How to Gather Data and Make Something Useful

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Program Manager

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About Delaware County
About Delaware County

The dominant tapestry segment here is Professional Pride (18). This segment is part of the Affluent Estates LifeMode Summary Group.

- **Total Population**: 202,801
- **Median Age**: 38
- **Diversity Index**: 29
- **Median Household Income**: $100,159
- **Median Disposable Income**: $77,050

This pie chart displays the count of

[Zoom to](#)  [Get Directions](#)
About Delaware County

• 2017 population estimated at 200,464
  – 15% increase in population from 2010
  – Fastest growing county in Ohio

• Unemployment rate of 3.5%

• Continuously ranked healthiest county in Ohio for both health outcomes and health behaviors
About the Health District

• Governed by a Board of Health
• Levy funded
• Approximately 75 staff agency-wide
History of DGHD Mosquito Program

• Started in 1998
• Program includes
  – Educating
  – Surveying
  – Adulticiding
  – Larviciding
  – Barrier Treatments
Past Year

• I started as Program Manager
• Dave started being the lead for GIS
• Problems
  – Maps were not functional
  – Traps were placed in each political subdivision based on ease to collect traps
  – Action to positive pools was based on a mile flight pattern of culex mosquito.
Problem 1

• Maps were not built correctly
  – Dots were placed on an image

• Work with partners and look for sources
  – County Auditor, Living Atlas, County Agencies, State Agencies

• Correctly built maps are a great tool
  – Population density
  – Run plumes off of road centerlines
Problem 2

Old Map (points on an image)  New Map (traps with population points)
Problem 2

No Data Trap had 35% Coverage

Based on Data Trap had 75% Coverage

<table>
<thead>
<tr>
<th>Locations</th>
<th>Primary Traps</th>
<th>Secondary Traps</th>
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<th>Overall</th>
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Trap Locations for Kingston Township

- Primary (Yellow)
  - 5555 Blue Church Rd, Sunbury
- Secondary (Red)
  - 6683 State Route 61, Sunbury
Coverage for Kingston Township

- 1 mile radius buffer around primary and secondary traps
Coverage for Kingston Township

- 1052 addresses in Kingston Township
- Primary Trap Cover
  - 152 addresses
- Secondary Trap Cover
  - 212 addresses
- Approximately 35% coverage
Problem 3

• Previous action to a positive pool
  – Used to scramble to develop a plan
  – Used to look up no fogs and determine action area

• Current action to a positive pool
  – Maps have layers
    • Notice Signs
    • No Fogs/ Apiaries
    • Fogging Boundaries
    • Public Notices are pre-written
Map Examples

- Fog boundary
- Apiaries
Sign Locations
No Fog Areas
“New” Tool – Survey 123

• Created a Matrix for Rating potential Trap location.
  – Rate potential for harborage
  – Rate potential for blood meal sources
  – Rate potential for breeding sites
Sample Screen

This survey is intended to rate the efficiency of each mosquito trap in Delaware County for the Delaware General Health District.

Township/Trap

- Please Select -

Location of Trap

Set Location

Type of trap at location

- Please Select -

Picture of location

Press here to choose image file. (<10MB)

Proximity to Mammal Habitat

- Please Select -

Proximity to Birds Habitats

- Please Select -

Proximity to Birds Habitats

- Please Select -

Water Present (within 50 yards)

- Please Select -

Ground Vegetation (within 50 yards)

- Please Select -

Trees (within 50 yards)

- Please Select -

Accessibility

- Please Select -

Additional comments

Submit
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<th>Other - Township/Trap</th>
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<th>Proximity to Birds Habitats</th>
<th>Water Present (within 50 yards)</th>
<th>Ground Vegetation (within 50 yards)</th>
<th>Trees (within 50 yards)</th>
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Collected Information

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Answered: 22  Skipped: 0
Site Evaluation of Breeding Sites

• Paperwork
• Complete evaluation of area while on site
  – Office knows instantly that evaluation was completed
  – Pictures can be connected to the inspection
• Apply pesticide while on site
  – Drop down menu
  – If/then questions
Form Example

Larvicide Applicator

This is a larvicide application form intended to be completed by those properly trained to apply larvicide treatment.

Commercial Applicator

Dave Letter

Can larvicide be applied following inspection

- Yes
- No

Address

Set Location

Name of person contacting service

Date

- Entry Day

Subdivision

- Please Select-

Brand Name & EPA Registration No.

- Please Select-

Altolod Briquettes (EPA Registration No. 2724-421)
Master Line Kontrol 4-4 (EPA Registration No. 73748-4)
Summit Briquettes (EPA Registration No. 6218-47)
VectoLex CG (EPA Registration No. 73049-20)

Was the product diluted

- Please Select-

Was any equipment utilized (e.g. slingshot)

- Please Select-

Time of day

Wind Direction

Velocity (mph)

Air Temperature
Captured Information
Advantages

• Properly developed maps are a tool.
• GIS can assist in making decisions.
• GIS software can be used to gather or disseminate information.
• GIS field tools verify employees completed work or made appropriate decisions.
Next steps

• The public will complete breeding site nuisance complaints using a GIS tool
• Live tracking of trap function
• Live reporting of trap counts
• Application of pesticide will connect to inventory spreadsheets
• Adding ponds to positive pool action plans