

BC WNV Surveillance Program: Results and Recommendations, 2005



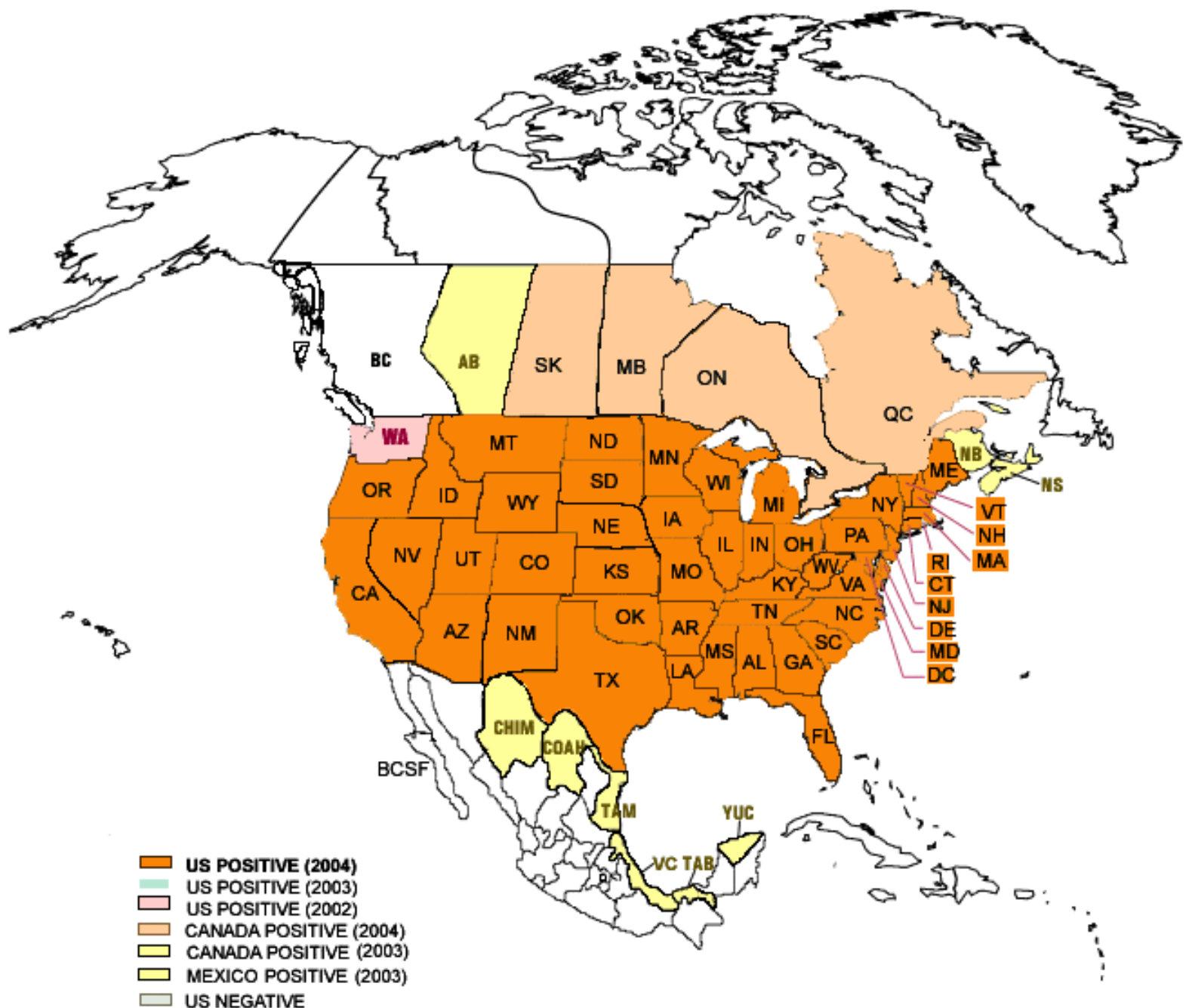
www.bccdc.org/

Outline

Results and recommendations from:

- Human surveillance
- Corvid surveillance
 - Testing program
 - On-line reporting
- Mosquito surveillance

No endemic evidence
of WNV detected



- US POSITIVE (2004)
- US POSITIVE (2003)
- US POSITIVE (2002)
- CANADA POSITIVE (2004)
- CANADA POSITIVE (2003)
- MEXICO POSITIVE (2003)
- US NEGATIVE

Human Surveillance Results

- 2005 activity > 2004, less than 2003

	2003	2004	2005
Canada	1388	20	239
US	9862	2344	2949

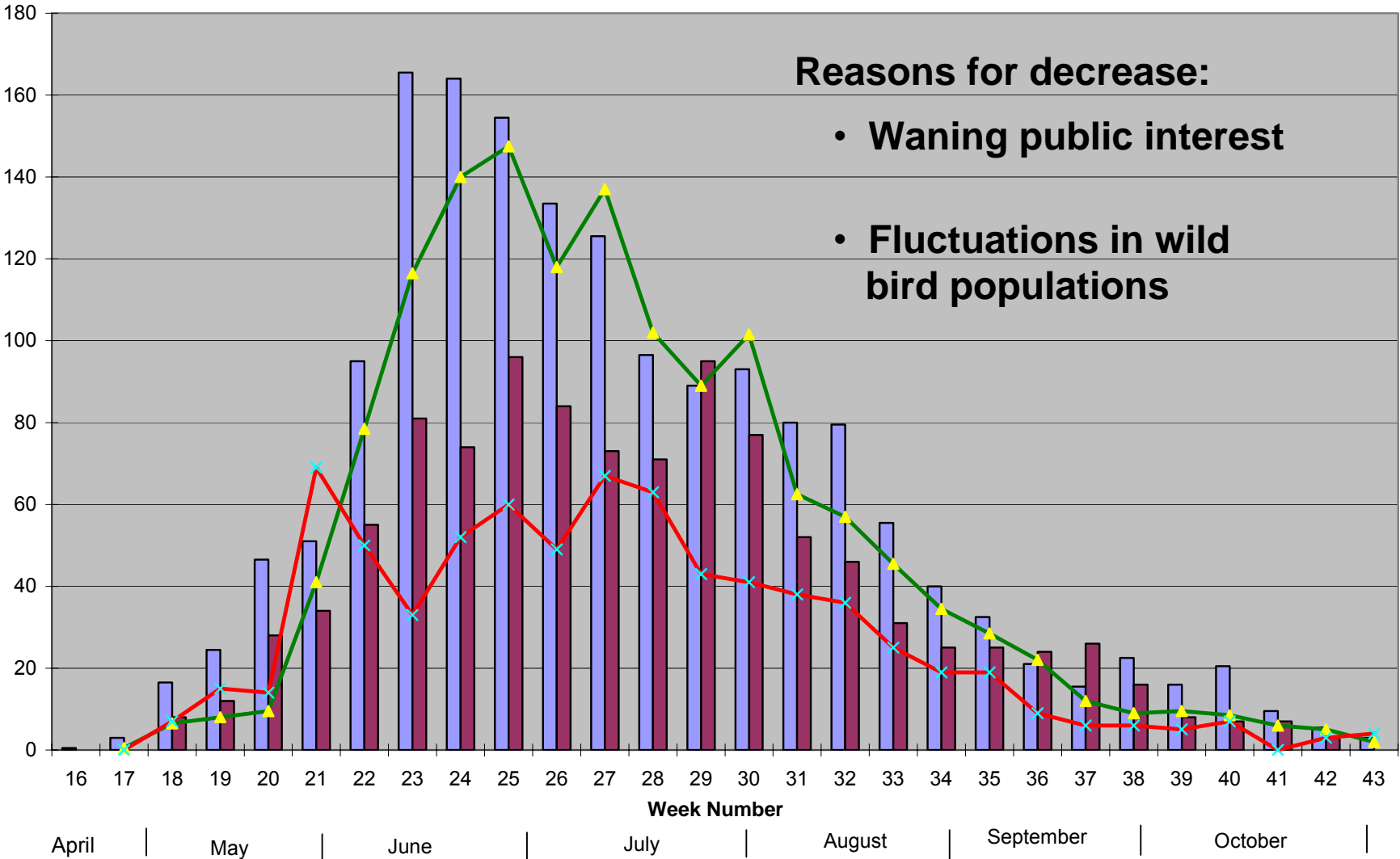
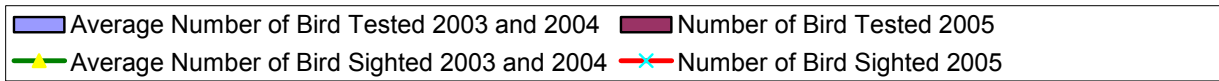
- >36,000 blood donor samples screened
- 755 symptomatic patients tested

60% ↑ from '04

Recommendations

- Change from year-round testing policy
 - Patient testing and organ donor screening:
 - April 1 - November 1
 - Unless travel history indicates testing
 - Ease laboratory cost pressures

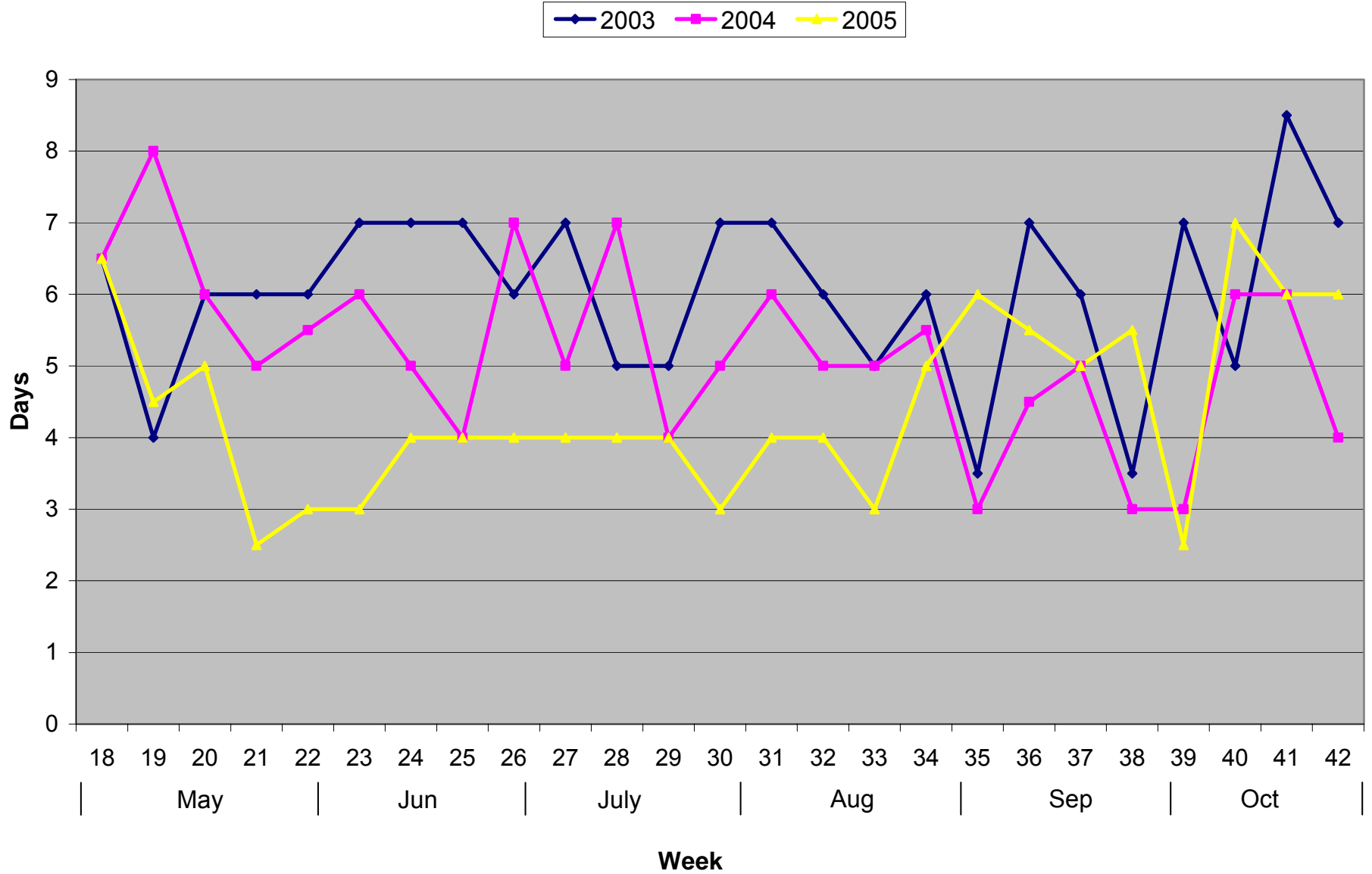
Corvid Surveillance



Average number of birds sighted in 2003 and 2004: 1397
Total number of birds sighted in 2005: 740

Average number of birds tested in 2003 and 2004: 1659
Total number of birds tested in 2005: 1058

Lag times (in days) for Corvid submissions



Recommendations

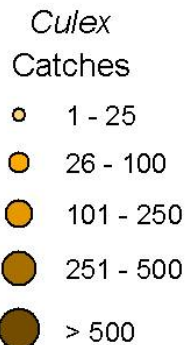
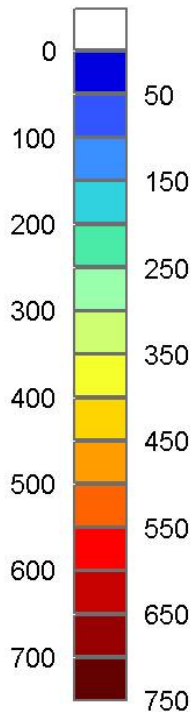
- Areas with low corvid/population densities
 - Increase mosquito trapping
 - Increased public awareness
 - sentinel communities?
- Ensure coverage of field staff
 - Peak period – Aug/Sept
 - Keep turn around times fast

Mosquito Surveillance

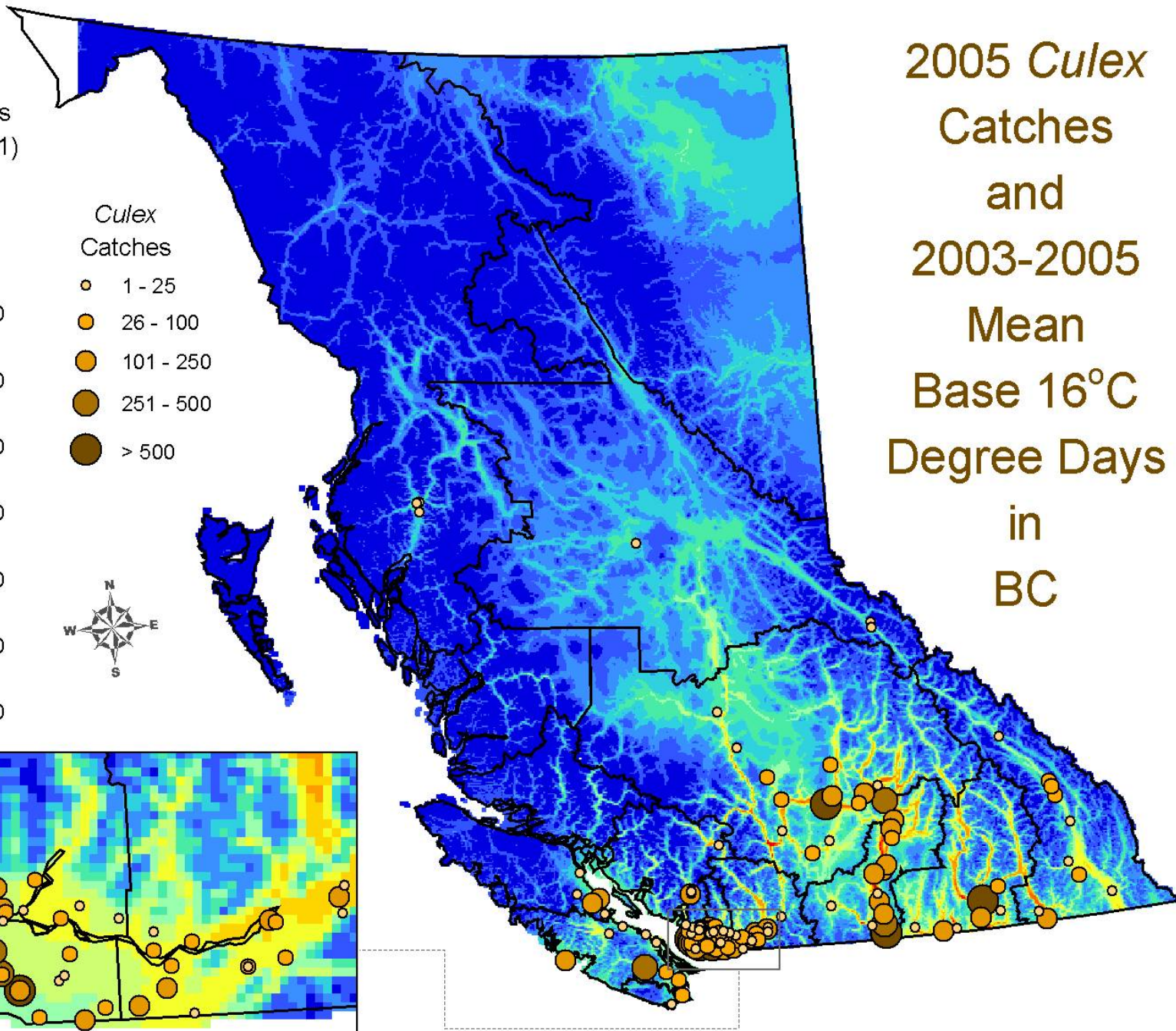
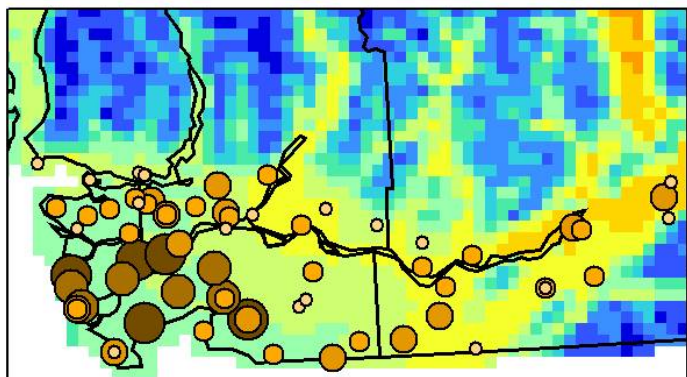
Mosquito results

- Average mosquito crop in 2005
 - 22% increase vs. dry years in 2003 and 2004
 - *Cx. tarsalis* increased by 186%
- Better trap placement
- Change from gravid to light traps
- 1-day improvement in submission lag
 - Lag time increased after Sept 1

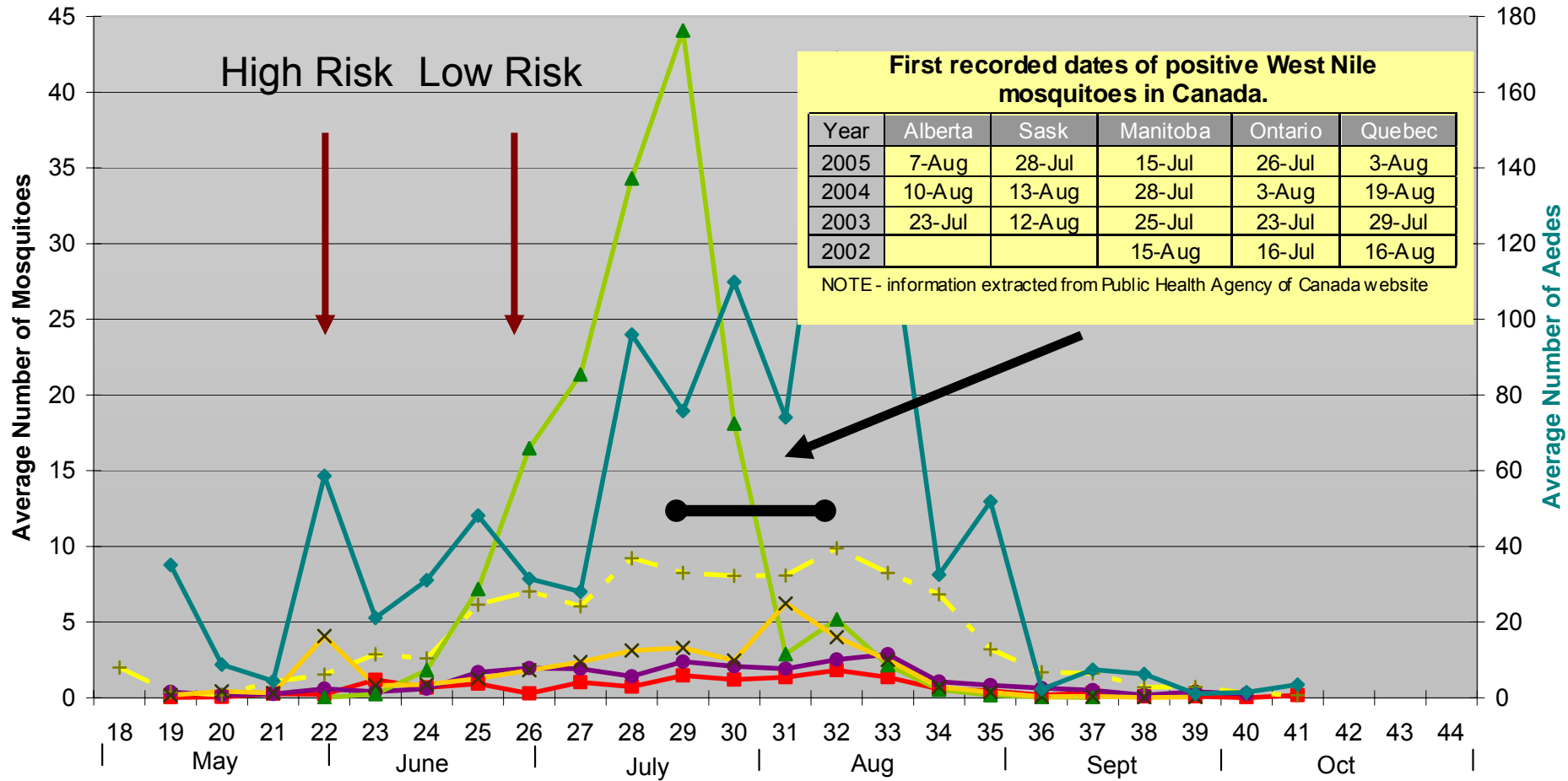
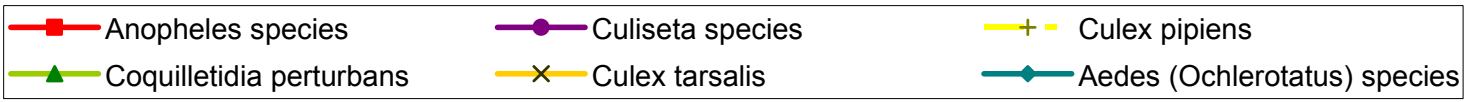
Mean
Base 16° C
Degree Days
(Up to Aug 31)



2005 *Culex*
Catches
and
2003-2005
Mean
Base 16°C
Degree Days
in
BC



Distribution of Average number of Mosquito Species in BC Over Time



Including male and female pools
Week Mosquitoes Collected
Data up to and including Oct 29, 2005

Weeks run Sunday to Saturday

Recommendations

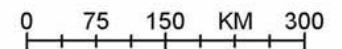
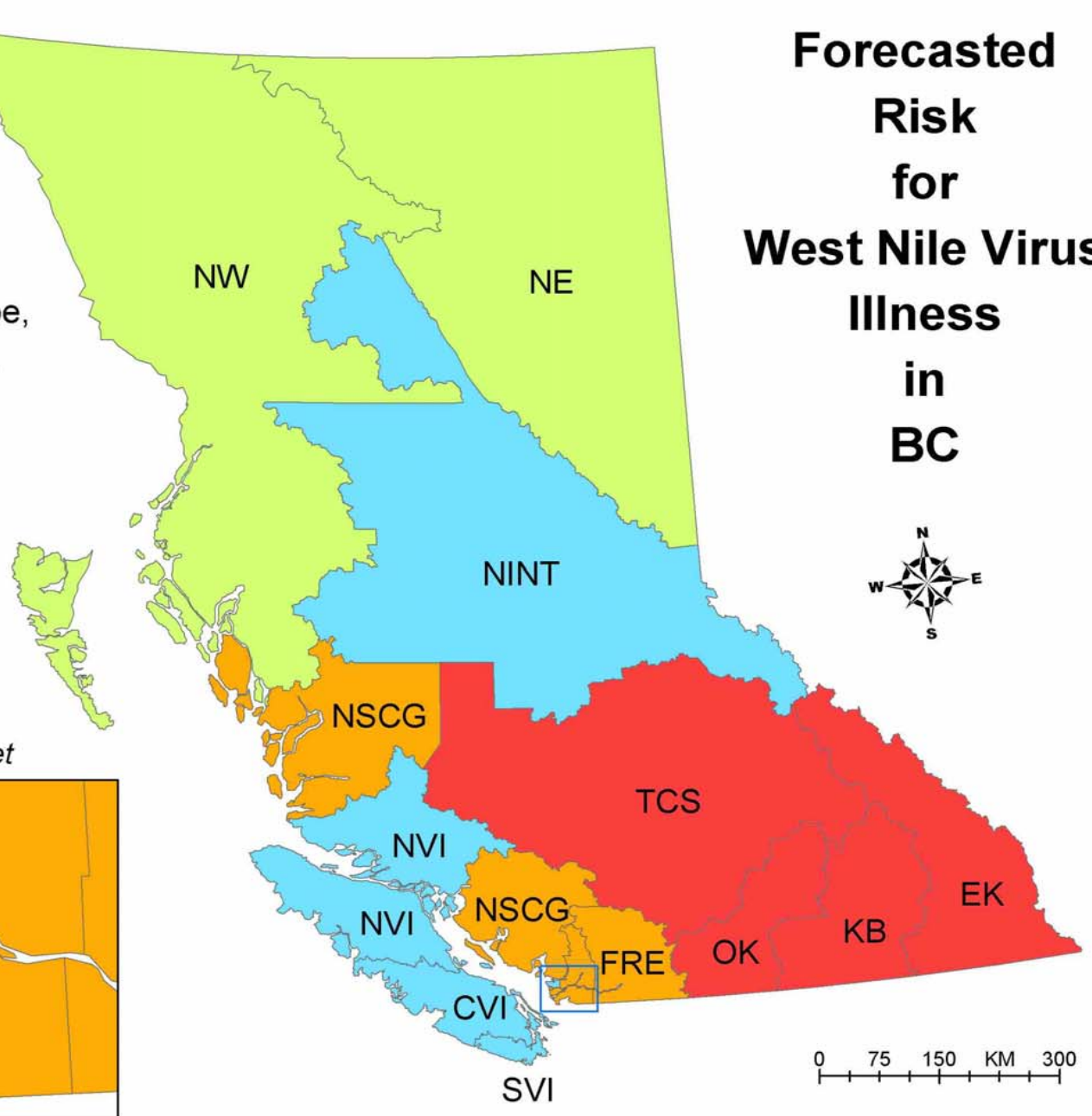
- Delay start of mosquito surveillance
 - High risk areas : 1 June
 - Low risk areas : 1 July
- PCR testing of only *Culex* mosquitoes
 - Other species tested once positives found
- Ensure coverage of field staff
 - Peak period – Aug/Sept

Forecasted Risk for West Nile Virus Illness in BC

Risk of WNV illness based on the presence of *Culex* mosquitoes, climate and ecosystem type, human population density, and bird migration routes.



Vancouver Lower Mainland Inset



Conclusions

- BC conditions theoretically support WNV
 - *Culex* mosquitoes
 - Climatic conditions
 - Avian hosts
- 2006 ??