Aerial Mosquito Control Operations

Malcom Williams Chief pilot AVCS
ADAPCO Vector Control Services
(VDCI–Vector Disease Control, Inc.)
950 N. Broadway, Suite B
Greenville, MS 38701
USA
Our Fleet of Aircraft

- *Piper Aztec PA23-250* (N76SR)
- *Piper Aztec PA23-250* (N415CC)
- *Piper Aztec PA23-250* (N2468M)
- *Cessna 402* (N215RC)
- Each aircraft capable of treating 30,000 - 60,000 acres in one evening
- Certified by the Federal Aviation Administration (FAA)
- Equipped with the Wingman™ GX aerial spray guidance system and Micronair rotary Atomizers.
- Equipped with the AIMMS-20 Weather monitoring system
Pilots

• All our pilots and Co pilots are full time Mosquito pilots.
• All are on straight salaries and not performance based.
• All together our pilots have Over 25 years and 15,000 hrs of aerial mosquito control experience.
Aircraft

• All of our planes are certified by the FAA to meet or exceed FAA requirements for single engine performance over congested areas.
• This has been demonstrated to the FAA for each aircraft.
• Our planes are set up for aerial mosquito control only.
Technology Allows for a High Level of Application Accuracy

- AIMMS-20 Weather Monitoring System
- GPS Guided System
- Rotary Atomizers
- Real-Time Weather
- Data On-Board GPS Systems
- Integrated Mapping Technology
AVCS Experience

• ADAPCO pioneered the Optimization drift technology to be used for mosquito control.
• Uses the USDA AG Disp. Optimization model.
• AVCS has been using this technology for around five years.
• This has given us the experience to work out the bugs and prefect the process.
Ware County Surveillance

mosquito species

Oc. atlanticus  Ae. vexans  Ps. ciliata  An. crucians

prespray  postspray
Why have contingency contracts

- Many waivers and permits have to be in place before an application takes place. This takes time to implement.
- All preparations for facilities are put in place.
- Insurance certificates are put in place.
- GIS mapping of proposed areas are done.
- Gives a level of protection and another tool to be used in your program.
FAA Low Level Waivers
And Congested Area Flight Plan

- Low Level Waiver maintained for all 48 Contiguous States
- Congested Area Flight Plans for Specific Contracts
  - Equipment Used
  - Application Method
  - Emergency Facilities
  - Pilot Qualifications
  - Maps of Possible Spray Areas
Advance Preparations

Contingency Plans

• Arrangements made with local airports
  ➢ Fuel
  ➢ Parking
  ➢ Chemical Storage

• Expedited delivery of pesticides is planned

• FAA requests for
  ➢ Low Level Waiver
  ➢ Congested Area Plans
Contingency Contracts –
24 to 48 Hour Response Time

- Pre-Flight Aircraft
- Prepare Ground Support
- Relocate Aircraft
- Prepare GPS Spray Blocks

- Coordinate with Contracting Agency On-Site
- Site Surveillance
- Final Weather Test
- Pre-Flight Briefing
Spray Blocks Created and Site Surveillance Initiated
Aircraft and Application Equipment are Inspected
Systems are Calibrated

Micronair nozzles

AIMMS unit

Consistently produces 20–50 micron sized droplets
Ada County will spray to kill mosquitoes spreading West Nile (See a map of where the county plans to spray)

By Kathleen Kreiter and Heath Druzin
Idaho Statesman
The Idaho Statesman | Edition Date: 06-18-2006

Two small airplanes will buzz 300 feet over parts of Ada County on Monday and Tuesday nights, spraying an insecticide officials hope will help stem the "epidemic" of West Nile virus.

Ada County commissioners declared an emergency last week and on Thursday approved a plan to spray the insecticide Dibrom over about 50,000 acres of the county to kill adult mosquitoes. Aerial spraying is the "prescription" that's required to treat the West Nile problem, they said.

Two Idahoans have died from West Nile, and the virus was a contributing factor in the death of a third person Wednesday. John Shaw, a 66-year-old Elmore County man, died Wednesday night. He suffered from other conditions as well, officials said.

Idaho's tally of confirmed human cases of West Nile virus stood at 299 on Thursday; 35 of them are serious neuroinvasive infections.

"The mosquitoes are starting to get the upper hand," said Brian Wilbur, director of Ada County's pest control district.
Pre-fly Spray Zones
Finally Get Some Flight Time
Efficacy Monitoring
MONITOR 4

DESIGNED AND BUILT
BY
ADAPCO, INC.
What is it?

- Variable Flow Control
  - Allows chemical to be applied proportionate to ground speed
  - Ensures a consistent and economical application

- Uses GPS for flow control and recording of trip information
Making your life easier...

- Accountability of drivers
  - Records speed, flow rate, date and time of applications, etc.
- Easily recall past missions with GeoTracker to prove/disprove spray locations
- Ability to give drivers certain spray privileges
GeoTracker – Cayman Islands
Downloading Options

- Removable Compact Flash card
- “Parking-lot download” option
- “Real-Time Tracking” option
Come by the booth and check it out!