

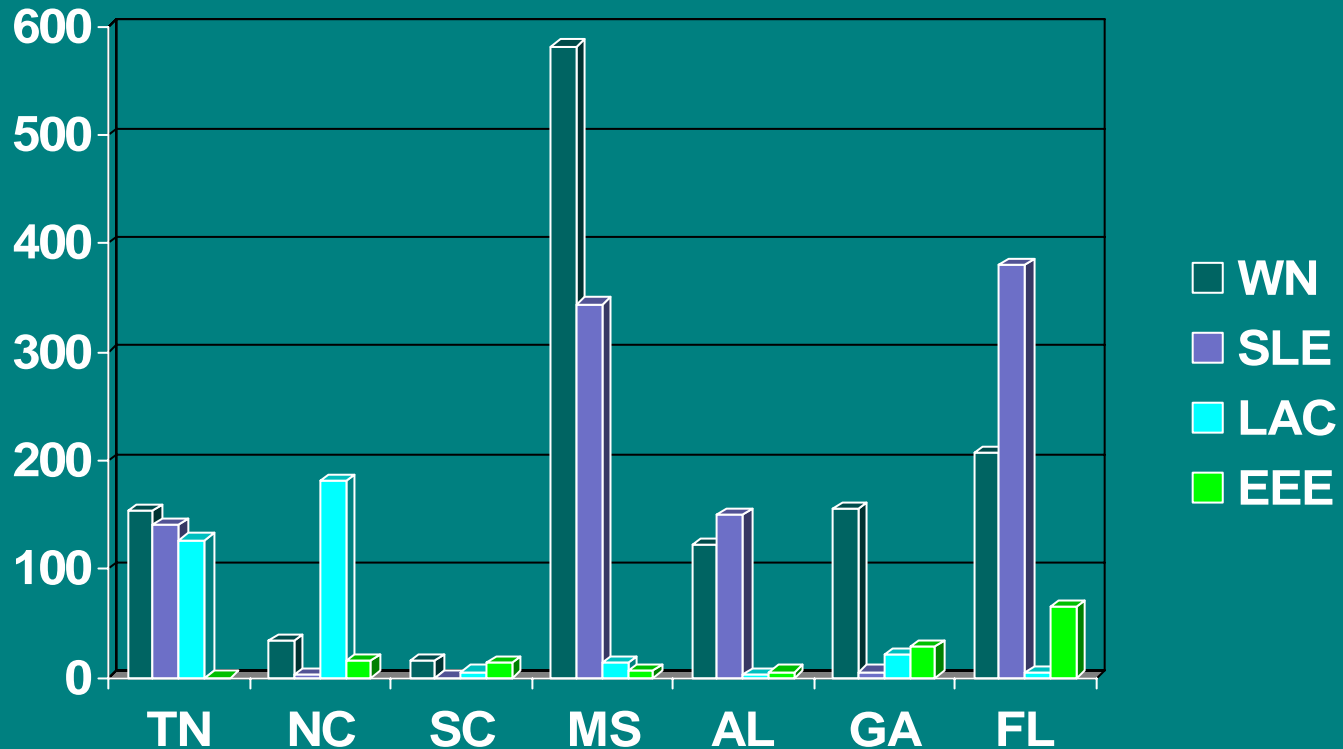
# Tennessee's West Nile Submission Site

Abelardo C. Moncayo, Ph.D.

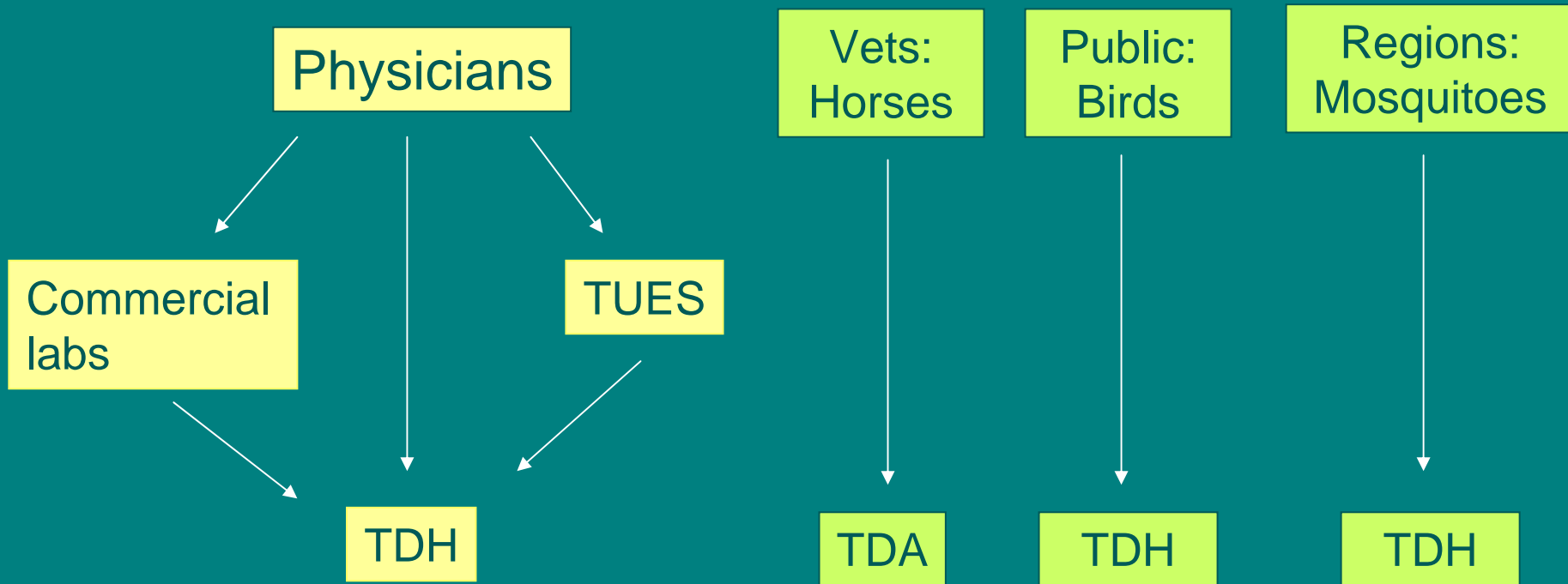
State Medical Entomologist

Tennessee Department of Health

# Major arboviruses 1964-2006



# Arboviral surveillance in Tennessee



# Tennessee West Nile Submission Site

West Nile Virus Submission Website

- Home
- Bulletin Board
- Message
- Search
- Test Results
- Summary
- Package
- Site
- Mosquito
- Bird
- Veterinary
- Human
- CDC
- MMWR
- Data
- Users
- An



Wednesday March 19, 2008



Login



Bulletin Board



Summary

## Tennessee - Department of Health

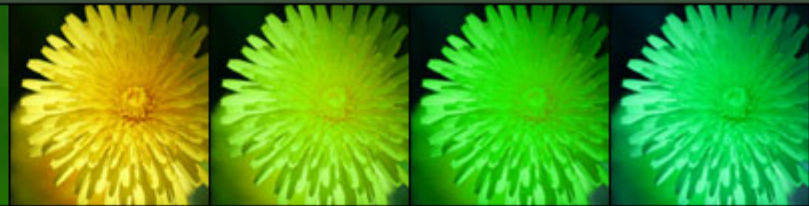
### Our Mission

To promote, protect and improve the health of persons living in, working in, or visiting the State of Tennessee!

# Bulletin Board

Board Message Search Test Results Summary Package Site Mosquito Bird Veterinary Human CDC MMWR Data Users Analysis

People



Wednesday March 19, 2008

Today is: Wednesday, March 19, 2008

From: **Moncayo, Abelardo** ---- Administrator

Subject: **West Nile Season 2008**

Posting Time: **3/10/2008 8:53:21 AM**

The New West Nile Season will begin on May 1, 2008.  
The 1st shipment will be accepted on Tues May 6th.  
Please submit samples weekly by sending them on Mondays so we receive them on Tuesdays and can have results by the end of the week for you.

---



Login



Bulletin Board



Summary

# Data Summary

Wednesday Mar 07

Year to search: 2007



Login



Bulletin Board



Summary

	Mosquito Tested	Mosquito Confirmed	Bird Tested	Bird Confirmed	Veterinary Tested	Veterinary Confirmed	Human Confirmed	Dead
<b>Grand Totals --&gt;</b>	3803	600	32	7	4	4	11	0
<b>Davidson:</b>	650	1	1	0	0	0	1	0
<b>East:</b>	0	0	3	0	0	0	0	0
<b>Hamilton:</b>	305	5	6	1	0	0	0	0
<b>Knox:</b>	153	0	4	0	1	1	0	0
<b>Madison:</b>	0	0	0	0	0	0	0	0
<b>Mid Cumberland:</b>	0	0	1	0	0	0	2	0
<b>North East:</b>	0	0	3	2	1	1	1	0
<b>Shelby:</b>	2695	594	0	0	0	0	5	0
<b>South Central:</b>	0	0	5	0	0	0	0	0
<b>South East:</b>	0	0	2	1	0	0	0	0
<b>Sullivan:</b>	0	0	2	1	1	1	2	0
<b>Upper Cumberland:</b>	0	0	2	0	1	1	0	0
<b>West:</b>	0	0	3	2	0	0	0	0



# Data Summary

Thursday March 20, 2008

Year to search: 2006

	Mosquito Tested	Mosquito Confirmed	Bird Tested	Bird Confirmed	Veterinary Tested	Veterinary Confirmed	Human Confirmed	Dead
<b>Grand Totals --&gt;</b>	5935	626	20	1	8	8	22	1
<b>Davidson:</b>	1450	21	0	0	0	0	1	0
<b>East:</b>	0	0	8	1	2	2	0	0
<b>Hamilton:</b>	195	0	2	0	0	0	0	0
<b>Knox:</b>	187	0	3	0	0	0	0	0
<b>Madison:</b>	90	3	0	0	0	0	0	0
<b>Mid Cumberland:</b>	0	0	1	0	1	1	2	1
<b>North East:</b>	0	0	1	0	0	0	0	0
<b>Shelby:</b>	4013	602	0	0	1	1	14	0
<b>South Central:</b>	0	0	2	0	0	0	0	0
<b>South East:</b>	0	0	0	0	1	1	0	0
<b>Sullivan:</b>	0	0	1	0	0	0	0	0
<b>Upper Cumberland:</b>	0	0	2	0	0	0	0	0
<b>West:</b>	0	0	0	0	3	3	5	0



Login



Bulletin Board



Summary

[Home](#) [Bulletin Board](#) [Message](#) [Search](#) [Test Results](#) [Summary](#) [Package](#) [Site](#) [Mosquito](#) [Bird](#) [Veterinary](#) [Human](#) [CDC](#) [MMWR](#) [Data](#) [Users](#) [A](#)

# Entering mosquito data

## West Nile Virus Submission Website

Home Bulletin Board Message Search Test Results Summary Package Site Mosquito Bird Veterinary Human CDC MMWR Data Users Ana



How many pool?

Package ID  
200

VIAL ID	Collection Date	Address	City	Zip	County	Long	Lati	Species	Total Per Pool	Trap Method	Blood Fed	Public Info
1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Anderson	<input type="text"/>	<input type="text"/>	Aedes aegypti	<input type="checkbox"/>	Gravid	<input type="checkbox"/>	<input type="checkbox"/>



# Searching of data

Wednesday Marc

Search for samples according to the data category and result type. You can search all data or search by region. You can also search a specific vial ID or a part of the ID, i.e. 2005M-16, which will display all 2005 data for mosquitoes, from county number 16.

Year to search: 2008

Search by VIAL ID

Mosquito  Bird  Veterinary  Human

ALL  Pending  Confirmed  Negative  Equivocal  Unsatisfactory

Region:

ALL  
Davidson  
East  
Hamilton  
Knox  
Madison  
Mid Cumberland

County:

ALL

VIAL ID:

Search

Download



Login



Bulletin Board



Summary

# Searching of data

Delete Selected

Edit Selected

	VIAL ID	Collection Date	Address	City	Zip	County	Long	Lati	Species	Total Per Pool	Trap Method	Blood Fed	Test Result	Created	Sent	Received	Test Date	Public Info
1	<input type="checkbox"/> 2007M-79-0669	06/18/2007	6762 Stonebreak	Bartlett	38135	Shelby	- 89.836952	35.222067	Culex species	50	Gravid	<input type="checkbox"/>	Confirmed	6/22/2007	6/27/2007	7/2/2007	7/9/2007	<input checked="" type="checkbox"/>
2	<input type="checkbox"/> 2007M-79-0680	06/18/2007	5141 Cotswold	county	38125	Shelby	- 89.821667	35.00779	Culex species	50	Gravid	<input type="checkbox"/>	Confirmed	6/22/2007	6/27/2007	7/2/2007	7/9/2007	<input checked="" type="checkbox"/>
3	<input type="checkbox"/> 2007M-79-0764	06/20/2007	517 Bon Air	Memphis	38112	Shelby	- 89.952824	35.146658	Culex species	35	Gravid	<input type="checkbox"/>	Confirmed	6/22/2007	6/27/2007	7/2/2007	7/11/2007	<input checked="" type="checkbox"/>
4	<input type="checkbox"/> 2007M-79-0807	06/21/2007	3102 Ridgeway	Memphis	38115	Shelby	- 89.856866	35.064223	Culex species	8	Gravid	<input type="checkbox"/>	Confirmed	6/22/2007	6/27/2007	7/2/2007	7/11/2007	<input checked="" type="checkbox"/>
5	<input type="checkbox"/> 2007M-79-0811	06/21/2007	6649 Malej	Memphis	38141	Shelby	- 89.840830	35.016257	Culex species	50	Gravid	<input type="checkbox"/>	Confirmed	6/22/2007	6/27/2007	7/2/2007	7/11/2007	<input checked="" type="checkbox"/>
6	<input type="checkbox"/> 2007M-79-0812	06/21/2007	6878 glenwick	Memphis	38141	Shelby	- 89.834329	35.026813	Culex species	50	Gravid	<input type="checkbox"/>	Confirmed	6/22/2007	6/27/2007	7/2/2007	7/11/2007	<input checked="" type="checkbox"/>
7	<input type="checkbox"/> 2007M-79-0842	06/25/2007	4388 Old North Bridge	county	38125	Shelby	- 89.819931	35.028244	Culex species	50	Gravid	<input type="checkbox"/>	Confirmed	7/2/2007	7/9/2007	7/10/2007	7/13/2007	<input checked="" type="checkbox"/>
8	<input type="checkbox"/> 2007M-79-0843	06/25/2007	5141 Cotswold	county	38125	Shelby	- 89.821667	35.00779	Culex species	50	Gravid	<input type="checkbox"/>	Confirmed	7/2/2007	7/9/2007	7/10/2007	7/13/2007	<input checked="" type="checkbox"/>
9	<input type="checkbox"/> 2007M-79-0860	06/26/2007	932 Seventh	Memphis	38107	Shelby	- 90.037890	35.166990	Culex species	36	Gravid	<input type="checkbox"/>	Confirmed	7/2/2007	7/9/2007	7/10/2007	7/13/2007	<input checked="" type="checkbox"/>
10	<input type="checkbox"/> 2007M-79-0934	06/28/2007	5839 Myers	Memphis	38115	Shelby	- 89.868529	35.045078	Culex species	50	Gravid	<input type="checkbox"/>	Confirmed	7/2/2007	7/9/2007	7/10/2007	7/17/2007	<input checked="" type="checkbox"/>

1

2

3

4

5

6

7

8

9

10

>>

# Entering test results

## West Nile Virus Submission Website

Home Bulletin Board Message Search Test Results Summary Package Site Mosquito Bird Veterinary Human CDC MMWR Data Users An



Wednesday March 19, 2008

Select a sample or samples to change results. "Post" to view and then "save" it to the database. Time and date changes automatically when you enter new results. This will expedite your result entry.



Login



Bulletin Board



Test Result: Pending

Check All

Post to Selected Records

Save

Cancel

#	Selected	VIAL ID	Test Result	Date Reported
1	<input type="checkbox"/>	2007M-79-0669	Confirmed	7/9/2007 8:59:06 AM
2	<input type="checkbox"/>	2007M-79-0680	Confirmed	7/9/2007 8:59:06 AM
3	<input type="checkbox"/>	2007M-79-0764	Confirmed	7/11/2007 3:59:17 PM
4	<input type="checkbox"/>	2007M-79-0807	Confirmed	7/11/2007 3:59:17 PM
5	<input type="checkbox"/>	2007M-79-0811	Confirmed	7/11/2007 3:59:17 PM
6	<input type="checkbox"/>	2007M-79-0812	Confirmed	7/11/2007 3:59:17 PM
7	<input type="checkbox"/>	2007M-79-0842	Confirmed	7/13/2007 4:32:37 PM

# Creating xml reports

## West Nile Virus Submission Website

Home Bulletin Board Message Search Test Results Summary Package Site Mosquito Bird Veterinary Human CDC MMWR Data Users An



Wednesday March 19, 2008



Login



Bulletin Board



Summary

Mark the End Week .

Denominator

Numerator

CDC's Date List in Database:

1	12/30/2007	---	1/5/2008
2	1/6/2008	---	1/12/2008
3	1/13/2008	---	1/19/2008
4	1/20/2008	---	1/26/2008
5	1/27/2008	---	2/2/2008
6	2/3/2008	---	2/9/2008
7	2/10/2008	---	2/16/2008
8	2/17/2008	---	2/23/2008
9	2/24/2008	---	3/1/2008
10	3/2/2008	---	3/8/2008
11	3/9/2008	---	3/15/2008
12	3/16/2008	---	3/22/2008
13	3/23/2008	---	3/29/2008
14	3/30/2008	---	4/5/2008
15	4/6/2008	---	4/12/2008
16	4/13/2008	---	4/19/2008

# Addition of data

## West Nile Virus Submission Website

Home Bulletin Board Message Search Test Results Summary Package Site Mosquito Bird Veterinary Human CDC MMWR Data Users An

Wednesday March 19, 2008

Species  Trap Method  Test Result

Mosquito  Bird  Veterinary



Login



Bulletin Board



Summary

Corvid:  Yes  No

CDC ID:

Species Name:

Add

Delete

Elements:

Aedes aegypti  
Aedes albopictus  
Aedes cinereus  
Aedes species  
Aedes vexans  
Anopheles crucians  
Anopheles punctipennis  
Anopheles quadrimaculatus



# Addition of Users

## West Nile Virus Submission Website

Home Bulletin Board Message Search Test Results Summary Package Site Mosquito Bird Veterinary Human CDC MMWR Data Users An



Wednesday March 19, 2008



Login



Bulletin Board



Summary

Add User

Delete User

Reset Password

Get User Info

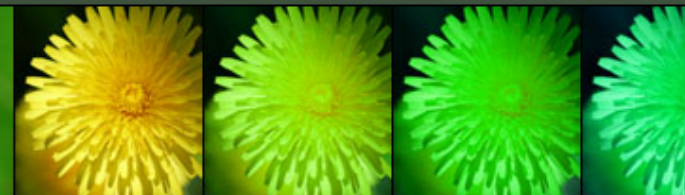
Anderson, Michael  
Areola, Sanmi  
Atkins, Hugh  
Beam, Sharon  
Belton, Jim  
Benson, Linda  
Bowery, Bill  
Brogan, Jack  
Brown, Jeff  
Brumley, David

# Analysis

## West Nile Virus Submission Website

[Home](#) [Bulletin Board](#) [Message](#) [Search](#) [Test Results](#) [Summary](#) [Package](#) [Site](#) [Mosquito](#) [Bird](#) [Veterinary](#) [Human](#) [CDC](#) [MMWR](#) [Data](#) [Users](#) [An](#)

Health



Wednesday March 19, 2008



[Login](#)



[Bulletin Board](#)



[Summary](#)

**Counts by region: These analyses are for mosquito data only.**

**Contact me if you have any suggestion.**

[View Counts by Region](#)

[View ratio by ZIP over time](#)

[View ratio by Region over time](#)

[View Tennessee's map](#)



# View Counts by region/zipcode

For your analysis chose year, region and any other attributes needed. Not selecting an attribute will automatically generate a graph of mosquitoes collected.



Login



Bulletin Board



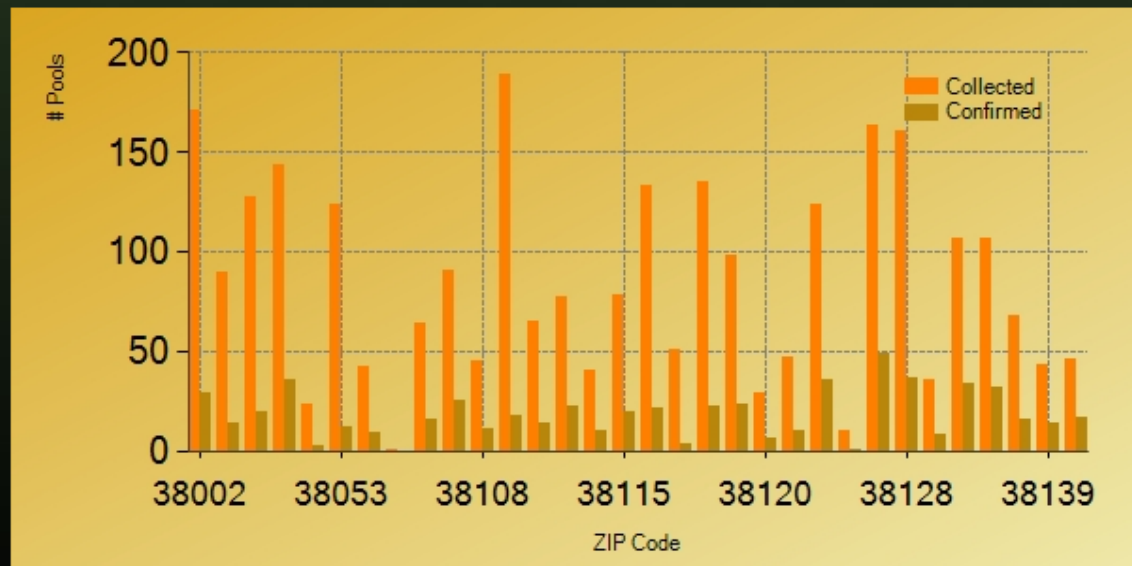
Summary

Select Year: 2007

Select Region: Shelby

Pending  Confirmed  Negative  Equivocal  Unsatisfactory

Draw



Home

Bulletin Board

Message

Search

Test Results

Summary

Package

Site

Mosquito

Bird

Veterinary

Human

CDC

MMWR

Data

Users

At

# Zip code infection rate through time

Wednesday March 19, 2008

View percent positive mosquitoes by zip code over time. Select Region, Zip code and add year. Not selecting the other attributes will automatically produce graphs with non-accumulated data.



Login



Bulletin Board



Summary

Select Region: Shelby

Select Zip: 38127

2007

ADD

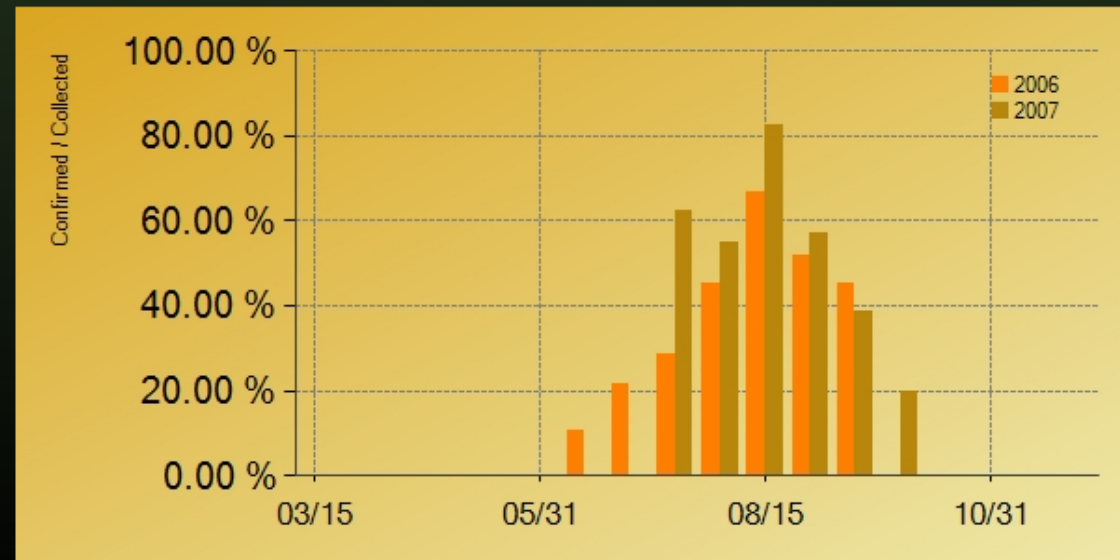
Clear

Draw

Accumulated

With Pending  With Unsatisfactory

2006  
2007



Home

Bulletin Board

Message

Search

Test Results

Summary

Package

Site

Mosquito

Bird

Veterinary

Human

CDC

MMWR

Data

Users

An

# County infection rate through time

Wednesday March 19, 2008

View percent positive mosquitoes by region over time. Select Region, and add year. Not selecting the other attributes will automatically produce graphs with non-accumulated data.



Login



Bulletin Board



Summary

Select Region:    
Davidson  
East  
Hamilton  
Knox  
Madison  
Mid Cumberland  
North East  
Shelby  
South Central  
South East  
Sullivan  
Upper Cumberland  
West

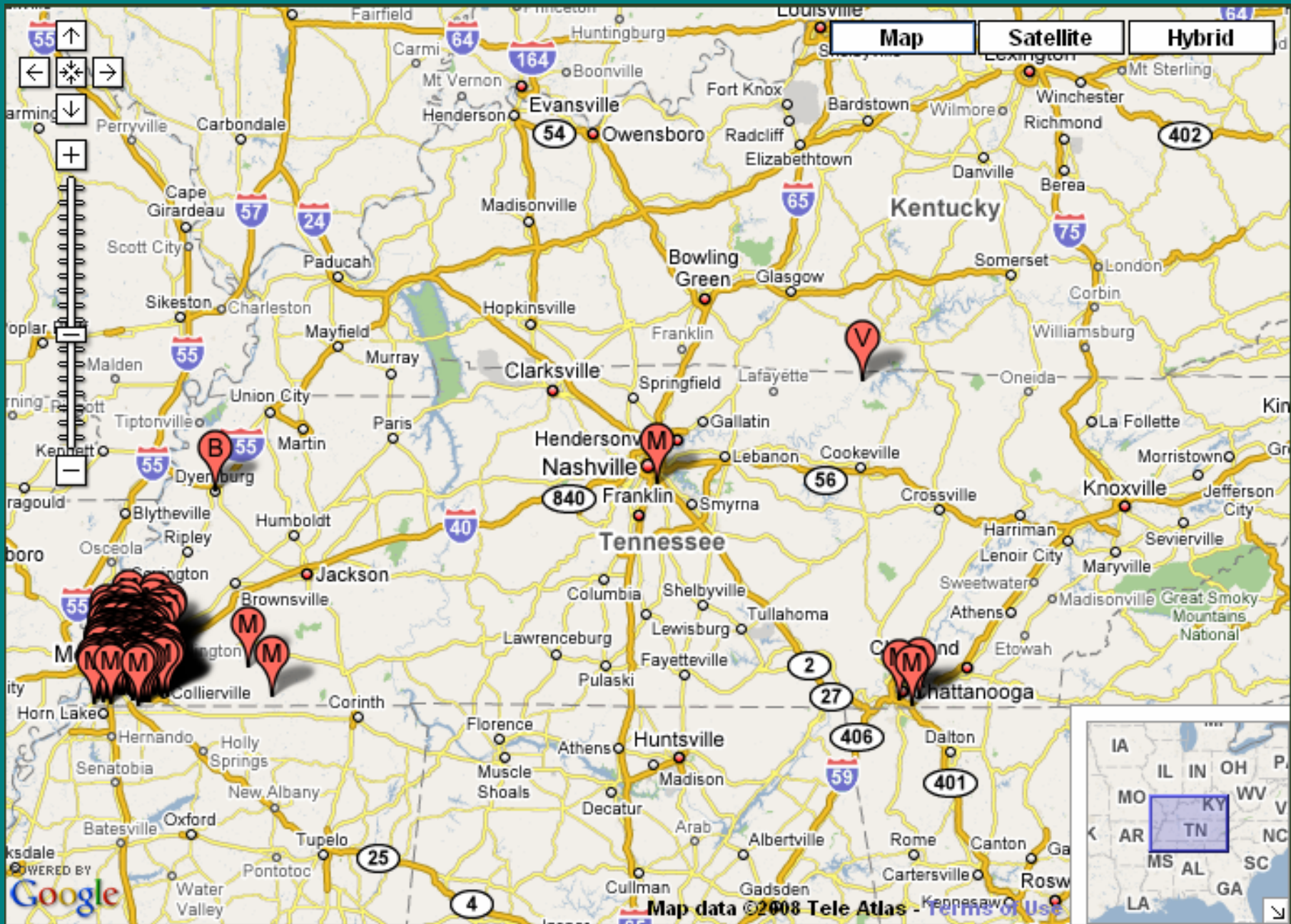
ADD

Clear

2006  
2007







Map

Satellite

Hybrid

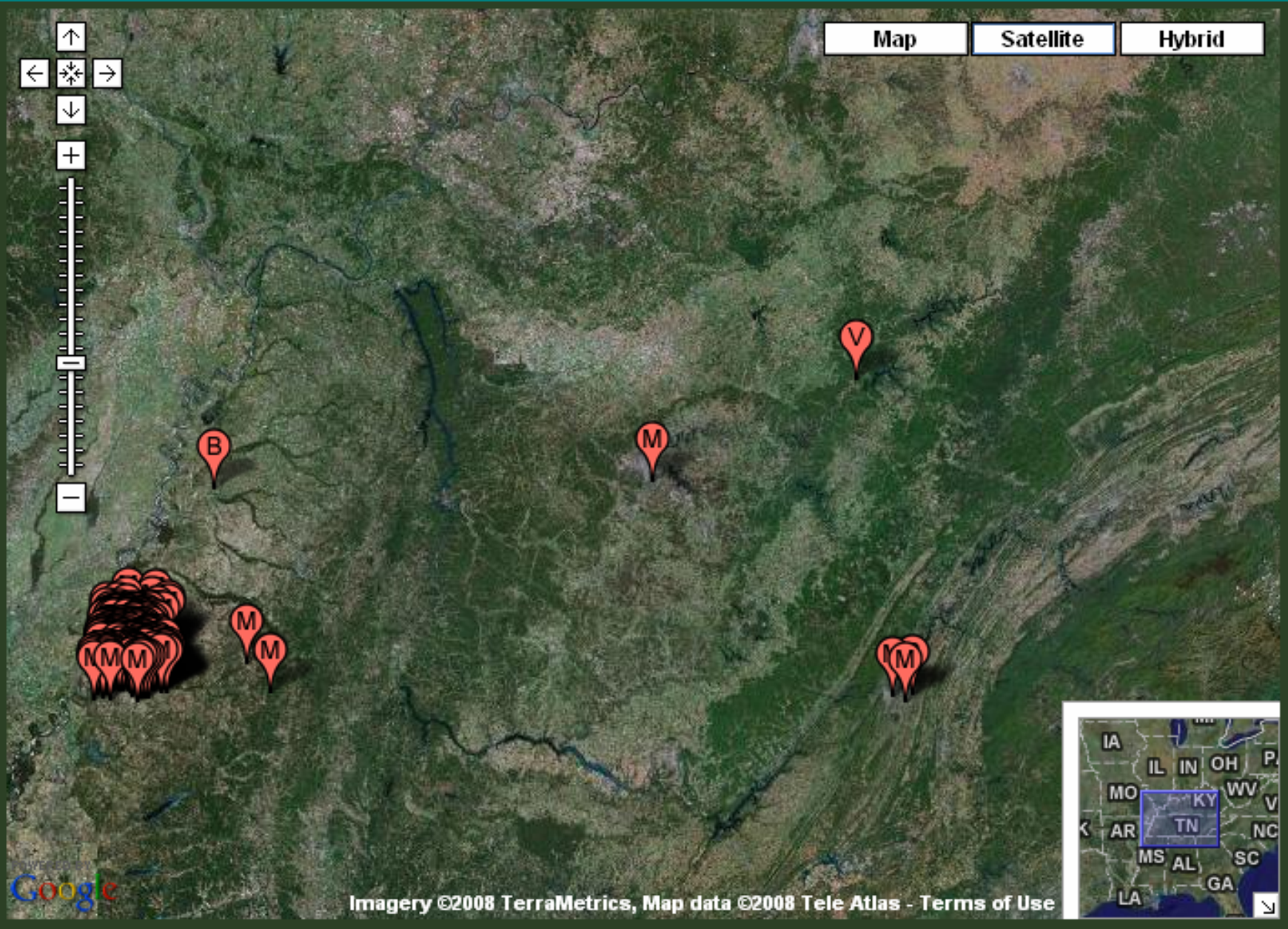
Navigation controls including a compass, zoom in (+) and zoom out (-) buttons, a street view pegman icon, and a scale bar.







Map    Satellite    Hybrid

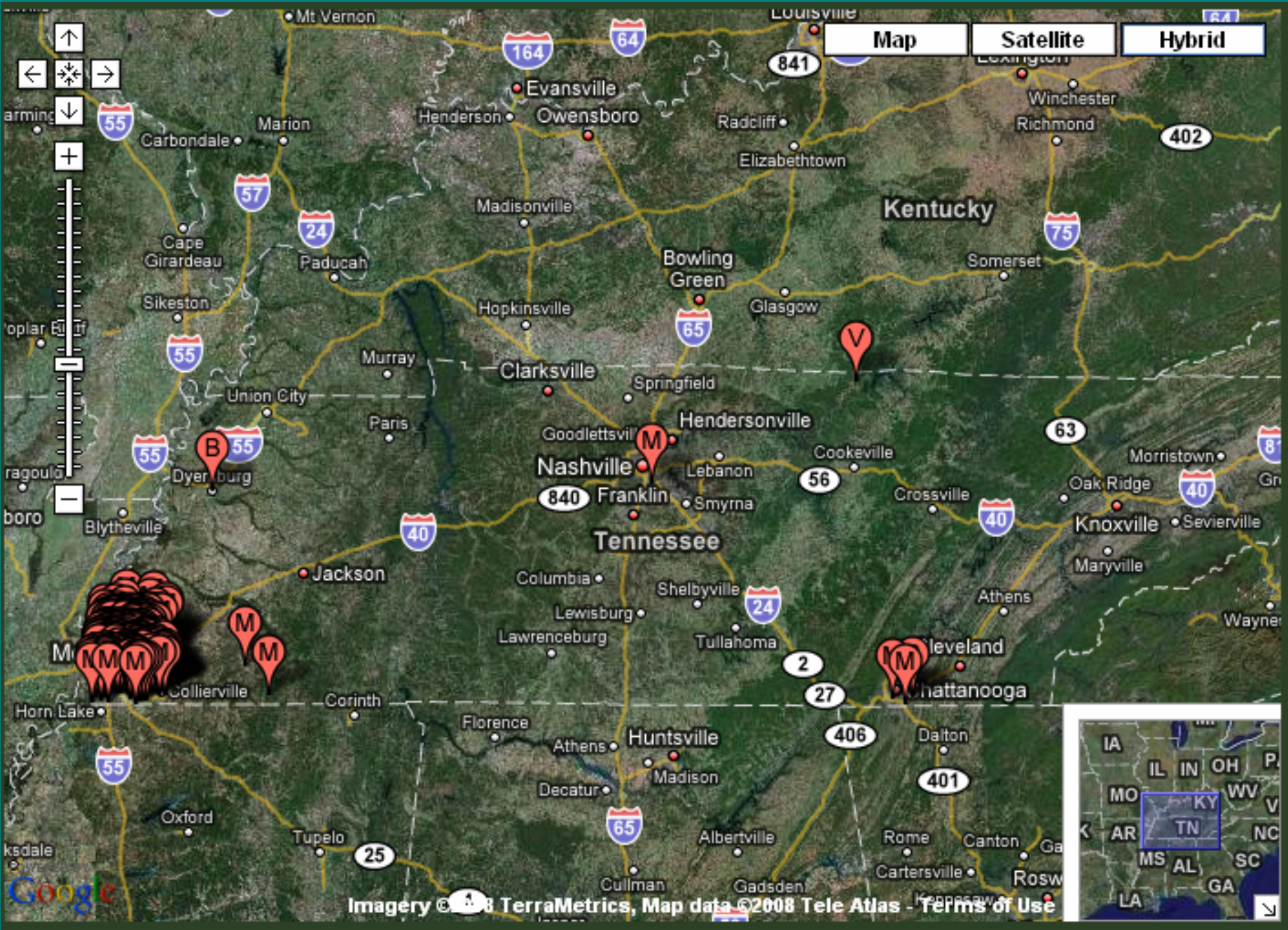


Google

Imagery ©2008 TerraMetrics, Map data ©2008 Tele Atlas - Terms of Use

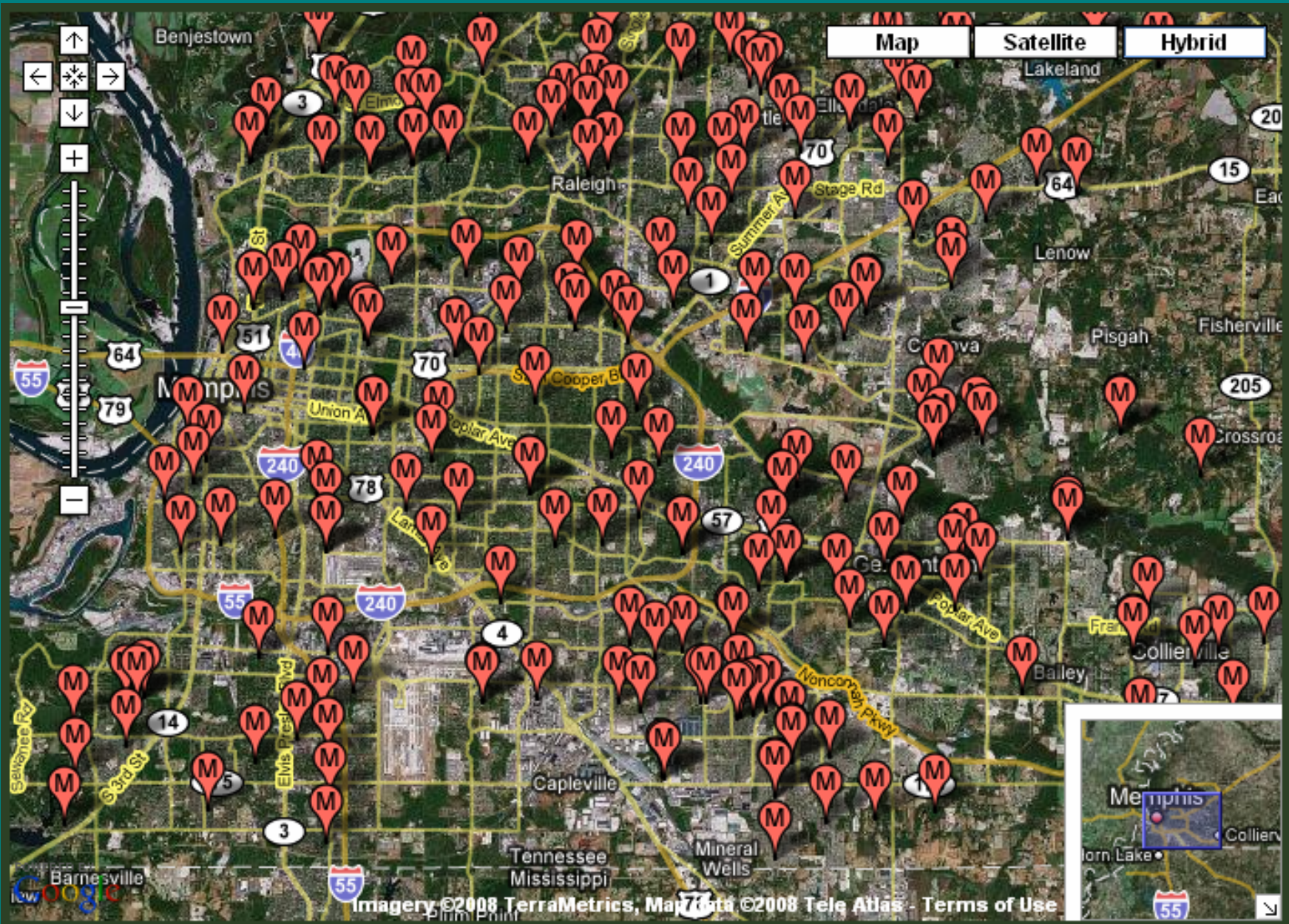






Imagery © 2008 TerraMetrics, Map data © 2008 Tele Atlas - Terms of Use



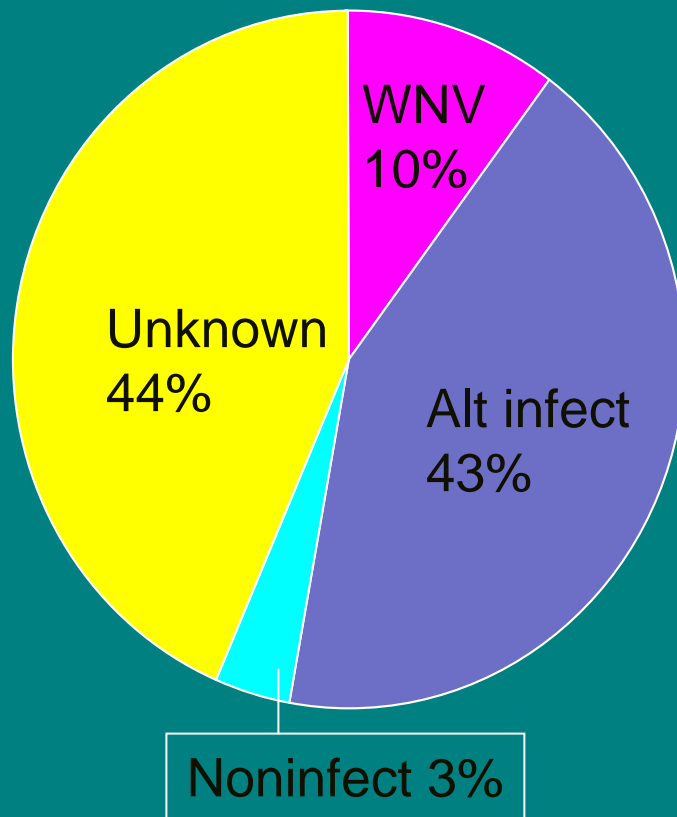




# Future

- Multiplex for arboviruses 2008
- Apply cell culture techniques
- Update West Nile Site to the  
**Arbovirus Submission Site**

# If Not WNV, Then What Is It?



- HSV
- VZV
- RMSF
- Ehrlichia
- La Crosse Virus
- Rabies
- Mycoplasma (?)

# Potential arboviruses

## Bunyaviridae

La Crosse  
South River  
Potosi  
Lokern  
Tensaw  
Trivittatus  
Cache Valley  
Keystone  
Jamestown Canyon  
San Angelo  
Main Drain

## Flaviviridae

St. Louis encephalitis  
Cowbone ridge  
Dengue  
Yellow fever

## Togaviridae

Eastern equine encephalitis  
Western equine encephalitis  
Venezuelan equine encephalitis  
Highlands J virus  
Fort Morgan  
Chickungunya  
Rift Valley Fever

## Rhabdoviridae

Flanders  
Farmington  
Rhode Island