvicides and control agents, ultra-low volume (ULV) application, computer technologies, and field control strategies. By combining these tools with data derived from years of experience, Colorado Mosquito Control will be able to continue to refine an IPM approach, we call Environmental Mosquito Management (EMM). The EMM process places an emphasis on survey and mapping, population monitoring and surveillance, and intensive larval mosquito control using computer technology to target the use of least-toxic, natural biological controls. The adult mosquito control component will involve the careful and strategic application of low-toxicity, rapidly biodegradable, ultra-low-volume materials only when established population thresholds are reached.

- All activities and methods performed in the Gunnison County Mosquito Management Program are consistent with CDC recommendations.

Colorado Discharge Permit System / NPDES

As of March 1, 2012 Colorado Mosquito Control, Inc. is in FULL COMPLIANCE with the Colorado Discharge Permit System as required by provisions of the Colorado Water Quality Control Act, (25-8-101 et seq., CRS 1973 as amended). This is the Colorado State version of the NPDES (National Pollution Discharge Elimination System) as authorized by the Colorado Department of Public Health and Environment, Water Quality Control Division, issued November 4, 2011.

The Colorado Mosquito Control PDMP (Pesticide Discharge Management Plan) is on file at the CMC main office and are available upon written request.

SECTION II. Integrated Mosquito Management (IMM) Program Scope of Work

IMM Surveillance and Monitoring

Defining the distribution, density, and species makeup of a target mosquito population in relation to human populations is essential to the success of a program that is attempting to control nuisance and/or disease carrying mosquitoes. Several tools and techniques exist and are used within the Gunnison County Mosquito Management Program.

CDC Light Trap Network. A major tool in any mosquito control program is a mosquito trapping devise called a CDC Light Trap. This trap was developed in the 1960's and has been the standard tool for monitoring mosquito population levels, density, and species makeup for almost thirty years. These specially designed, battery powered light traps baited with CO_2 (carbon dioxide), will be routinely operated at fixed data points throughout the mosquito management area to collect adult mosquitoes. The blood meal seeking female mosquito, follows the CO2 vapor plume produced by the sublimation of the dry-ice into carbon dioxide gas, as would be produced by the exhaling process of any free air breathing animal, including humans. Once near the trap, a small light bulb draws the mosquito in and a fan then sucks the mosquito into a collection bag alive.

In addition to the population density trends, (quantitative), our monitoring traps also give us insight into the efficacy of the larviciding work, indications of inward migrations from outside of the control area, and important information about the species complex present, (qualitative), at any given time. Another important aspect of the mosquito light trap monitoring function is the identification of adult mosquitoes which is actually a way of finding out about potential new larval sources. Without correct identification, mistakes can be made during treatment. We also use our species determination information to alert county health officials of the possible disease (Encephalitis) carriers Culex tarsalis. Once the adult pestiferous mosquitoes are identified, the likely water sources in the vicinity are mapped and placed on the weekly inspection and treatment list.

Identifying and Targeting Culex Mosquitoes. A new training program has been developed over the past season by CMC management for our field technicians which will allow them to identify, in the field, 2nd through 4th instar mosquito larvae to Genus. This will allow CMC field techs to differentiate floodwater Genus nuisance mosquitoes from Culex disease vector mosquitoes. This ability will then allow CMC, over time, to identify and eventually target those sites which regularly or periodically produce disease vector Culex mosquitoes.

Mosquito-borne Disease Monitoring. CMC will communicate regularly with the County Health Departments in the region, the Colorado Department of Public Health and Environment and with the Centers for Disease Control Ft. Collins for updates on the potential for mosquito-borne disease transmission in our region. Dead bird surveillance and collection is on-going in all CMC accounts.

Weather Monitoring. Climatological data and daily weather conditions are critical factors in the monitoring and control of mosquitoes. As discussed earlier, rainfall and temperatures play a vital role in the hatch and development of Aedes mosquitoes, and daily wind patterns, precipitation and temperatures have a great impact on operational activities. For these reasons CMC keeps in close contact with the National Weather Service for weather updates, predictions and climatological statistics.

IMM Larval Mosquito Control

The foundation and focus of the Gunnison County IMM Program is the environmentally sensitive control of mosquito larvae within the designated service area. Effective control of larvae will prevent their development into adult mosquitoes, and therefore, reduce the need for adult mosquito control activities. The key to environmentally oriented larval control is the organization and classification of active and potential larval development sites.

Colorado Mosquito Control uses a computer data-base called; the Computerized Mosquito Management System (CMMS). The CMMS system was designed to optimize the larval control component of an integrated pest management program.

Initially CMC performed a survey to systematically map all potential mosquito development sites within the control area. The community's site information is then input into a database to establish one of two fundamental CMMS files. The second file contains a breeding history for each site. The historical database includes information on which sites have actually produced larvae, the time of the season, the frequency of larval occurrence, and the species found in each site. Over the initial three-year period of database development, the site history file is filled with all the information gathered during routine site inspection and larviciding services. The sites are split into

two categories; non-breeding and targeted. The non-breeding sites are considered a low-priority, and bi-weekly or monthly inspections will maintain the database for these sites. The sites with a history of producing mosquitoes will be targeted for intensive field inspections and subsequent appropriate larval control measures.

Just as no one medicine is prescribed for all illnesses, no one larvicide is suitable for the control of all mosquito species in every type of habitat. The CMMS system allows CMC to do "prescription larval control" for each individual site. This strategy is based on habitat type, and species history. Large river-flooded and flood-irrigated lands are targeted for aerial larvicide applications with either Bti or Abate. Intermittently wet/dry prolific breeding sites can be targeted for pre-hatch applications of Abate 5% pellets that offer a 30 day residual, and the balance of targeted sites that are listed as potentially requiring larviciding at some point during the season can be addressed with Bti granular. The community's CMMS is updated and fine-tuned continuously throughout the entire mosquito season.

CMC's Computerized Mosquito Management System (CMMS) provides a cost-effective, site specific, "Prescription-Oriented" plan that prioritizes field operations and reduces costly inspections and unwarranted insecticide use. The CMMS system allows the mosquito control program to become much more environmentally sensitive, because the use of biological control is encouraged, and only minimum doses are required to maintain good control. The CMMS program is an indisputably effective tool in the Gunnison County Environmental Mosquito Management Program.

CMC's "Prescription Oriented" Larvicides and Control Agents

- ***All pesticides used in the Gunnison County Mosquito Management Program will be certified for that use and applications will be made in compliance with the specific label.***

Effective larval control can be achieved within the EMM framework by using only the most environmentally-sound and cost-effective materials currently available.

Bacillus thuringensis israeliensis (Bti) is an extremely low-toxicity, biological insecticide. Bti is a very species specific material that will only affect mosquito and black fly larvae. Activated by the specific pH in the gut of the larvae, the bacterially produced crystalline spore of Bti will, after being eaten by the larvae, destroy the digestive tract and kill the larvae, thus precluding development through the pupal stage to adulthood. The Bti product is formulated either on a corncob granular carrier and is applied at an EPA recommended rate of 5 lbs. per acre or an aqueous suspension applied via mistblower/ULV sprayer.

Altosid IGR Briquets and Pellets are non-toxic biological insecticides designed to release effective levels of Altosid (methoprene) Insect Growth Regulator over a thirty day (or 150 day) period. The Altosid IGR is released as the briquet erodes and prevents the metamorphological change from the larval into the pupal stage. Due to their relatively high cost the briquets are used primarily in large inaccessible historically active sites and open street catchbasins. Open street catchbasins are considered to be the primary source of Culex mosquitoes in residential areas. Culex mosquitoes are the vectors of Western Equine and other Encephalitis type diseases. In the EMM program all open catchbasins in the community can be treated using Altosid Briquets three times during the mosquito season, late June, July and August to suppress Culex mosquitoes during the key encephalitis virus amplification period if this proves necessary from larval inspections and/or the onset of an encephalitis outbreak.

Abate 5% Pellets, Sand Granule & Liquid, (temephos) are a formulation of a low-toxicity larvicide that has been designed to provide long-term, 30 day larvicidal action(pellets only) in prolific breeding sites, sites with a high organic pollution content and sites with large flood prone margins subject to major Aedes larval

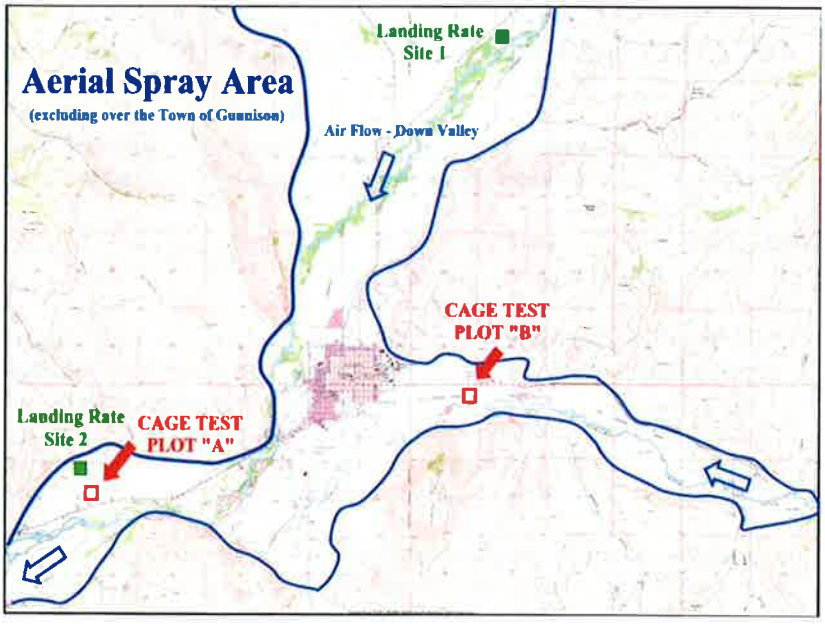
development. Abate's extremely low toxicity, and rapid biodegradability make it the product of choice for the type of site described above.

Water Management & Source Reduction

As a part of our routine visual site inspections, CMC inspectors will often note such areas as clogged ditches and streams, neglected swimming pools, and illegal tire and trash dump sites which are potential public health hazards. Water management or source reduction activities will be done throughout the summer mosquito season by clearing obstructions from clogged channels and hand digging at a number of sites in the program area. CMC will outline these problems in our weekly reports, and is always available to assist local code enforcement officials in the location and identification of these health hazard sites.

EMM Adult Mosquito Control

The primary objective of the EMM program thus far has been to inhibit the development of mosquito larvae so as to minimize the need for "fogging" to control adult mosquitoes. The use of ULV (ultra-low volume) formulated insecticides for use in ground application truck-mounted equipment gives good but only temporary relief and is normally not very cost-effective and although adult mosquito suppression by ULV fogging is desired by some citizens, it can be strongly opposed by others. CMC will follow strict adult mosquito control guidelines and will only adulticide when justified by CDC Light Trap counts above 100 mosquitoes per trap/night and/or citizen annoyance complaints or the threat of mosquito-borne disease transmission.



The adult mosquito management portion of the EMM Program consists of three phases:, Harborage Site/Perimeter Adulticiding, Residential Truck ULV Adulticiding, and Aerial ULV Adulticiding. The goal of harborage site/perimeter adulticiding is to concentrate control efforts in adult mosquito harborage areas with high humidity gradients such as stream or river valleys, margins of thick woodlots, and densely vegetated parks and outside of residential areas, away from the human population. The dispersal of the adult mosquito population into residential areas can be greatly reduced by applying adulticide materials into the harboring/perimeter areas where adult mosquitoes congregate. As a result, Residential Truck ULV adulticiding can be limited to periods of excessively high annoyance.

1. Harborage Site/Perimeter Adulticiding. Harborage areas can be defined as cool, humid spots where adult mosquitoes congregate during sunny, dry periods during daylight hours, before undertaking localized feeding flights at dusk. Species of mosquitoes with short flight ranges may be permanent residents of these harborages, while other species with longer flight ranges, such as Aedes, often use these harborage areas as daytime stopovers, during migration.

The treatment of harborage areas can be accomplished in several ways using either residual or non-residual adulticides. Residual Treatment. The treatment of harborage areas with residual materials has previously been called perimeter barrier application. The treatment of dense harborage vegetation with residual materials not only gives immediate control of existing adult mosquitoes but will prevent the rapid reinfestation of the harborage and adjacent residential areas. This type of application is usually accomplished by power backpack or truck-mounted mistblower sprayers. The material of choice is a low-toxicity permethrin based emulsion. Non-residual Treatment. Harborage site adulticiding can also be accomplished using truck-mounted ULV equipment to apply non-residual aerosol materials such as Biomist 3+15. However, residual treatments offer the considerable advantage of reduced reinfestation.

2. Truck ULV Adulticiding. During the course of a normal mosquito season, several large broods of Aedes floodwater mosquitoes will periodically migrate into a community and override the local larviciding and harborage/perimeter control efforts. In these cases Truck ULV Adulticiding is the only effective means to reduce the local mosquito populations below an acceptable level. In these situations, the ULV Adulticiding will only take place when established monitoring thresholds are reached. The decision to spray will be based only on the strict adherence to 100 mosquitoes per trap/night, and/or the recognition of a potential disease outbreak or severe nuisance problems generated by citizen complaints. To obtain the optimum effectiveness, the scheduling of the ULV application will depend on appropriate weather conditions, light trap counts, and resident input. The material of choice will be Biomist 3+15. Biomist 3+15 is a synthetic pyrethroid insecticide (permethrin) and offers a very low toxicity, low odor, rapid biodegradation, and excellent mosquito mortality. This material will be applied using the ultra-low-volume (ULV) technique and in strict compliance with all U.S. EPA, Colorado Dept. of Agriculture, and Colorado Dept. of Public Health regulations.

3. Aerial ULV Adulticiding. During the course of a normal mosquito season, generally one huge brood of Aedes floodwater mosquitoes will explode from river-flooded and irrigation flooded areas and begin to migrate into residential areas and override the local larviciding and harborage/perimeter control efforts. In these cases an aerial ULV Adulticiding is the only large-scale and effective means to reduce these huge mosquito populations below an acceptable level. In these situations, the ULV Adulticiding will only take place when established monitoring thresholds are reached. The decision to spray will be based only on the strict adherence to 100 mosquitoes per trap/night, and/or the recognition of a potential disease outbreak or severe nuisance problems generated by citizen complaints in a network of perimeter surveillance traps . To obtain the optimum effectiveness, the scheduling of the aerial ULV application will depend on appropriate weather conditions, light trap counts, and resident input.

ULV Equipment. CMC uses the Leco-type HD ULV sprayer, considered to be the industry standard. The efficiency of ULV spraying depends upon the proper droplet size output. All CMC ULV sprayers are routinely calibrated and tested for proper operation.

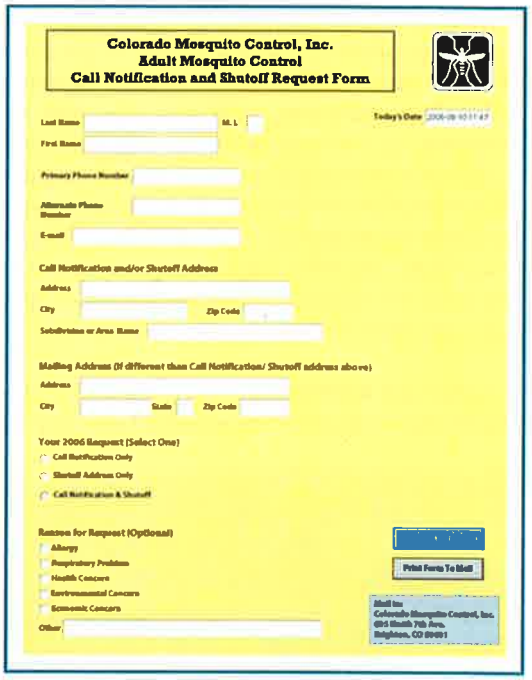
Quality Control. All adult mosquito control operations will be monitored by various methods including; CDC light trapping results, and detailed monitoring of insecticide usage through equipment calibration and inventory depletion.

Public Education, Notification and Shutoff System

Colorado Mosquito Control is committed to educating the public about the safety and effectiveness of our state-of-the-art IPM mosquito control program. . CMC will coordinate with the Gunnison County Health Department on timely and appropriate press releases and news articles.

CMC WEBSITE. Colorado Mosquito Control is committed to educating the public about the safety and effectiveness of our state-of-the-art IPM mosquito control program. Over the years, CMC has developed as part of our educational program an extensive and comprehensive website devoted to mosquito control education and information dissemination. Please visit this site at www. comosquitocontrol.com for more information.

Prior to starting any Aerial Adulticide Applications, CMC will advertise in local newspapers and on local radio, contact individually by telephone those community residents that have health, environmental or philosophical concerns about the spraying and have requested that they be notified. A minimum of three attempts to reach each of these residents will be made between the hours of 12 noon and 9 P.M. prior to the spray application. Also, upon request, addresses will be marked on CMC's operational maps, and the ULV insecticide will be "shutoff" in front of, and upwind from, these properties.



Colorado Mosquito Control, Inc.
Adult Mosquito Control
Call Notification and Shutoff Request Form

Last Name
M. I.
First Name
Primary Phone Number
Alternate Phone Number
E-mail
Call Notification and/or Shutoff Address
Address
City
Zip Code
Subdivision or Area Name
Mailing Address (If different than Call Notification/ Shutoff address above)
Address
City
State
Zip Code
Your 2006 Request (Select One)
Call Notification Only
Shutoff Address Only
Call Notification & Shutoff
Reasons for Request (Optional)
Allergy
Respiratory Problems
Health Concern
Environmental Concern
Economic Concern
Other
Print Form To Mail

Gunnison County Mosquito Management Program
Services Summary

I. General Services Description

All General Services are quoted for the 2013 season at no charge, and are included as part of the total service package.

1. General Liability/Auto/Workers Comp. Insurance Coverage
Comprehensive $1,000,000 ($1 Million) per occurrence General Liability, Claims-made policy. Including chemical and pollution coverage. Gunnison County has been named as additionally insured. (Certificates will be provided).

2. MosquitoLine® Customer Response System
Twenty-four hour customer access telephone number for reception of mosquito annoyance complaints and information requests. This number will be advertised frequently throughout the summer in the local newspapers.

3. ImmediateResponse® System
Guaranteed 24 hour response/resolution time to all mosquito annoyance complaint calls, weather permitting.

4. C.M.M.S. ® (Computer-assisted Mosquito Management System)
Use of CMC's comprehensive computer database and reporting system to target specific larval mosquito control methods to historically active development sites. This method provides effective control and reduces the high cost of routine "hit & miss" site inspection.

5. Complete Weather Monitoring Service
Daily monitoring and recording of local weather conditions in our computer database for use in mosquito annoyance prediction, effective operational scheduling and efficient reporting.

6. Timely Reports
CMC will provide activity reports detailing provided services during the months of April through September. The reports shall include the following information: 1. a description of the services performed at breeding sites and trapping locations; 2. identification of areas treated with chemicals, what materials were used, the date and time of the application, the rationale for their use.

7. Annual Report
A comprehensive end of season report detailing the season's activities, including breeding site inspection & treatment summaries, a MosquitoLine report, ImmediateResponse report, mosquito population graphs, and weather data will be provided by November 15, 2013.

8. Public Relations
A. CMC will work with local newspapers to put out several articles describing the mosquito control program's biological approach to suppressing the areas mosquito problems. On-going publicity about the program will provide residents with information about the program's activities as well as where to call to report mosquito annoyance problems. A citizen mosquito control "hot-line" number will be advertised. CMC will respond to all citizen calls with appropriate action, be it informational request, or annoyance complaints. These calls generally provide an excellent opportunity to explain the workings of the control program. to normally under-informed residents.

B. Maintenance of a complete and continuously updated shut-off file and map system which identifies all properties that have requested that the adulticide spray be shut-off in front of, and up-wind from their property. All Shut-off properties will be marked prior to any spray application.

C. A continuously updated notification file which lists those residents that desire advanced notification of adult control spray applications.

D. Complete access to all CMC technical literature including Material Safety Data Sheets and Sample Labels for all insecticides used in the program.

E. CMC informational literature, including the 28 page informational booklet; "Mosquito Control, The Environment and You" will be distributed free of charge upon request.

F. News releases issued to the local media when deemed appropriate and necessary, in cooperation with the Gunnison County Manager.

II. Larval Control Services Description

The following larval mosquito control service items are quoted on a complete seasonal basis.

9. C. M. M. S. Site Inspection Service
Routine Individual Inspections covering all of the previously mapped potential larval mosquito development sites.

10. Larvicide Application
Power backpack or aerial application of 5% Bti granular/liquid 12AS or Abate 5% Pellet/1%Sand/Liquid larvicide at a U.S. EPA approved dosage rates. Application of Altosid Briquets when deemed appropriate and necessary.

11. Larval Service Quality Control
Twenty-four hour elapse time spot check of the previous days inspected and treated sites.

III. Adult Mosquito Control Services Description

The following adult mosquito control service items are quoted on a complete seasonal basis.

12. Light Trap Monitoring Service
Seasonal CDC Light Trap service for adult mosquito population monitoring. A minimum of eight traps will be operated from mid-May through September, with catches retrieved, sorted to sex and species, with the resulting data recorded for computerized analysis and weekly reporting.

13. Harborage Area Adulticide Application
Application by power backpack and/or truck-mounted mistblower of residual permethrin insecticide for control of adult mosquitoes in heavily vegetated harborage sites.

14. Truck ULV Adulticide Application
ULV (ultra-low volume) applications via truck-mounted Leco spray units with EPA approved Biomist 3+15 (Permethrin) at a dosage rate of 6.0 fl. oz. per minute at 10 mph (1.0 fl. ounce per acre) to those areas targeted for control via CDC trap population surveillance.

15. Aerial ULV Adulticide Application
A single ULV (ultra-low volume) application via agricultural spray plane with EPA registered ULV (permethrin) to those rural/agricultural areas targeted for control via CDC/Gravid trap population surveillance.

- **A)** All applications will strictly adhere to product label.
- **B)** Aircraft calibration data will be made available to Gunnison County.
- **C)** Raw in flight GPS data will be made available to Gunnison County.

16. Adult Mosquito Control Service Quality Control
Monitoring of all adult mosquito control operations by various methods including; CDC Light Trapping, and detailed monitoring of insecticide usage through equipment calibration and inventory depletion.

IV. Contingency Public Health Emergency Services (additional cost, upon request only)

Since this proposal/contract is based on IPM methods and is primarily targeted toward larval mosquito control with adult mosquito surveillance via CDC light traps, and only limited and targeted small area truck ULV adulticide applications to areas with severe annoyance problems, and includes only a single aerial ULV adulticide application per season, and does not include additional large scale aerial or on-going multiple truck-based adulticide spray applications we have included contractual price quotes for additional vector mosquito surveillance trapping and a per mile cost for additional adulticide applications in the case of a public health emergency. These services would be provided strictly UPON REQUEST ONLY.

A. CDC Light Trap and/or Reiter Gravid Trap Surveillance
Upon request, CMC will operate additional CDC light traps and/or Reiter gravid traps for expanded adult mosquito and disease vector mosquito surveillance within Gunnison County

Identification of the trapped mosquitoes will be done the following day after the mosquitoes are returned to the lab and killed. The trapped mosquitoes will be counted and identified to the following species; Culex tarsalis, Culex pipiens, Aedes/Ochlerotatus species. Gravid Traps are designed to collect gravid (blood fed) container breeding and potential disease vector Culex pipiens mosquitoes. Captured females mosquitoes will be identified and

reported along with other trapping results weekly. If requested, these mosquitoes will be pooled and sent to the Colorado Dept. of Health for virus testing.

Cost includes all equipment, dry ice, vehicles, labor, shipping and reporting. Cost per trap/night: $68.00

B. Ground-based Truck ULV Adulticide Application
For large scale Public Health Emergency adult mosquito control, CMC will apply either Biomist 3+15, Permanone RTU or AquaReslin synthetic pyrethroid insecticides (permethrin). These products offer a very low toxicity, low odor, rapid biodegradation, and excellent mosquito mortality. This material will be applied along designated roads, streets and off-road areas using the ultra-low-volume (ULV) technique at 8.0 ounces per minute at 10mph vehicle speed and in strict compliance with the label and all U.S. EPA, Colorado Dept. of Agriculture, and Colorado Dept. of Public Health regulations.

Cost includes all equipment, vehicles, pesticide products, labor, and liability insurance. Cost per spray mile: $58.00

C. Aerial ULV Adulticide Application
For even larger scale Public Health Emergency adult mosquito control, CMC will apply by fixed-wing air craft, an appropriately labeled insecticide (Anvil, Trumpet, Fyfanon, AquaReslin) for adult mosquito control. One of these materials will be applied using the ultra-low-volume (ULV) technique at the proper dosage rate and in strict compliance with the label and all U.S. EPA, Colorado Dept. of Agriculture, and Colorado Dept. of Public Health regulations. Cost will vary by total acreage selected and product chosen.
Cost includes all aircraft, equipment, vehicles, pesticide products, labor, and liability insurance. Approximate cost per spray acre: $2.25

Entry on to Private Property

The entry onto private property to treat for mosquito larvae shall be by prior authorization from owner/agent.

The field staff will service the project area and the immediate environs as one mosquito management area. Man power and control operations will be prioritized to obtain maximum mosquito control effectiveness and to minimize annoyance levels.

The program's active field mosquito suppression work will continue for five months, usually terminating in the first weeks of August, depending on the biological activity and weather conditions at that time.

Project Area

The Project Area is the Gunnison County Mosquito Control Area as defined in Board of County Commissioners of Gunnison County Colorado Ordinance Number 7.

CMC Staffing & Qualifications

Colorado Mosquito Control, Inc. is a professional organization dedicated to providing comprehensive state-of-the-science large-scale mosquito control contracted services to municipalities and other organizations. CMC's mosquito management programs are designed, implemented, and supervised by experienced, trained, and licensed personnel with over 50 years of combined field mosquito control experience, including Board Certified Entomologists.

Michael W. McGinnis, President
Over 32 years experience in all aspects of municipal mosquito control program design, implementation, and contractual services.
Owner of Colorado Mosquito Control, Inc. Broomfield Colorado
Founder / Owner of Advanced Pest Management Co. Inc. Fenton Michigan
B.S. Geography & Earth Science, The Pennsylvania State University (1979)
Member: American Mosquito Control Assn.
West Central Mosquito & Vector Control Assn.
Michigan Mosquito Control Assn. Board of Directors
Licensed: Commercial Pesticide Applicator - Colorado Department of Agriculture/US EPA
Commercial Pesticide Applicator - Michigan Dept. of Agriculture/US EPA

Chris Kruthaupt, Gunnison County Manager
23 years experience in all aspects of the Gunnison County MCD
mosquito control program operations.
B.S. Biology Western State. M.S. Water Science University of Idaho
Member: American Mosquito Control Assn.
West Central Mosquito & Vector Control Assn.

Michael J. "Doc" Weissmann, Ph.D., Entomologist/Surveillance Manager
Extensive experience with insect identification, behavior, and public education.
Faculty Affiliate in the Department of Bioagricultural Sciences and Pest Management at Colorado State University, Ft. Collins, Colorado.
B.A. (1982) and M.A. (1986) in Biology from University of Colorado at Gunnison
Ph.D. (1995) in Entomology from Colorado State University in Ft. Collins

L.C. Keenan, BCE (Board Certified Entomologist)
40 Years hands-on experience Pest Management program design and implementation, with US Department of Agriculture, and private sector.
Founder Colorado Mosquito Control, Inc.
University of California, University of Washington
USDA Graduate School
B.S. Economic Entomology
Member: American Mosquito Control Assn.
West Central Mosquito & Vector Control Assn.
Colorado Pest Control Assn.
Licensed: Commercial Pesticide Applicator - Colorado Department of Agriculture/US EPA

Dr. Tom Janousek, Entomologist
20 years experience in all aspects of municipal mosquito control program operations.
B.S. Biology from Creighton University 1987

MS Public Health from Tulane University, School of Public Health and Tropical Medicine, August 1991
Ph.D. Medical Entomology Texas A&M

Member:	American Mosquito Control Assn.
	West Central Mosquito & Vector Control Assn.
Licensed:	Commercial Pesticide Applicator - Colorado Department of Agriculture/US EPA

Proposed Seasonal Field Staff

The Gunnison Valley Mosquito Management Program will be staffed with four full time technicians, one field supervisor and one Biologist, supported by direct administrative and other technical personnel..

Confidential References

City of Westminster
Mr. Rich Dahl, Parks Services Manager
4800 West 92nd Ave.
Westminster, CO 80033
(303) 430-2400 ext. 2202

Boulder County MCD
Mr. Jeff Zayach
Boulder County Public Health
Environmental Health
3450 Broadway
Gunnison , CO 80304
(303) 441-1189

Thornton, City of
Mr. Andy Jennings, Park Superintendent
Thornton Rec. Center
2211 Eppinger Blvd.
Thornton, CO 80229
(303) 538-7300

Broomfield, City of
Kathy Schnoor, Env. Svcs Administrator
P.O. Box 1415
Broomfield, CO 80038-1415
(303) 466-2302

City of Loveland
Mr. Mick Mercer, Director of Streets and Sanitation
500 East 3rd Street
Loveland, CO 80537
(303) 962-2524

Other references available upon request

COLORADO MOSQUITO CONTROL, INC.

ATTACHMENT "A" March 6, 2013
2013-2015 CONTRACTUAL SERVICE COST SUMMARY

Multi-Year Gunnison County Mosquito Management Program

The following price is quoted on a complete seasonal basis and will be fully earned. The complete seasonal cost will not be exceeded without the written approval of the Gunnison County Managers Office. This program is offered by CMC as a comprehensive integrated larval and adult mosquito control program, specifically designed for Gunnison County as a strategy against local, severe mosquito annoyance. Please see the previous cost and services description pages for more detailed information. This proposal includes all labor, insecticides, vehicles, equipment, liability/auto/workers comp. insurance coverage, administrative support, and overhead expenses.

I. General Services

1. Liability/Auto/Workers Comp Insurance Coverage
2. MosquitoLine® Customer Response System
3. ImmediateResponse® System
4. C.M.M.S.® (Computer-assisted Mosquito Mgmt. System)
5. Complete Weather Monitoring System
6. Timely Reports
7. Annual Report
8. Public Relations

II. Larval Mosquito Control Services

9. C.M.M.S. Site Inspection Service.
10. Larvicide Application
11. Larval Service Quality Control.

III. Adult Mosquito Control Services

12. Light Trap Monitoring Service
13. Harborage Area Adulticide Application.
14. Truck ULV Adulticide Application
15. Aerial ULV Adulticide Application
16. Adult Service Quality Control.

IV. Add-on Contingency Public Health Emergency Services

(additional cost, provided upon request only)

A. CDC Light Trap and/or Reiter Gravid Trap Surveillance
B. Ground ULV Adulticide Application
C. Aerial ULV Adulticide Application

2013 Gunnison County Mosquito Control Program Proposed Service Cost: $82,550.00/Year

ATTACHMENT "B" March 6, 2013
Gunnison County Mosquito Control Proposal 2013

1. Hold Harmless Indemnity Clause:

C.M.C., Inc. shall indemnify and hold harmless Gunnison County and its agents and employees from and against all claims damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the services, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of C.M.C., Inc., any sub-contractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

Responsibility/Liability. C.M.C., Inc. warrants that it will exercise in its performance of these services the standard of care normally exercised by nationally recognized organizations engaged in performing comparable services. C.M.C., Inc. shall be liable to Gunnison County for any loss, damages or costs incurred by the County because of C.M.C., Inc.'s duties under this warranty.

2. Warranty & Disclaimer

Colorado Mosquito Control, Inc. ("CMC") is engaged in the business of mosquito control and abatement, and has not been retained to eradicate the mosquito population in any particular area. There are severe, and sometimes fatal, consequence of some mosquito bites which may be transmission of certain serious diseases such as malaria, dengue fever, West Nile virus and several other forms of encephalitis. Not only can mosquitoes carry diseases which afflict humans, but they also can transmit several diseases and parasites that birds, dogs and horses and other animals are very susceptible to. These include dog heart worms, Western Equine Encephalitis and West Nile Virus. Because CMC has not been retained to eradicate the mosquito population, CMC can make no warranty, representation or guarantee, of any type, about the existence of mosquito borne diseases in the geographic area of the proposed area of contracting, or the potential for human or animal infection, either before, during or after the completion of the CMC mosquito control services.

CMC warrants that the services described in this proposal will be provided in a professional and business-like manner. Other than this warranty, CMC makes no express or implied warranties, including without limitation, any express or implied warranties of merchantability or fitness for a particular purpose. Client understands and agrees that any liability of CMC regarding the Project shall be limited to negligence of CMC in the carrying out of its professional services under the contract, and shall not include any special, incidental, consequential or punitive damages, or any damages based on any lost sales or profits.

CMC will not be liable for any general, special, incidental or consequential damages for loss, damage or expense including but not limited to sickness, injury or death, loss of livestock or animals, or lost profits from any farm or ranching operations of any type from the mosquito control services provided by Colorado Mosquito Control, Inc.

3. No private vehicles will be operated in Gunnison County in connection with the Mosquito Control Program.

4. Workman's Compensation, Automotive and General Liability Insurance are in place. (Certificates available upon request)

5. Independent Contractor.

The parties recognize and agree that the Contractor is an independent contractor for all purposes, both legal and practical, in performing services under this Agreement, and that the Contractor and its agent and employees are not agents or employees of Gunnison County for any purpose. As an independent contractor, the Contractor shall

be responsible for employing and directing such personnel and agents as it requires to perform the services purchased hereunder, shall exercise complete authority over its personnel and agents, and shall be fully responsible for their actions.

Contractor acknowledges that it is not entitled to unemployment insurance benefits nor worker's compensation benefits from Gunnison County, its elected officials, agents, or any program administered or funded by Gunnison County. Contractor shall be entitled to unemployment insurance or worker's compensations insurance only if unemployment compensation coverage or worker's compensation coverage is provided by the Contractor, or some other entity that is not a party to this contract. Contractor is obligated to pay Federal and State income tax on any monies earned pursuant to the contract relationship.

COLORADO MOSQUITO CONTROL, INC.

ATTACHMENT "C" March 6, 2013
2013-2015 CONTRACTUAL SERVICE COST AGREEMENT

For Gunnison County for the 2013-2015 seasons only;

THREE YEAR CONTRACT: Attachment "A" September 25, 2012 is offered for a three year period 2013-2015 with a 2.0% price escalator per year. Requests for increases beyond this amount would be subject to negotiation. The yearly continuation of this project is subject to the appropriation of funds by the Gunnison County Commissioners on an annual basis for this purpose. Signing and returning the attached copy of the contractual agreement will authorize COLORADO MOSQUITO CONTROL, INC. to perform the service items contained in Attachment "A" September 25, 2012 within the stipulated limits for a period of three years, 2013 through 2015 seasons. The Gunnison County MCD also agrees to the terms set forth in Attachment "B". These prices are complete and fully earned. Billing will be in 6 equal monthly installments (March - August). If new areas are to be covered they will be added at the current unit rate.

For acceptance of Attachment "A" September 25, 2012 for a period of THREE YEARS (2013-2015) Sign Here:

Name (X)_____Title_____Date_____.

For Colorado Mosquito Control, Inc.

Name Michael W. McGinnis Title_____Date_____.
Michael W. McGinnis

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Invoices should be sent to:

Name_____Title_____

Address_____Phone_____

City Zip_____

Retain This Copy For Your Files

COLORADO MOSQUITO CONTROL, INC.

ATTACHMENT "C" September 25, 2012
2013-2015 CONTRACTUAL SERVICE COST AGREEMENT

For Gunnison County for the 2013-2015 seasons only;

THREE YEAR CONTRACT: Attachment "A" September 25, 2012 is offered for a three year period 2013-2015 with a 2.0% price escalator per year. Requests for increases beyond this amount would be subject to negotiation. The yearly continuation of this project is subject to the appropriation of funds by the Gunnison County Commissioners on an annual basis for this purpose. Signing and returning this copy of the contractual agreement will authorize COLORADO MOSQUITO CONTROL, INC. to perform the service items contained in Attachment "A" September 25, 2012 within the stipulated limits for a period of three years, 2013 through 2015 seasons. The Gunnison County MCD also agrees to the terms set forth in Attachment "B". These prices are complete and fully earned. Billing will be in 6 equal monthly installments (March - August). If new areas are to be covered they will be added at the current unit rate.

For acceptance of Attachment "A" September 25, 2012 for a period of THREE YEARS (2013-2015) Sign Here:

Name (X)_____Title_____Date_____.

For Colorado Mosquito Control, Inc.

Name Michael W. McGinnis Title_____Date_____.

Michael W. McGinnis

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Invoices should be sent to:

Name_____Title_____

Address_____Phone_____

City Zip_____

Please Return This Copy To Colorado Mosquito Control