

# **MASSACHUSETTS MOSQUITO CONTROL ANNUAL OPERATIONS REPORT**

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**2007** Year of Report

Date of Report: March 11, 2008

Project/District Name: **Bristol County Mosquito Control Project**

Address: 140 North Walker Street

City/Town: Taunton

Zip: 02780

Phone: 508-823-5253

Fax: 508-828-1868

E-mail: brismosqmt@comcast.net

**Report prepared by: Wayne N. Andrews, M.S.**

If you have a mission statement, please include it here:

In conjunction with the belief that mosquito control is an important public health issue, the Bristol County Mosquito Control Project, under the guidance of the State Reclamation and Mosquito Control Board, strives to serve their membership communities by suppressing both nuisance and disease carrying mosquito populations. Our goal is to bring mosquito populations to tolerable levels using a variety of scientifically effective methodologies consistent with applicable laws. Surveillance, water management, biological and chemical controls are performed in an environmentally sensitive manner to minimize potential effects on people, wildlife and the environment. It is acknowledged that commissioners live or work in the county and that all decisions be made in a fiscally responsible manner. The Project advocates public outreach and education through cooperative efforts with local officials, school departments and the news media.

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## **ORGANIZATION SETUP:**

Please list your staffing levels for the year of this report:

Full time: 9

Part time: 15 hours per week

Seasonal: 3

Other: 0 (please describe)

Please break these down into the following areas:

Administrative staff: 1.5

Field staff: 7.5

Please check off all that apply, and list employee name(s) next to each category:

- Public relations Priscilla Matton, Wayne Andrews
- Information technology Priscilla Matton, Wayne Andrews
- Entomologist Priscilla Matton, Wayne Andrews
- Wetland Scientist Priscilla Matton, Wayne Andrews
- Biologist Wayne Andrews, Priscilla Matton
- Education Priscilla Matton, Wayne Andrews
- Laboratory Wayne Andrews, Priscilla Matton
- Operations Stephen Burns
- Facilities Stephen Burns
- Other (please list)

For the year of this report, we maintained:

11 vehicles

2 modified wetland equipment (list type) (2) low ground pressure excavators, (1) low ground pressure mower, (1) trailer to transport

6 ULV sprayers (list type) (2) Beecomist, (4) London Fog (GPS)

0 Larval control equipment (list type)

Other (please be specific):

**Comments:** 1/3 of senior staff have Bachelor's Degrees in Business, 2/3 have Masters' degrees in Medical Entomology

## INTEGRATED PEST MANAGEMENT (IPM):

### Definition TBD

Please check off all of the services that you currently provide to your member cities and towns as part of your IPM program; details of these services are in the next sections.

- Larval mosquito control
- Adult mosquito control
- Source reduction
- Ditch maintenance
- Open Marsh Water Management
- Adult mosquito surveillance
- Education, Outreach & Public education
- Research
- Other (please list):

**Comments:** None

## LARVAL MOSQUITO CONTROL:

Do you have a larval mosquito suppression program? Yes

If yes, please describe the purpose of this program: To reduce the emergence of adult mosquitoes in areas where larval mosquitoes are present.

Please give the time frame for this program: See Timeline at the end of the document.

Describe the areas that this program is used: Throughout the Bristol County Area

Do you use:

**Ground applied (includes hand, portable and/or backpack)**

**Helicopter applications**

**Other (please list):**

**Comments:** None

What products do you use in – (please use product name and EPA#)

**Wetlands:** Vectobac G #73049-10

**Catch basins:** VectoLex WDG #73049-57

**Containers:** VectoLex WDG #73049-57

**Other (please list):** Cattail areas: Altosid Pellets #2724-448

Please list the rates of application for the areas listed above:

**Wetlands:** 2.5 Lbs/acre

**Catch basins:** .0041 ozs/catch basin

**Containers:** .000041 ozs/container

**Other:**

**Comments:** None

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## **ADULT MOSQUITO CONTROL:**

Do you have an adult mosquito suppression program? Yes

If yes, please describe the purpose of this program: Vector Contol 85%; Nusiance 15%

Please give the time frame for this program: See Timeline at end of document.

Describe the areas that this program is used: Area wide and targeted adulticide.

Do you use:

**Truck applications**

**Portable applications**

**Aerial applications**

**Other (please list):**

**Comments:** More aerial adultciding should be done. Culiseta melanura & Cq. perturbans can not be controlled in the larval stage.

Please list the names of the products used with EPA #:

- 1). Anvil 10+10 ULV, EPA Reg # 1021-1688-8329
- 2).
- 3).
- 4).

Please list your application rates for each product:

- 1). 1/2 fluid oz per acre
- 2).
- 3).
- 4).

Please describe the maximum amounts or frequency used in a particular time frame such as season and areas

It is application rate dependent and only applied every other day in the same area.

**Comments:** None

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### **SOURCE REDUCTION**

Do you perform source reduction methods such as tire/container removal? Yes

If yes, please describe your program: Containers and tire removal from problem areas.

**Comments:** None

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### **DITCH MAINTENANCE**

Do you have a ditch maintenance program? Yes

Please check all that apply:

- Inland/freshwater
- Saltmarsh

If yes, please describe: This includes both hand and mechanized work.

Please check off all that apply INLAND DITCH MAINTENANCE:

- Hand tools
- Mechanized equipment
- Other (please list):

**Comments:** None

Please check off all that apply SALTMARSH DITCH MAINTENANCE:

- Hand cleaning**  
 **Mechanized cleaning**  
 **Other (please list):**

**Comments:** None

Please give an estimate of cumulative length of ditches maintained from the list above INLAND:

**Hand cleaning 80,277 feet**  
**Mechanized cleaning 17,449 feet**  
**Other (please list):**  
**Comments:** None

Please give an estimate of cumulative length of ditches maintained from the list above SALTMARSH:

**Hand cleaning 10,352 feet**  
**Mechanized cleaning 5,762 feet**  
**Other (please list):**

**Comments:** Based on calendar year 2007

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## **OPEN MARSH WATER MANAGEMENT**

Do you have an OMWM program? Yes

If yes, please describe: In surveillance phase.

Please give an estimate of total square feet or acreage: None, still in surveillance phase.

**Comments:** None

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## **ADULT MOSQUITO SURVEILLANCE**

Do you have an adult mosquito surveillance program? Yes

Please check off all that apply:

- Gravid traps

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Resting boxes                     | <input type="checkbox"/> Canopy            |
| <input checked="" type="checkbox"/> CDC light traps                   | <input checked="" type="checkbox"/> Canopy |
| <input checked="" type="checkbox"/> CDC light traps w/CO <sub>2</sub> | <input type="checkbox"/> Canopy            |
| <input checked="" type="checkbox"/> ABC light traps                   | <input type="checkbox"/> Canopy            |
| <input checked="" type="checkbox"/> ABC light traps w/CO <sub>2</sub> | <input type="checkbox"/> Canopy            |
| <input checked="" type="checkbox"/> NJ light traps                    | <input type="checkbox"/> Canopy            |
| <input type="checkbox"/> NJ light traps w/CO <sub>2</sub>             | <input type="checkbox"/> Canopy            |

Other (please describe):

Please describe the purpose of this program: There are two reasons to do surveillance: to monitor mosquito populations and virus levels in these mosquitoes.

Do you maintain long-term trap sites in any of your areas? Yes

If yes, please describe how you chose these long-term sites. Originally based on EEE human cases in these areas.

Please check off the species of concern in your service area:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> <i>Ae. albopictus</i> | <input type="checkbox"/> <i>Oc. cantator</i>                  |
| <input type="checkbox"/> <i>Ae. cinereus</i>              | <input type="checkbox"/> <i>Oc. excrucians</i>                |
| <input checked="" type="checkbox"/> <i>Ae. vexans</i>     | <input type="checkbox"/> <i>Oc. fitchii</i>                   |
| <input type="checkbox"/> <i>An. punctipennis</i>          | <input checked="" type="checkbox"/> <i>Oc. j. japonicus</i>   |
| <input type="checkbox"/> <i>An. quadrimaculatus</i>       | <input type="checkbox"/> <i>Oc. punctor</i>                   |
| <input checked="" type="checkbox"/> <i>Cq. perturbans</i> | <input checked="" type="checkbox"/> <i>Oc. sollicitans</i>    |
| <input checked="" type="checkbox"/> <i>Cx. pipiens</i>    | <input type="checkbox"/> <i>Oc. stimulans</i>                 |
| <input checked="" type="checkbox"/> <i>Cx. restuans</i>   | <input checked="" type="checkbox"/> <i>Oc. taeniorhynchus</i> |
| <input checked="" type="checkbox"/> <i>Cx. salinarius</i> | <input checked="" type="checkbox"/> <i>Oc. triseriatus</i>    |
| <input checked="" type="checkbox"/> <i>Cs. melanura</i>   | <input type="checkbox"/> <i>Oc. trivittatus</i>               |
| <input checked="" type="checkbox"/> <i>Cs. morsitans</i>  | <input type="checkbox"/> <i>Ps. ferox</i>                     |
| <input type="checkbox"/> <i>Oc. abserratus</i>            | <input type="checkbox"/> <i>Ur. sapphirina</i>                |
| <input checked="" type="checkbox"/> <i>Oc. canadensis</i> |   |

Other (please list):

Do you participate in the MDPH Arboviral Surveillance program? Yes

How many pools do you submit weekly on average? 45-60

Please check off the arboviruses found in your area in the past 5 years:

- West Nile Virus
- Eastern Equine Encephalitis
- Other Please list: Highlands Jay

Did the above listed diseases cause human or horse illnesses? Yes

Please explain: In the past 5 years we have had 172 isolations of either WNV or EEE. We have also had human cases of EEE/WNV as well as horse deaths from both of these viruses. Historically we have had over a 1,000 isolations of EEE, hundreds of horse deaths and 100+ humans cases of EEE. WNV has caused large numbers of horse and human cases. Many of these not reported or detected.

At what arbovirus risk level did the year begin in your area? (If more than one please list)

**WNV: 3**

**EEE: 3**

At what arbovirus risk level did the year end in your area? (If more than one please list)

**WNV: 4**

**EEE: 4**

**Comments:** Several towns were both risk cat 4 for much of the season for both WNV and EEE.

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## **EDUCATION, OUTREACH & PUBLIC RELATIONS**

Do you have an education/public outreach program program? Yes

If yes, please describe: Numerous radio, TV and newspaper events.

Please check off all that apply:

School based program

Website

PR brochures/handouts

Community events

Other (please describe): Science fair mentor program, High School Internship programs.

Please give an estimate of attendance/participants in this program: 1,000+

Please list some events you participated in for the year of this report: School, community wide events, gardening clubs, beekeeper meetings and many others.

Please list training events your staff attended: Northeast Mosquito Control Annual Training, Clarke's Mosquito Seminar for CEU's, American Mosquito Control Meetings.

**Comments:** Public outreach is a major part of our program.

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## **BIOLOGICAL CONTROL EFFORTS**

Do you have a biological control program? No

If yes, please describe: None

Is this program the introduction of mosquito predators or the enhancement of habitat for native predators? None

Please check off all that apply:

- Predatory fish
- Predatory invertebrates
- Other (please describe):

**Comments:** None

## **INFORMATION TECHNOLOGY**

Does your program use (check all that apply):

- Computers
- GIS mapping
- GPS equipment
- Computer databases
- Aerial Photography
- Other (please describe):

Please describe your capabilities in these areas: Handheld and adulticide based GPS

Please describe your current GIS abilities: Advanced

Give details if possible on your GIS abilities: ArcMap

**Comments:** None

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## **REVENUES & EXPENDITURES**

Please give a concise statement of revenues & expenditures for the prior fiscal year ending June 30.

See Fiscal Year Spreadsheet at the end of the document.

Comments: None

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## PESTICIDE USAGE

Please total your pesticide usage with information from your Mass. Pesticide Use Report, WNV Larvicide Use records and contracted pesticide applications. Applications methods include; hand/backpack, aerial, ULV, mistblower, other (please explain)

Product Name: Anvil 10+10 ULV

EPA Reg. #: 1021-1688-8329

Application method: Truck- Based GPS

Targeted life stage: Adult

Total amount of concentrate applied: 312.8 gal

Comments: A major reduction in amount used since variable flow, even though there has been a substantial increase in service requests.

Product Name: VectoBac G

EPA Reg. #: 73049-10

Application method: Hand

Targeted life stage: Larvae

Total amount of concentrate applied: 1,998.2 lbs

Comments: None

Product Name: VectoLex WDG

EPA Reg. #: 73049-57

Application method: Hand or Pump

Targeted life stage: Larvae

Total amount of concentrate applied: 95.0708 ozs

Comments: None

Product Name: Altosid Pellets

EPA Reg. #: 2724-448

Application method: Hand

Targeted life stage: Larvae

Total amount of concentrate applied: 312.47 lbs

Comments: Mostly for Cq. perturbans control

Product Name:

EPA Reg. #:

Application method:

Targeted life stage: Choose one

Total amount of concentrate applied:

Comments: \_\_\_\_

Product Name:  
EPA Reg. #:  
Application method:  
Targeted life stage: Choose one  
Total amount of concentrate applied:  
Comments: \_\_\_\_\_

Product Name:  
EPA Reg. #:  
Application method:  
Targeted life stage: Choose one  
Total amount of concentrate applied:  
Comments: \_\_\_\_\_

Product Name:  
EPA Reg. #:  
Application method:  
Targeted life stage: Choose one  
Total amount of concentrate applied:  
Comments: \_\_\_\_\_

Product Name:  
EPA Reg. #:  
Application method:  
Targeted life stage: Choose one  
Total amount of concentrate applied:  
Comments: \_\_\_\_\_

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### **LARGE AREA EXCLUSIONS**

Do you have large areas of pesticide exclusion, such as estimated or priority habitats?  
Yes

If yes, please explain, and include maps if possible. Canoe River and Hockomock ACEC's and large areas of Priority Habitat.

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### **SPECIAL PROJECTS**

Do you perform any inspectional services such as inspections at sewage treatment facilities or review sub division plans? Yes

If yes, please elaborate Perform entomological work when requested by member towns.

Do you work with DPW departments or other local or state officials to address stormwater systems, clogged culverts or other areas that you have identified as man-made mosquito problem areas? Yes

If yes, please elaborate: Extensive work is done with member towns.

Have you worked with these departments on long term solutions? Yes

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### **CHILDREN AND FAMILIES PROTECTION ACT**

Is your program impacted by the Children and Families Protection Act? Yes

If yes, please explain: We have 265 day cares and 150 locations of private, parochial and public school properties.

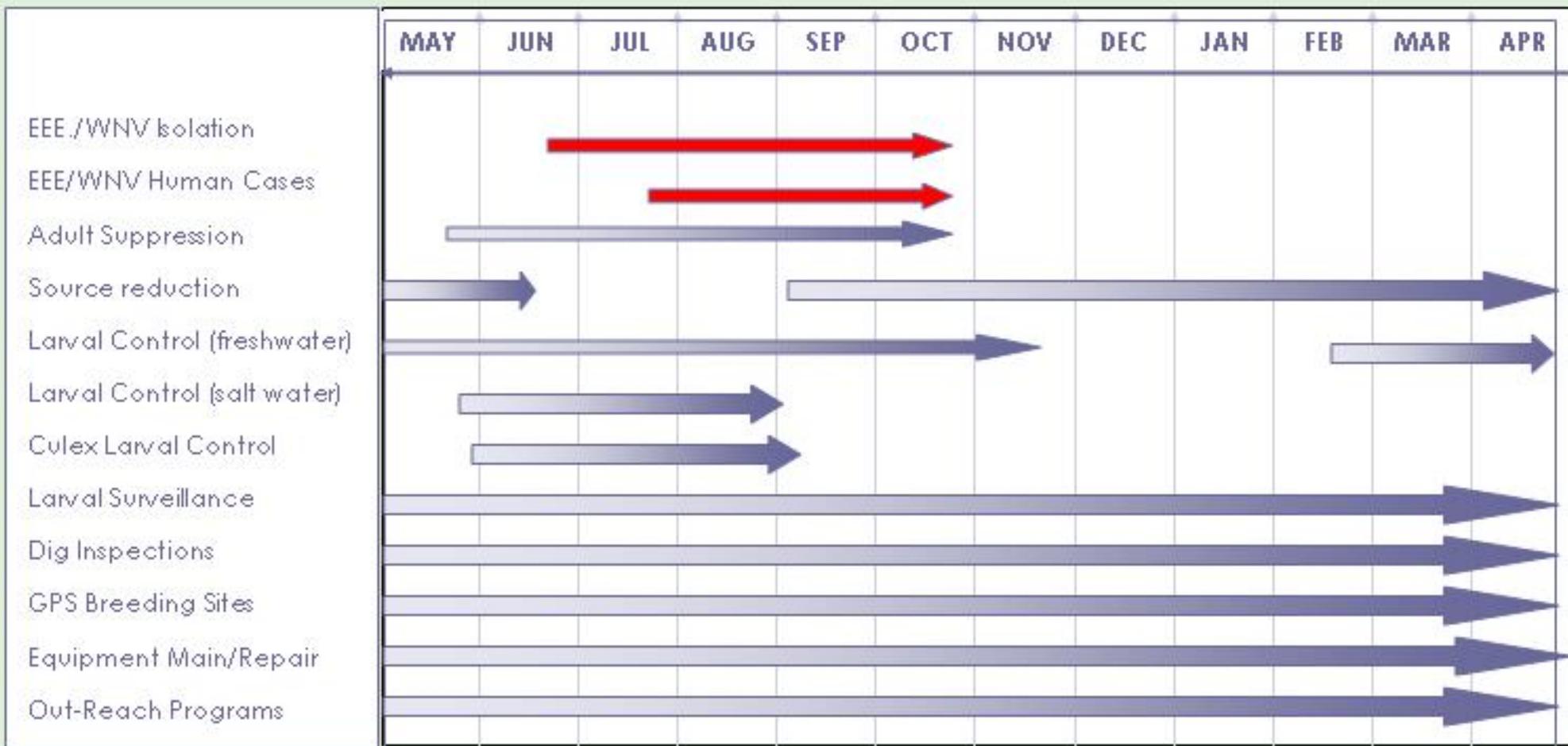
If you have data on compliance with this Act and your program, please list here: Most of our schools have an IPM plan on file with the state, however less than 50% contain any mosquito control language. Only schools and daycares the request larviciding or adulticiding from Bristol County Mosquito Control have the proper compliance language.

If you had difficulties with implementation of your program due to this law, please elaborate here: Avoiding this many locations at night makes adulticiding applications very difficult.

### **GENERAL COMMENTS**

Please list any comments or concerns not covered in this report: Bristol County has 691 sq miles. It has 556 sq miles of land and 135 sq miles of water. It also has 74,000 acres of DEP wetlands plus an additional 25,000 acres of re-flood that supports *Aedes vexans*.

# Bristol County MCP TIMELINE



FY 2007 Reserve  
\$417,021.71

FY2007 BUDGET \$1,063,051.08

	JULY	AUG	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	YTD TOTAL
2007 BUDGET													1,063,051.08
SUB AA													
PAYROLL	29,331.36	38,907.10	58,417.62	37,024.83	36,808.00	36,808.00	36,808.00	36,808.00	55,245.12	42,391.70	36,797.20	52,162.61	497,509.54
SUB BB													
EXPENSES, TRAVEL		26.17	799.97	167.56	1213.11	133.15	373.32	1024.60	240.54	1377.14	573.14	198.29	6,126.99
SUB DD													
RET.; INS.; TAXES	81,183.00	7,265.38	9,580.82	9,624.31	13,904.28	9,250.25	9,117.34	9,389.81	9,117.34	9,117.34	8,863.81	26,517.31	202,930.99
SUB EE													
OFFICE EXPENSES	286.95	837.20	4.98	1,189.78	757.47	240.62	8,262.28	14,978.55	1,454.15	295.93	1,246.08	203.78	29,757.77
SUB FF													
VEHICLE MAINT-REPAIR	62,531.15	1,041.69	283.92	574.08	81.86	266.58	351.69	93.88	349.82	436.39	1,348.21	107.40	67,466.67
SUB GG													
RENT; FUEL; UTILITIES	5,232.82	5,419.07	5,690.55	4,200.27	4,661.87	4,378.82	5,066.44	5,442.32	5,079.00	4,661.24	4,535.73	5,198.25	59,566.38
SUB HH													
CONSULTANT SERV.													0.00
SUB JJ													
OPERATIONAL SERV.	180.00	180.00	1,380.00		200.0		1,100.0			1,128.57	180.00	1,680.00	6,028.57
SUB KK													
EQUIPMENT			285.99				1,498.61					355.51	2,140.11
SUB LL													
LEASE-PURCHASE	66.72	67.01	4720.39	67.68	314.28		61.60		183.23	68.81	6,593.24	1,056.63	13,199.59
SUB NN													
INSECTICIDES		17600.00								28,211.23			45,811.23
FACILITY-MAINT & REPAIR	72.96	457.59	89.12	1,096.63	425.89	16.61	486.52	676.73	493.12	92.30	448.20	4,943.25	9,298.92
SUB UU													
INFORMATION TECH	2355.5	891.65	1,547.11	804.82	1185.23	783.04	728.83	380.68	5,069.66	7842.48	17184.91	16,711.65	55,485.56
	181,240.46	72,692.86	82,800.47	54,749.96	59,551.99	51,877.07	63,854.63	68,794.57	77,231.98	95,623.13	77,770.52	109,134.68	995,322.32

CARRY OVER 67,728.76