Central Mass. Mosquito Control Project: Incorporating A GIS- Year 1

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In order to provide better service to its towns and create a more efficient MCP overall, CMMCP created a Geographic Information System (GIS) department in the fall of 2006. Since then, CMMCP personnel have been working to incorporate many of the programs and services that it provides. Here are some examples of what CMMCP has been able to accomplish over this past year.

Future plans for GIS at CMMCP include GPS linked ULV machines, field technician data offloads, as well as further data integration and inter-department connectivity. In time CMMCP will be able to plan and coordinate control efforts more effectively, having data from all departments accessible in the GIS.

Mosquito Breeding Wetlands

This map is of Hopedale and includes wetlands that typically breed mosquitoes as well as a layer of map sections for the town. The wetland layer can be used as a guide for mosquito sources, with the map sections used as a point of reference for field technician. The map sections layer can also be used in conjunction with other programs at CMMCP. Pictures can be linked to the specific wetlands as well as treatment data.

Mosquito Surveillance Sites w/ Past Virus Data

Here is a map of the CMMCP service area with the mosquito surveillance traps sites along with past virus activity in the surrounding area. These traps have several pictures linked to them as well as links to aerial collection data in the SEDPH database. This surveillance data can be used in finding out where certain species are prevalent or in observing the trend of mosquito populations.

Water Management Jobs

This map shows one of the past water management jobs of CMMCP. On top of the orthophoto is the job site in red and nearby wetlands in green. Data specific to the particular job can also be linked to the job site as well as pre and post pictures. Future maintenance data can eventually be added.

Adulicide Service Requests

This map is of Hopedale and portrays the adulticide service requests for the town in 2007. Also on this map is vector data for the town with exclusion zones highlighted in red as well as school locations and NIMH property. With similar maps CMMCP can determine what sections of town have the highest number of requests and consider additional control methods in these areas to reduce adult emergence.

Larvicide Program

Here is a map of Hopedale with the various larvicide programs of CMMCP displayed. The aerial larvicide program, ground larvicide program and catch basin larvicide program are all depicted here for the town in 2007. Data from these programs can be linked to the treatment sites.

Data obtained from NIMH Aerial Database

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Water Management Photo

Pre Management Photo

Post Management Photo