

COUNTY COUNCIL OF BEAUFORT COUNTY
ADMINISTRATION BUILDING
BEAUFORT COUNTY GOVERNMENT ROBERT SMALLS COMPLEX
100 RIBAUT ROAD
POST OFFICE DRAWER 1228
BEAUFORT, SOUTH CAROLINA 29901-1228

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CHAIRMAN

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TELEPHONE: (843) 255-2000

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www.bcgov.net

GARY T. KUBIC
COUNTY ADMINISTRATOR

JOSHUA A. GRUBER
DEPUTY COUNTY ADMINISTRATOR
SPECIAL COUNSEL

THOMAS J. KEAVENY, II
COUNTY ATTORNEY

SUZANNE M. RAINEY
CLERK TO COUNCIL

AGENDA
COMMUNITY SERVICES COMMITTEE

Monday, May 23, 2016

3:30 p.m.

Large Meeting Room, Bluffton Branch Library
120 Palmetto Way, Bluffton

Committee Members:

William McBride, Chairman
Gerald Dawson, Vice Chairman
Rick Caporale
Steve Fobes
Alice Howard
Roberts "Tabor" Vaux

Staff Support:

Monica Spells, Assistant County Administrator
Civic Engagement and Outreach

1. CALL TO ORDER – 3:30 P.M.
2. CONSIDERATION OF CONTRACT AWARD
 - A. MAPVISION SOFTWARE FOR MOSQUITO CONTROL - \$93,200 ([backup](#))
3. LIBRARY UPDATE – Mr. Ray McBride, Library Director
 - A. DISCUSSION ONLY / MEMORANDUM OF UNDERSTANDING BETWEEN HILTON HEAD ISLAND LAND TRUST AND HILTON HEAD ISLAND BRANCH LIBRARY OF THE BEAUFORT COUNTY LIBRARY SYSTEM ([backup](#))
 - B. PRESENTATION / POTENTIAL BOOKMOBILE SERVICES (LIBRARY TO GO) FOR BEAUFORT COUNTY ([backup](#))
 - C. UPDATE / 2016 LARGE COMPETITIVE LIBRARY SERVICES AND TECHNOLOGY ACT (LSTA) GRANT AWARD OF \$23,200 FROM THE SOUTH CAROLINA STATE LIBRARY TO EXPAND KAJEET SMARTSPOT PROGRAM
4. CONSIDERATION OF REAPPOINTMENTS AND APPOINTMENTS
 - A. Disabilities and Special Needs Board
5. ADJOURNMENT

2016 Strategic Plan Committee Assignments
Connectivity in Rural Areas / Wi-Fi Expansion
Smoke Free Campus
Residential Homes (2) (South)





COUNTY COUNCIL OF BEAUFORT COUNTY
PURCHASING DEPARTMENT

106 Industrial Village Road, Bldg. 2 -- Post Office Drawer 1228
Beaufort, South Carolina 29901-1228

TO: Councilman William McBride, Chairman, Community Services Committee

FROM: Dave Thomas, CPPO, Purchasing Director *DT*

SUBJ: Request to Purchase MapVision® Software from Leading Edge Associates, Inc., a Sole Source Vendor, for Beaufort County Mosquito Control

DATE: May 18, 2016

BACKGROUND: The Purchasing Department received a request from the Mosquito Control Director to purchase MapVision® (data management system software) from Leading Edge Associates, Inc., Fletcher, NC. MapVision® is a web-based, geo-spatial system to integrate all mosquito control information and data collected from the field, laboratory, and office. The mapping/satellite imagery system supports surveillance of mosquitoes and mosquito-borne diseases, planning and tracking of adulticide and larvicide treatments (including alerts for no sprays and bee hives), requests for service, comprehensive reporting of data, and accountability (such as for NPDES permit compliance).

VENDOR INFORMATION:

COST

Leading Edge Associates, Inc., Fletcher, NC
[\$93,200 + \$0 tax (cloud based)]

\$93,200

JH **FUNDING:** 10001400-54112, Mosquito Control – Data Processing (current fund balance – \$93,200)

PRIOR YEAR COST: N/A

FOR ACTION: Community Services Committee meeting occurring on May 23, 2016

RECOMMENDATION: The Purchasing Department recommends that the Community Services Committee approve the purchase of MapVision® for \$93,200 through Leading Edge Associates, Inc.

CC: Gary Kubic, County Administrator *GKubic*
Josh Gruber, Deputy County Administrator/Special Counsel *JG*
Alicia Holland, Asst. Co. Administrator, Finance *AH*
Philip Foot, Asst. Co. Administrator, Public Safety *PF*
Gregg Hunt, Mosquito Control Director *GH*

Attachment: Product and Pricing Information

Professionally we serve; Personally we care!



Beaufort County Mosquito Control

Mr. Gregg J. Hunt, Director
Beaufort County Mosquito Control
84 Shanklin Road
Beaufort, SC 29906-8427

MOSQUITO CONTROL & MANAGEMENT INFORMATION SYSTEM

MapVision® 1.0 Proposal
February 15, 2016

Bill Reynolds
Leading Edge Associates, Inc.
C/O: 407-468-0008
breynolds@leateam.com

Mike Reynolds
Leading Edge Associates, Inc.
C/O: 828-246-2111
mreynolds@leateam.com

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February 15, 2016

VIA EMAIL

ghunt@bcgov.net

Mr. Gregg J. Hunt, Director
Beaufort County Mosquito Control
84 Shanklin Road
Beaufort, SC 29906-8427

Re: MapVision® 1.0 Proposal

Dear Mr. Hunt:

It was great visiting with you and Liz at the AMCA conference in Savannah, GA last week, I trust you had a good conference and safe trip home.

After revisiting the previous proposal, we provided back in 2012 and reflecting on what you believe your current needs are, we have recrafted and updated our proposal to include many of the features you expressed an interest and are within the **MapVision®** Elite and Premier systems. Based on your review of this proposal we can refine your requirements and make modifications.

We are pleased to provide you with an updated proposal, which includes a high level overview and many specific features for your operations. Our system focuses on several specific operational goals such as:

- Ensuring field data is more useful and relevant to decision-making at all levels
- Improve accessibility and data entry of mapping, field and related lab data to all levels of the organization, particularly to users in the field
- Improve the quality and completeness of field data entry that is central to operations and strategic planning
- Improve field operation by giving field technicians and managers visualization of important locations on a map and satellite image, access to important location history and information needed for their work, and an easy method for entering error-free and complete field data
- Improve lab data collection and decision-making by entering, integrating and displaying basic lab data along with field data
- Improve operational management by providing meaningful standard reports, and reducing time and efforts for generating operational and regulatory reports, currently somewhat labor intensive and time-consuming

Our system is designed to prioritize core integrated mosquito management functions with an emphasis on your unique needs such as geospatial visualization, satellite imagery, source status, alerts and historical data. Additionally, the system provides a simple, user-friendly interface for data entry in the field or office. As an added feature, the system is designed to provide real time tracking and robust lab functionalities.

MapVision® provides integration of data, accountability, surveillance, optional ULV adulticide application recording with real-time tracking and recording of all events associated with location, time, flow rate, spray status, speed, heading, date, seamless integration of aerial treatment blocks, direct upload of commonly used GPS guidance and recording systems files and a comprehensive reporting module.

Our system will provide your operation many feature rich functions and our goal is to provide you several unique advantages:

- **Geo-spatial visualization of locations on a map and satellite image, along with attributes, status, alerts, and historical activities for important locations**
- **Simple, complete, and error-free input of field and lab data from any location, in the field or on-site**
- **Real-time and robust access (and updates) to field and lab data**
- **Meaningful standard reports and data delivery**
- **Migrate and clean data from current data Applications**

This is followed by our Financial Proposal, which includes all the features, Service and Support as well as Installation and Training. As requested, this proposal does not include real time tracking, extensive reports and equipment, which we have discussed and outlined previously.

We appreciate your consideration and look forward to working with you to create your customized MapVision- system. Should you have any questions or would like to arrange an on line WebEx meeting to further discuss this proposal please call either Bill or me directly.

Regards,



Michael "Mike" D. Reynolds, Sr., Co-Owner
Leading Edge Associates, Inc.
C/O: 828-246-2111
mreynolds@leateam.com



William "Bill" H. Reynolds, Jr., Co-Owner
Leading Edge Associates, Inc.
C/O: 407-468-0008
breynolds@leateam.com



Financial Proposal:

Software:

Description	Units	Unit Price	Extended
<p>Please note, this proposal includes a combination of MapVision® Elite and Premier functionality</p>			
MapVision® Website Application Software; <ul style="list-style-type: none"> • Operations, Mapping, Lab, Admin • Real time inventory, • Basic Tier I reporting 	1	\$62,000	\$62,000
Integration of aerial and ground file missions	1	\$5,500	\$5,500
MapVision® Mobile Client based software (ULV, Service Request, tracking and all real time database synchronization)	1	\$14,900	\$14,900
Total Software			\$82,400.00

Administrative: Software License and Service Support and Maintenance Agreement:

Software License:	\$2,500 Annually
Annual Service, Support and Software Maintenance Agreement (SSMA) <ul style="list-style-type: none"> • Payable Annually, beginning at Phase III • Includes two hours of phone, on-line and email technical support each month totaling 24 hours annually. • Should software "bugs" occur, no time will be applied to monthly support hours at no expense to customer. • Hours are non-accruing, do not rollover and can not be "banked" or saved. • The SSMA also includes annual Webhosting. • Begins upon completion of Project. • Any Enhancements identified by customer will be quoted and approved prior to any work being performed. 	\$2,500 Annually



Training & Deployment:

On-Site Training and Live Deployment	\$5,800
--------------------------------------	---------

Recurring Annual Expenses:

Administrative – Recurring Software License and Annual SSMA as outlined above:	\$5,000
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Summary of Pricing:

MapVision® Software and other features	\$82,400
On-Site Training and Live Deployment	\$5,800
Administrative: Annual recurring	\$5,000
Total Project	\$93,200.00

Notes:

- Price quote is based on an estimated time for software design, programming, implementation and modifications to all MapVision® features
- Additional customization will be identified and a separate quote will be provided.
- Devices, mounting systems, laptops, GPS devices and SprayVision devices are NOT included
- Proposal does not include cellular connectivity, should this option be selected.



Optional features for consideration:

MapVision® Catch Basin iPad App	1	\$6,750	\$6,750
iPad app licenses	TBD	\$150	Annually
Catch Basin iPad Mini with Otter Cases	TBD	\$499	TBD

Acceptance:

The following representatives understand and accept the proposal as outlined above and the expectations and obligations as outlined. Delivery and acceptance is authorized by fax or email.

Michael "Mike" D. Reynolds, Sr.
Leading Edge Associates, Inc.
mreynolds@leateam.com

Leading Edge Associates, Inc.

William "Bill" H. Reynolds, Jr., Owner
Leading Edge Associates, Inc.
www.leateam.com
breynolds@leateam.com

Accepted this ____ day of _____ 2016

Beaufort County Mosquito Control

Authorized Representative
Beaufort County Mosquito Control

Non-Competitive Purchases Form - New Form



Non-Competitive Purchases Form

This form shall be completed for any non-competitive purchase over \$2,500 that is not exempt.

(a) A County contract may be awarded without competition when the Purchasing Director determines in writing, after conducting a good faith review of available sources, that there is only one source for the required supply, service, or construction item. The Purchasing Director shall conduct negotiations, as appropriate, as to price, delivery, and terms. A record of sole source procurements shall be maintained as public record and shall list each contractor's name, the amount and type of each contract, a listing of the items procured under each contract, and the identification of each contract file.

(b) Sole source procurement of a used item from the open market may only be considered, provided that:

(1) The using agency recommends purchase; (2) condition of the item is verified by appropriate County official; and (3) price analysis justifies purchase when the following factors are considered: (a) new acquisition price; (b) current book value; and (c) maintenance costs.

Code 1982 SS 12-19 Sec. 2-518 Sole source procurement

The County Council may by resolution, exempt specific supplies or services from the purchasing procedures required in the Code. The following supplies and services shall be exempt from the purchasing procedures required in this division; however, the Purchasing Director for just cause may limit or withdraw any exemption provided for in this section. (1) Works of art for museum and public display (2) Published books, library books, maps, periodicals, technical pamphlets (3) Copyrighted educational films, filmstrips, slides and transparencies (4) Postage stamps and postal fees (5) Professional dues, membership fees and seminar registration fees (6) Medicine and drugs (7) Utilities including gas, electric, water and sewer (8) Advertisements in professional publications or newspapers (9) Fresh fruit, vegetables, meats, fish, milk, bread and eggs (10) Oil company credit cards (11) Articles for commercial sale by all governmental bodies

Code 1982 SS 12-14 Ord. No. 2000-1 S 1, 1-1-0-2000 Sec. 2-514 Exemption from procedures

Notwithstanding any other section of this division, the Purchasing Director may make or authorize others to make emergency procurements of supplies, services, or construction items when there exists a threat to the functioning of county government; for the preservation or protection of property; or for the health, welfare or safety of any person, provided that such emergency procurements shall be made with such competition as is practicable under the circumstances. A written determination of the basis for the emergency and for the selection of the particular contractor shall be included in the contract file. As soon as practicable, a record of each emergency procurement shall be made and shall set forth the contractor's name, the amount and type of the contract, a listing of the items procured under the contract, and the identification number of the contract file.

Code 1982 SS 12-20 Sec. 2-519 Emergency procurements

Requesting Department: Mosquito Control Requested Account Code: 10001400 - 54112

Description of Requested Services:

MapVision, a data management system software from Leading Edge Associates, Inc.

Please provide a listing of the items purchased, if additional pages are necessary please attach to this form:

MapVision software

Cost of Requested Services: 93,200

Requested Vendor Name: Leading Edge Associates, Inc.

Requested Vendor Address: 702 Tulip Tree Court, Fletcher, NC 28732

Requested Vendor Phone Number: (828) 246-2111 Requested Vendor Email Address: mreynolds@leateam.com

Type of Service Requested (Please check one) Construction Service Supply/Good

Please attach any documentation provided by the vendor that provides back up for the claims in this document.



Non-Competitive Purchases Form



Non-Competitive Purchases Form - New Form

Please select a reason below as to why this is a non-competitive purchase and provide a brief explanation.

- It is not possible to obtain competition. There is only one source available for the supply, service, or construction item.
- The procurement is for a used item from the open market. The item may only be considered if, (1) the using agency recommends purchase, (2) condition of the item is verified by appropriate County official, (3) Price analysis justifies purchase when the following factors are considered: (a) new acquisition price; (b) current book value; and (c) maintenance costs.
- The item is a single source purchase. Other sources may be available but purchases are directed to one source because of factors unique to Beaufort County. Please select an option below:
 - Standardization
 - Warranty
 - Other, if selected please specify below.

Software is compatible with our current surveillance/abatement equipment and mosquito control strategies.

- An emergency exists that threatens the functioning of County government.
- An emergency exists that threatens the preservation or protection of County property.

What steps have been taken to verify that these features are not available elsewhere?

- Other brands/manufacturers were examined (please list names and contact information, and explain why they are not suitable for use by the County-attach additional pages as necessary):

- Other vendors were contracted (please list names and contact information and explain why those contacted did not meet the needs of the County-attach additional pages as necessary):

Requester Name: Gregg J. Hunt

Requester Signature: _____

Date: 5/18/2016

Department Head Name: Gregg J. Hunt

Department Head Signature: _____

Date: 05-18-16



Non-Competitive Purchases Form

For Purchasing Completion only:



Date Received in Purchasing Department: 05/18/2016

- Reviewed by Purchasing Department for completeness

Date: 05/18/2016

Non-Competitive Purchases Form - New Form

Reviewed by: David L. Thomas

Verified that this is the only source: Yes No

Comments: We reviewed and tested two other software firms that were not
comparable.

Purchasing Director or His Designee Approval Signature: [Signature]

Associated Purchase Orders Number: NA

Associated Contract Number: NA



May 18, 2016

VIA EMAIL

ghunt@bcgov.net

Mr. Gregg J. Hunt, Director
Beaufort County Mosquito Control
84 Shanklin Road
Beaufort, SC 29906-8427

Re: Sole Source Letter; **MapVision®** Software

Dear Gregg:

Leading Edge Associates, Inc. is the manufacture and direct supplier of **MapVision®** software to the mosquito control industry.

This Single Source Letter is in reference to **MapVision®** Software. Because of the technical nature of the mosquito control industry, Leading Edge Associates, Inc. is the sole source supplier of the **MapVision®** product which is capable of:

- Integrating with various industry leader's ULV spray, pump and data systems.
- Wireless file transfer to and from GPS guidance systems in fixed and rotor wing aircraft
- Unique to MapVision is our Heightened Surveillance and Parcel Inspection Plan which work together to maximize efforts from both lab and field operations to effectively provide door to door surveillance in response to mosquito-borne arboviral disease incidents such as Zika and WNV.

Please don't hesitate to email or call for additional information.

Sincerely,

A handwritten signature in black ink that reads "Mike Reynolds". The signature is written in a cursive, slightly slanted style.

Mike Reynolds, VP/COO
Leading Edge Associates, Inc.
Email: mreynolds@leateam.com
C/O: 828-246-2111

cc: B. Reynolds

Leading Edge Associates, Inc.
702 Tulip Tree Ct
Fletcher, NC 28732



Beaufort County Mosquito Control

Mr. Gregg J. Hunt, Director
Beaufort County Mosquito Control
84 Shanklin Road
Beaufort, SC 29906-8427

MOSQUITO CONTROL & MANAGEMENT INFORMATION SYSTEM

MapVision® 1.0 Proposal
February 15, 2016

Bill Reynolds

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C/O: 407-468-0008
breynolds@leateam.com

Mike Reynolds

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February 15, 2016

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ghunt@bcgov.net

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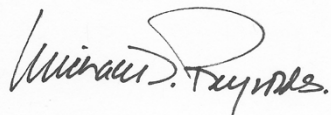
Our system will provide your operation many feature rich functions and our goal is to provide you several unique advantages:

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This is followed by our Financial Proposal, which includes all the features, Service and Support as well as Installation and Training. As requested, this proposal does not include real time tracking, extensive reports and equipment, which we have discussed and outlined previously.

We appreciate your consideration and look forward to working with you to create your customized **MapVision** system. Should you have any questions or would like to arrange an on line WebEx meeting to further discuss this proposal please call either Bill or me directly.

Regards,



Michael "Mike" D. Reynolds, Sr., Co-Owner
Leading Edge Associates, Inc.
C/O: 828-246-2111
mreynolds@leateam.com



William "Bill" H. Reynolds, Jr., Co-Owner
Leading Edge Associates, Inc.
C/O: 407-468-0008
breyolds@leateam.com

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MapVision® Website Core Application Software

Beaufort County Mosquito Control (BCMC) performs comprehensive integrated mosquito control operations that begin with the collection of field surveillance data. There are several components of **BCMC** surveillance program inclusive but not limited to routine LRC (landing rate counts), adult light traps, temporary adult light-traps, source inspections and larval surveillance practices.

The surveillance data from these field data collection techniques require a more centralized process and more efficient consolidation, presentation, treatment response distribution, public information dissemination and performance assessment. Leading Edge provides **BCMC** the ability to implement a public treatment notification system to inform the general public and public services agencies of planned treatment schedules as well as the ability for citizens to report Service Request. These features can be implemented either through a real time or near real-time service request program.

Solution:

MapVision® 1.0 is a web-based mapping system designed to consolidate multi-source surveillance data in order to develop and deploy strategic larvaciding and adulticiding response applications.

In near or real time, surveillance data from landing rate counts, trap counts, larval inspections and citizen complaints are projected over satellite and animated maps to provide management a broad vision of the adult and larval mosquito populations and problematic areas. From the surveillance data, treatment response strategies are developed and deployed for all ground and aerial larvaciding and adulticiding assets as well as a comprehensive service request program. This access to geospatial data provides for meeting the Operational Goals above, providing for more informed decision making, access to data, improved entry and completeness of field and lab data

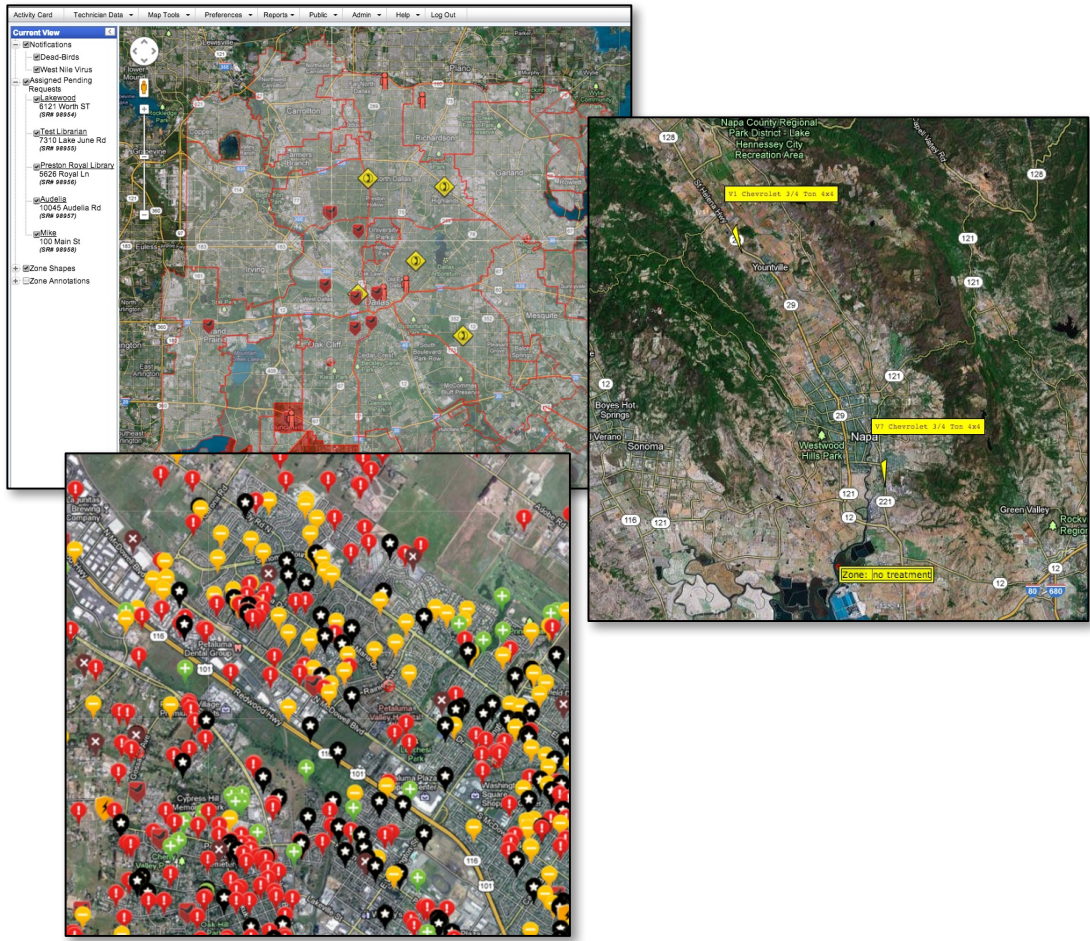
Feature

1. Types of location should be displayed on maps and images, preferably with selectable visibility along with default visibility based on user role. Summary information and history should be displayed, for example, when cursor is hovered on a location. Detailed information should be accessible, for example, when cursor is clicked on a location.

Feature:

2. Primary screen is map or satellite image display, with locations and type indicated by icons (type and layer preferably selectable)

Below you will find an example of the home **MapVision®** page, which illustrates posted geospatial data to include Sources, Service Requests, Dead Birds, WNV cases and zones and vehicles moving in real time. These data points can be selected and layered based on user preferences or user roles. Also illustrated are the visual locations of Sources and other data access to include current status, historical information, related lab data and access to reports, which will be discussed below.



Feature:

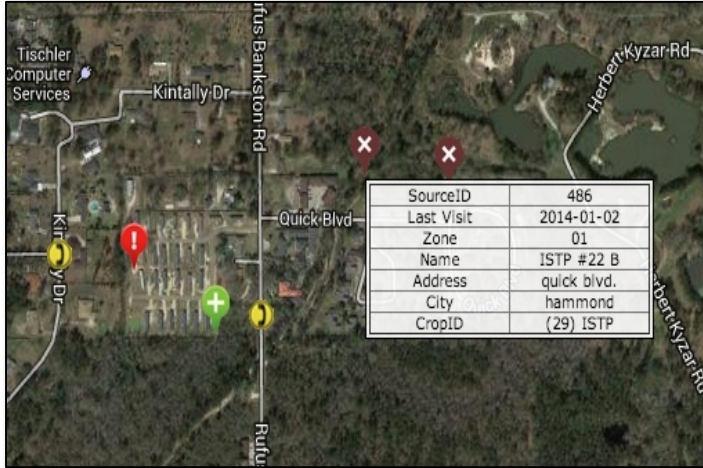
5. Maps and images updated with little or no user intervention

MapVision® integrates, as a backdrop function, a mapping API solution. This feature manages all images, terrain and animated mapping layers and requires no user intervention or maintenance.

MapVision® provides clients the ability to add numerous geo-references layers, over the background maps, of data such as sources, catch basins, treatment zones, zones, service requests, no spray points, no spray polygons, trap results, larval inspection results, disease test results for mosquito pools, birds, horses, aerial and ground spray applications and many other geo-referenced layers. All of these geo-referenced layers provide the user numerous filters to overlay these data set results. A few data filter examples are date ranges, zones, technician assigned areas, source types and many others.

Feature:

3. Location summary data shown when hovered; details displayed when clicked

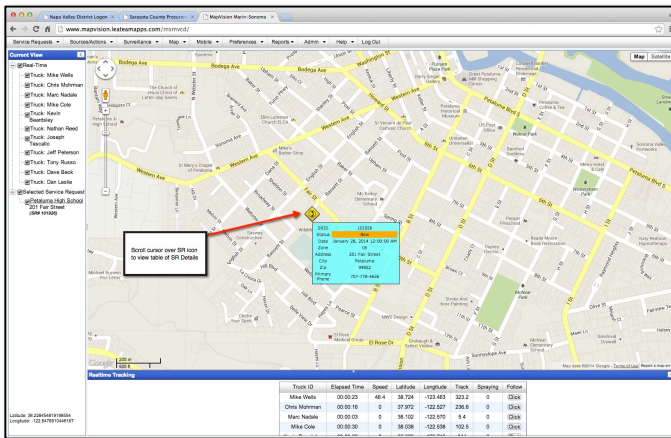


The illustration to the left provides the user the ability to hover their cursor over a data point, in this case a Source to view a table of specific data associated with the Source. Other examples would include treatment areas, zone annotations and Adult and Larval trap data as well as no spray residents, no spray organic polygons and service requests.

Feature Request:

- a.) Detailed information should be accessible, for example, when cursor is clicked on a location.

When the user “clicks” on an object such as a service request or source as an example, detailed information is displayed about the source or service request. Below are examples of this “click” method for a source and a service request



Initially, the user will see a popup table with some data; a second click will open the SR or Source Detail page.

Source Details

Monitor-NPDES

Source Name: Tiburon Peninsula Club
 Phone Number: (415) 435-1329

Location#: 83085
 Address: 1600 Mar West Road
 Cross Street: Tiburon Blvd.
 City: Tiburon State: CA
 Zip: 94920 County: Marin
 Latitude: 37.87786111 Longitude: 122.45761111

Date Made: _____
 Position Updated: December 15, 2005

Billed
 Inactive Date Inactive: _____

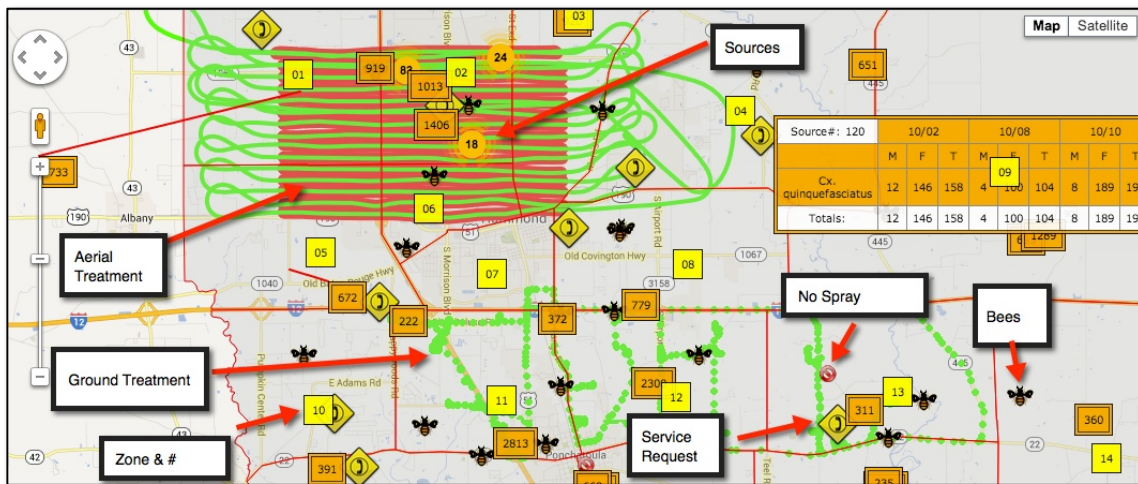
Species: 31 Aedes washinoi
 Crop: 742 Marsh, Fresh H2O
 Location: _____
 Alert Flags: M Monitor-NPDES

Beyond the broad picture, **MapVision**® drills down to individual surveillance sites displaying details to include but not limited to counts of each species, sub-totals and totals. **MapVision**® also posts data and treatment zones to the business public website, providing heightened and effective communication to the public indicating where trucks, aircraft and other response assets will be adulticiding, larvaciding and providing service requests.

Feature Request:

4. Integrated and selectable display of surveillance, source, treatment, service request, and disease occurrence locations, along with truck (or aerial) position and defined areas

MapVision® is designed to provide the user the ability to select integrated data to include all data sets, which are a part of the relational table database, and to display them on the map to include real time and post mission displays of both ground and aerial missions. The image below illustrates multiple, user defined data sets geo-referenced over maps. This image is displaying Service Requests, Zones, Adult Lab Data, No Spray locations, honeybee locations, Sources, and aerial and ground missions.

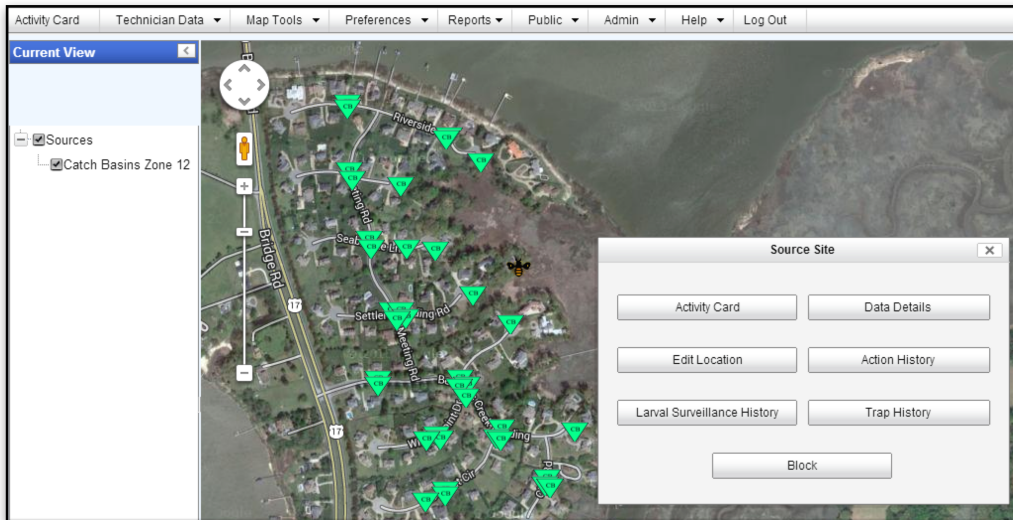


MapVision®'s webhosting provides fast and reliable to your data with a modern and flexible service and setup, driven to provide you with independent, secure and reliable webhosting. Leading Edge's hosting provides redundant UPS systems, generator backup, VESDA detection, closed circuit monitoring of hosting site and redundant systems to include monitoring of all hosting systems.

Feature:

7. Catch-basin management—to indicate that groups of nearby catch basins are inspected and treated as a collective group (this could be addressed with optional user-defined location groupings, described below)

For example, Catch Basins are treated similar to other Source types such as ditches, fountains, stagnant pools, and vernal pools. Technicians can search for catch basins based on zone, or by a unique proximity search by clicking on a map location and defining all Catch Basins (or a multitude of source types) within a 1 and 5 miles (user radius defined) of that point. The technician can then determine the status of every Catch basin based on the color of the marker or by viewing the Action History for that catch basin source. The unique color-coding of the markers provides the technician indication that a group of catch basins has been treated.



Feature:

8. User-defined grouping of locations (many locations-to-many groupings)

Locations also referred to as sources (sources can be a breeding source type, a disease incident, service request, dead bird, etc.) can be grouped based on many filters to create many grouping locations or layers. In the example below, the technician has searched for all Culvert Big Lid, Culvert Small Lid and Ditches in Zones L37A and L37B. Reports can be generated into a CSV file or PDF format. Moreover, and more importantly, these sources can now be geocoded to mapping service. This is demonstrated in the second image. The reports and mapping of these sources requires a single click of a button.

Sources (58 Total Records)

Source Type: **Culvert Big Lid**, Culvert Small Lid, Ditch Flood, Ditch-Septic, Field-Fallow, Fountain, General

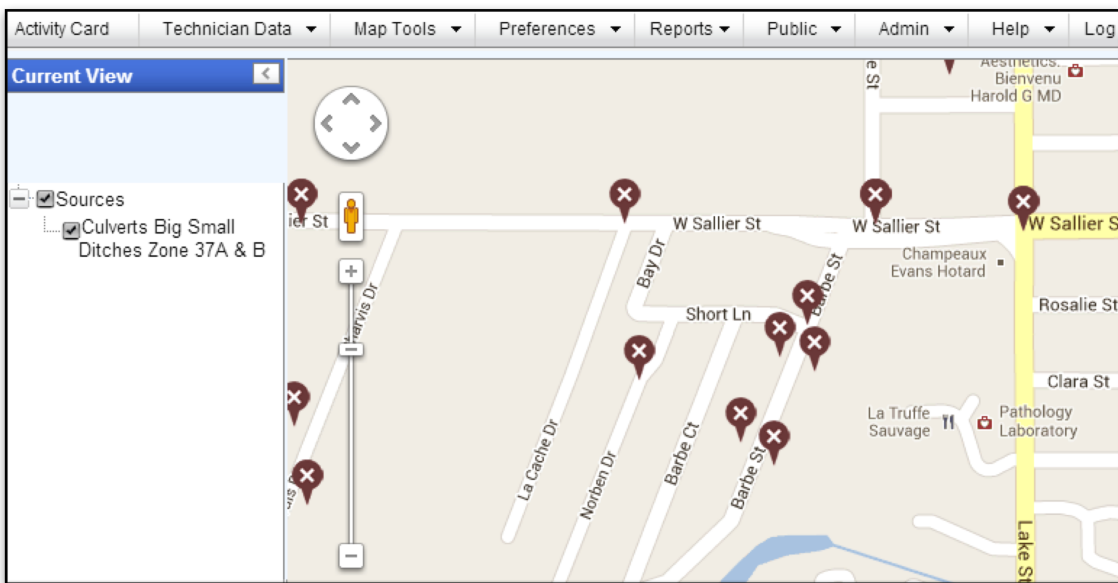
Alerts: Show All, Disease Incidents

Address: Begins With, City: Begins With, Zipcode: Begins With, SourceID: Begins With, Source Name: Begins With

Map Filtered | Map Selected | Show Details

ID	SourceName	Address	City	PriPhone	Type	Zone	Zip	CrossStreet	Inactive	LastMaterialID	LastTreated	LastVisited	Comments
813	Avin & Shellbeach - E	Avin & Shellbeach - E	Lake Charles		Culvert Small Lid	L37A							
812	2018 Charvais - W	2018 Charvais - W	Lake Charles		Culvert Small Lid	L37A							
811	W. Sallier & Riverside - NW	W. Sallier & Riverside - NW	Lake Charles		Culvert Small Lid	L37A							
810	W. Sallier across from #9 - N	W. Sallier across from #9 - N	Lake Charles		Culvert Small Lid	L37A							
809	W. Sallier across from #7 - N	W. Sallier across from #7 - N	Lake Charles		Culvert Small Lid	L37A							
808	2034 Charvais - W	2034 Charvais - W	Lake Charles		Culvert Small Lid	L37A							
807	W. Sallier west of LaCache - S	W. Sallier west of LaCache - S	Lake Charles		Culvert Small Lid	L37A							
806	W. Sallier between Bay & LaCache - S	W. Sallier between Bay & LaCache - S	Lake Charles		Culvert Small Lid	L37A							
805	2112 S. Barbe - W	2112 S. Barbe - W	Lake Charles		Culvert Small Lid	L37A							
804	2105 S. Barbe - E	2105 S. Barbe - E	Lake Charles		Culvert Small Lid	L37A							

CSV|PDF | << first < prev 1 2 3 4 5 6 next > last >> | Display: 10 | Show/Hide | Total Records: 58



Feature:

9. User-defined geospatial areas, with auto-assign areas to location, for example assigning zones, no-sprays, spray blocks, city boundaries, supervisory district, fields, etc. to source, trap, service request, etc. locations.

MapVision® manages zones, no-sprays, spray blocks, city boundaries, supervisory districts and fields uniquely. Specifically, but not limited to:

- Zones are geo-referenced as a layer on the map. Administrative users can assign technicians to zones.
- No-spray points and polygons are individual layers and are geographically assigned within one or a multitude of zones as well as outside of zones.
- Spray blocks or treatment blocks are user definable and are within a zone or span multiple zones. These treatment blocks contain a multitude of objects such as sources, service requests, etc.
- City boundaries consist of a geo-referenced layer(s). Sources are assigned to a zone, city, and technician
- Supervisory districts are not currently used in **MapVision®** as supervisors are responsible for Zones and specific technicians. **MapVision®** can add supervisory districts during the system design Phase I project meeting.
- Sources are assigned to zones, technicians, geospatial locations, counties and cities.
- Traps are assigned to geospatial locations, zones, counties, cities and technicians
- Service Requests are geospatially located and can be assigned to an address, customer, county, city, zone and technician

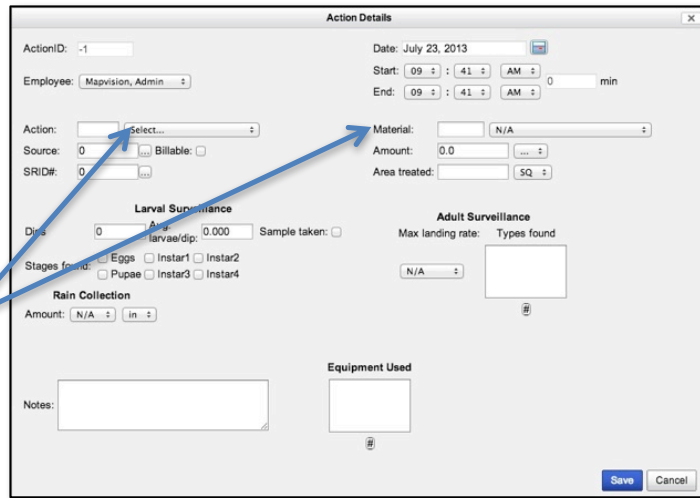
Feature:

10. Data entered on easy-to-use forms

Leading Edge provides several users input forms available on line and offline while in the field or office.

For example; many contain drop down menus and or auto-complete functionality. As user begins to type in a name the system will look for names similar and a popup list will appear allowing the user to select the correct name. Thereafter, all associated data will auto populate fields. These include but not limited to:

- Activity Card
- Service Request
- Source Details
- Trap Count and Lab Testing




Feature:

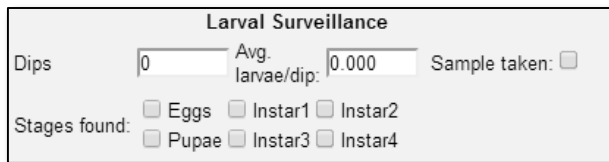
11. Field data integrated with basic lab and organizational data (see definition later)

MapVision® manages data collected in the field for the lab to include all forms of adult trapping and larval surveillance.

Adult Surveillance - **MapVision**® records the deployment of all forms of adult traps. Specifically, the trap id, trap set date, trap location, trap type, and technician who set the trap is recorded automatically and requires the technician to click on one button. Once collected, the trap ids, trap location, trap type, trap collection date, technician who collected the trap and any comments about the trap upon collection are recorded with a single click of a button. All of this information is automatically synchronized into the lab process of **MapVision**®. The lab results are automatically synchronized once the trap analysis has been completed and the results are available in real time instantly.

Currently Placed Traps				
<< first < prev 1 next > last >>				
ID	Type	Date Placed	Collect	
56564	Light	January 21, 2014	Collect	

Larval Surveillance – Using a very efficient and error free process, **MapVision**® provides the technician simple and powerful data collection associated with larval surveillance. Technician, date, trap ID, time, date, dips, average larvae/dip and stages are all recorded and synchronized in real time. If a Sample Taken is indicated, this information will be synchronized into the lab identification process and a physical sample will be brought to the lab. Once the lab identification is processed, the results will be synchronized in real time



The screenshot shows a form titled "Larval Surveillance". It contains the following fields and options:

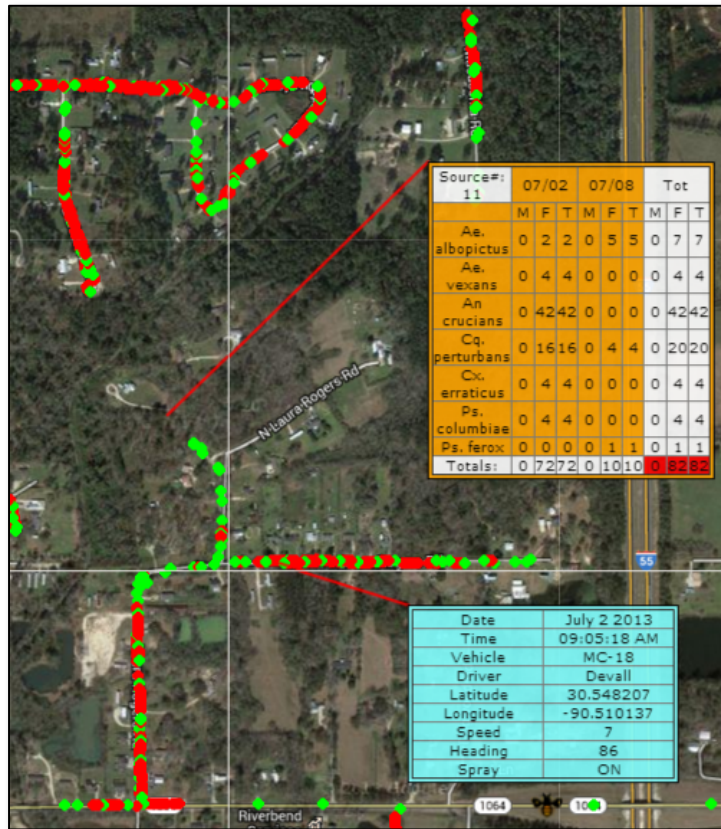
- Dips:
- Avg. larvae/dip:
- Sample taken:
- Stages found: Eggs Instar1 Instar2 Pupae Instar3 Instar4

Feature:

13. Spray positions from truck or aerial saved, including pre-treatment and post-treatment maps and data

MapVision® provides the user the ability to create custom layers to be viewed and analyzed over user selectable map backgrounds. Both ground and aerial applications are displayed on the map along with pre and post treatment counts associated with adult surveillance, landing rate counts, larval inspections, service request and many other user customizable data sets.

The **MapVision**® image below displays the ULV adulticide truck application as represented by the red and green path. The blue information tab provides information specific to a location on the map about the ULV application, showing the spray was on at 9:05:18 am on July 2, 2013. The pre and post adult trap results are displayed in the brown information tab, showing the pre counts of An. crucians and Cq. perturbans on July 7, 2013 of 42 and 16 respectively. And the post count results after the July 2, 2013 ULV adulticiding application for An. crucians and Cq. perturbans of 0 and 0.



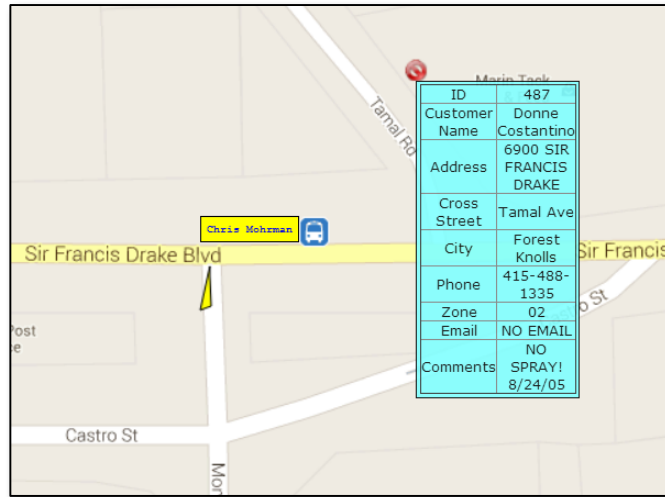
With the hover or click of the mouse, the above illustration reflects several functions including the ground trail, popup menus and data tables

Feature:

14. Flag/warn operator of an approaching no spray (organic or other) site in real time.

MapVision® provides the application technician early warning of “no-spray” locations. These no spray locations can be point or polygon based, representing a residents’ address, or an organic no treatment polygon. Both geographically represented in real time, the application technician can see their position relative to the no spray points or polygons and will hear an audible alert when within a specific distance of the no spray location. An administrator sets the distance the audible alert is activated.

The images below demonstrate the application technician performing a cursor “rollover” on the No Spray resident. This provides summary data about the No Spray resident. Clicking on the no spray icon can access detailed information.



- Summary data about the No Spray resident is provided. Clicking on the no spray icon will access detailed information.

NoSpray Details

NoSpray Details

NoSprayID: Location#

CustomerName Address

Phone: Cross Street

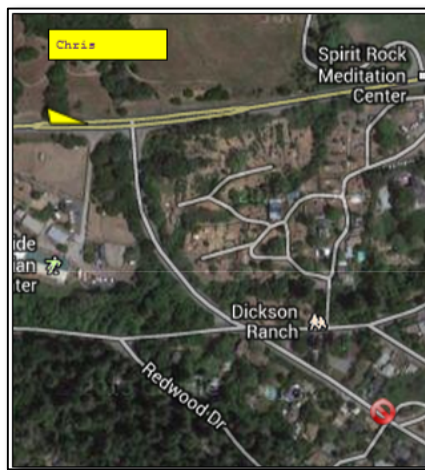
Email: City State

NoSpray Notify Zip County Zone:

Latitude Longitude

Comments:

- The image below displays the application technician's real time position relative to the no spray resident over satellite imagery maps.



Feature:

Accurate correction of data by appropriate users

Leading Edge creates numerous error traps and messages to the user to ensure accurate information is being selected and entered. As an example, when a user selects a material for application, the system checks the minimum and maximum label rate limits. If the technician enters a value outside of the label rates, the system will advise the technician that the value exceeds or is under the rate. The minimum and maximum range is displayed to the technician to assist in providing a correct input value.

Source selection is also checked if the technician manually enters a source number. If incorrect, **MapVision**® provides suggestions and or a range of sources that the technician can choose from. As a side note, typically a technician will “click” on a source to begin data collection. **MapVision**® then embeds the source number automatically into the Activity Card Source Field.

Unit values for a product are also error checked during data collection processes. **MapVision**® provides the user the ability to create, edit, add and delete species, which provide the technicians a very accurate list of species to choose from. This eliminates any spelling errors or unrecognizable species to be entered.

Super Admin and Admin preference levels provide specific users credentials to correct data. This completely eliminates any user access to specific data. **MapVision**® goes one step further by providing user credentials that allow administrators the ability to assign NO ACCESS, VIEW, CREATE, EDIT, ASSIGN, CLOSE, RESPOND and DELETE privileges to many data sets and processes such as Service Requests as on example. Below is a screen capture of a few Admin selections for user access:

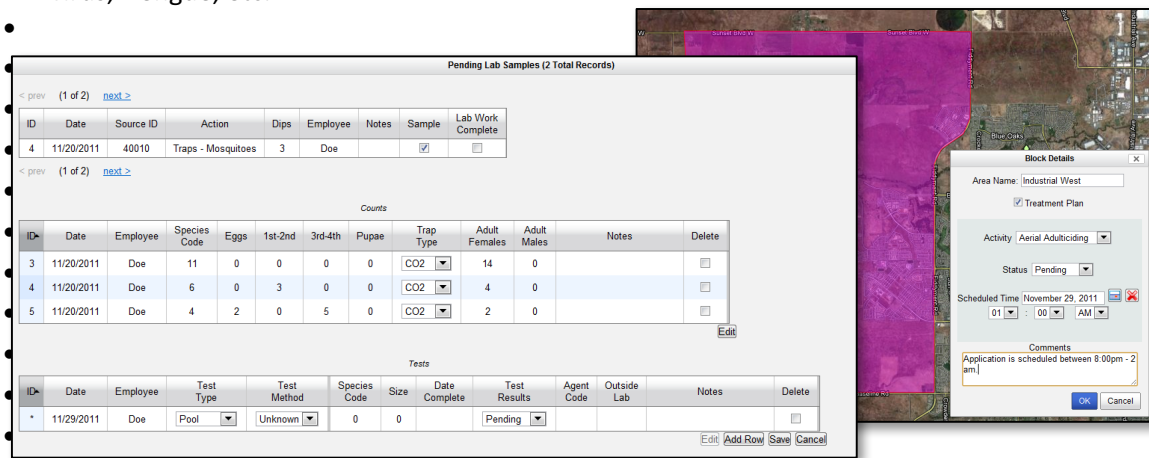
Permissions	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Respond	<input type="radio"/> Modify	<input type="radio"/> Add	<input checked="" type="radio"/> Close/Delete
Service Requests	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Respond	<input type="radio"/> Modify	<input type="radio"/> Add	<input checked="" type="radio"/> Close/Delete
Subordinate Activity Cards	<input type="radio"/> None	<input type="radio"/> View	<input checked="" type="radio"/> Edit/Add/Delete			
Sources	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Edit	<input checked="" type="radio"/> Add/Delete		
No-Spray	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Edit	<input checked="" type="radio"/> Add/Delete		
Blocks/Treatment Plans	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Edit	<input checked="" type="radio"/> Add/Delete		
Employees	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Edit	<input checked="" type="radio"/> Add/Delete		
Materials/Inventory/Equipment	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Edit	<input checked="" type="radio"/> Add/Delete		
Contacts	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Edit	<input checked="" type="radio"/> Add/Delete		
Lab/Surveillance	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Edit	<input checked="" type="radio"/> Add/Delete		
Truck-Treatments	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Edit	<input checked="" type="radio"/> Add/Delete		
Aerial-Treatments	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Edit	<input checked="" type="radio"/> Add/Delete		
System-Data	<input type="radio"/> None	<input type="radio"/> View	<input type="radio"/> Edit	<input checked="" type="radio"/> Add/Delete		

- **MapVision**®’s Intranet Web-based System Requirements (BCMC internal **MapVision**® website):
 - Web-based **MapVision**® intranet site for internal operations
 - All web-based **MapVision**® applications will be based on date selectable data sets
 - Intranet and internet site capable of displaying digital satellite mapping images, and animated maps centered over BCMC
 - Intranet and internet GIS mapping tools will include:
 - Panning maps

- Zoom in and zoom functions
- View maps as digital satellite images and or animated maps
- Geocode address function for **MapVision**® intranet and internet sites
- Display surveillance data to include:
 - Adult light-trap data
 - LRC (landing rate count) data
 - Temporary CDC light-trap site data
 - Specific count data will be displayed numerically
- All sites to be geo-reference based on latitude and longitude
 - Display treatment polygons to include:
 - All aerial larvaciding polygons
 - All aerial aduaticiding polygons
 - Acres for each polygon
 - Product volume required for each treatment polygon based on application rate of insecticide used
 - Single or multiple polygons can be select to be downloaded to aircraft
 - “Routine” treatment polygons can be saved and displayed
 - New treatment polygons can be created and added to “routine” polygons
- System will provide the following functions:
 - Date selectable pre-treatment data for current or historical reference
 - Date selectable post-treatment data
 - Display multiple aerial application missions to include:
 - Flight path
 - Spray switch status
- Mission data geo-referenced to satellite or animated maps
 - Date
 - Time
 - Display multiple ground truck aduaticiding missions to include:
 - Geo-referenced latitude/longitude position
 - Spray switch status
- Display citizen complaints to include:
 - Citizens address
 - Geo-coded location of citizen
 - Specific service request to be determined by BCMC
 - Print each service request
- Post service request response (work complete) to intranet/internet **MapVision**® website
 - Adult light-trap functionality
 - Add light-trap to include; name, latitude/longitude
 - Remove light-trap from map
 - Add temporary light-trap to include; name, latitude/longitude
 - Add/delete, name landing rate count site
- Display citizen’s service requests over digital satellite maps and animated maps
- With each mornings data projected, BCMC will create strategic response areas (shape files) for ground and or aerial mission(s) or service request responses. Subsequent to the applications, post larval inspections, LRC, NJ light-trap data, etc., will be collected and automatically transmitted in real time via cellular connection while Technicians are

in the field. Both the pre and post data sets will be projected over the **MapVision**[®] digital satellite maps along with the mission recordings and or service request responses.

- This web-service software is intended for operational purposes and for providing expedient consolidation of surveillance data, creation of response strategies, review of performance and for quick information to the public via **MapVision**[®]'s internet website.
- All historical data sets will be maintained and retrievable based on date of occurrence.
- Lab Management is designed to provide the back-end support to all surveillance collections associated with all aspects of a mosquito control operations. For example, below is the lab operations' Pending Lab Samples process. The sample below reflects two field samples taken that require lab identification and processing. This module provides the ability to process pupa, larva, adult mosquitoes, or any other lab critical data sets such as arbovirus diseases; West Nile virus, Dengue, etc.



The screenshot displays the 'Pending Lab Samples (2 Total Records)' window. It contains a table with the following data:

ID	Date	Source ID	Action	Dips	Employee	Notes	Sample	Lab Work Complete
4	11/20/2011	40010	Traps - Mosquitoes	3	Doe		<input checked="" type="checkbox"/>	<input type="checkbox"/>

Below this table is a 'Counts' section with a table:

ID	Date	Employee	Species Code	Eggs	1st-2nd	3rd-4th	Pupae	Trap Type	Adult Females	Adult Males	Notes	Delete
3	11/20/2011	Doe	11	0	0	0	0	CO2	14	0		<input type="checkbox"/>
4	11/20/2011	Doe	6	0	3	0	0	CO2	4	0		<input type="checkbox"/>
5	11/20/2011	Doe	4	2	0	5	0	CO2	2	0		<input type="checkbox"/>

At the bottom, there is a 'Tests' section with a table:

ID	Date	Employee	Test Type	Test Method	Species Code	Size	Date Complete	Test Results	Agent Code	Outside Lab	Notes	Delete
*	11/29/2011	Doe	Pool	Unknown	0	0		Pending				<input type="checkbox"/>

Overlaid on the right is a 'Block Details' dialog box for 'Industrial West' with the following fields:

- Area Name: Industrial West
- Treatment Plan
- Activity: Aerial Adulticiding
- Status: Pending
- Scheduled Time: November 29, 2011, 01:00 AM
- Comments: Application is scheduled between 8:00pm - 2 am.

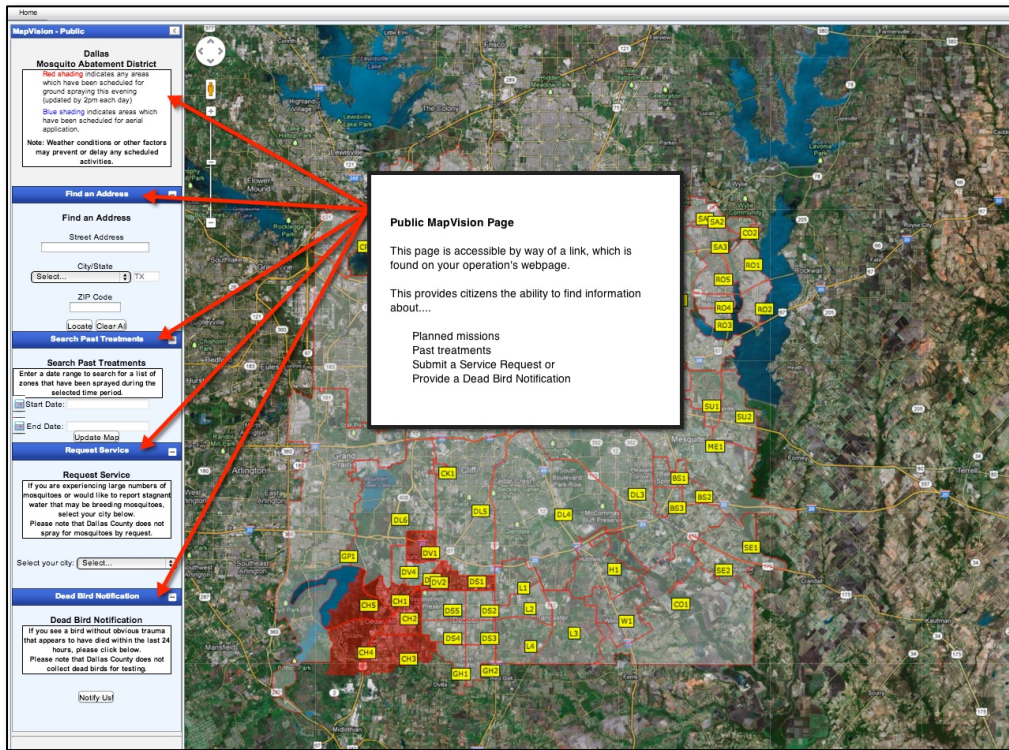
- When aerial operations are required, **MapVision**[®] provide Pilots the ability to edit, organize, modify and redraw Polygons while preserving original data on **MapVision**[®]
- **MapVision**[®] Internet Web-based System Requirements (BCMC external/public **MapVision**[®] website):
 - BCMC's external/public **MapVision**[®]'s website will provide the general public and BCMC the ability to:
 - View proposed aerial adulticiding spray block(s) projected over digital satellite maps¹
 - View proposed aerial larvaciding spray blocks(s) projected over digital satellite maps¹
 - View proposed ground spray area(s) projected over digital satellite maps¹
 - View post-mission adulticiding flight paths over digital satellite maps¹
 - View post-mission larvaciding flight paths over digital satellite maps¹
 - View post mission truck adulticiding treatments
 - BCMC will define what data is available for public viewing from recordings, such as:
 - Finding an Address
 - Viewing Treatments over a defined date range

- Submitting Service Request
- Notifying BCMCCD of Dead Bird locations
- The **MapVision**[®] internet website will provide the general public the function to enter their specific address to:
 - Display their physical location relative to scheduled ground and aerial adulticiding and larvaciding treatments
 - Display their address location relative to historical ground and aerial adulticiding and larvaciding treatments
 - Submit service requests
 - Zoom into specific locations of digital satellite and or animated maps
 - Zoom out from digital and or animated maps
 - View maps as digital, animated or combined overlay
 - Pan map using curser hand

Feature:

Public accessible service request submittal automatically viewed by supervisor; automatically dispatch to field (shows up on map) once approved

The image below illustrates the Public **MapVision**® site, which features several options for citizens to include:



Find an Address

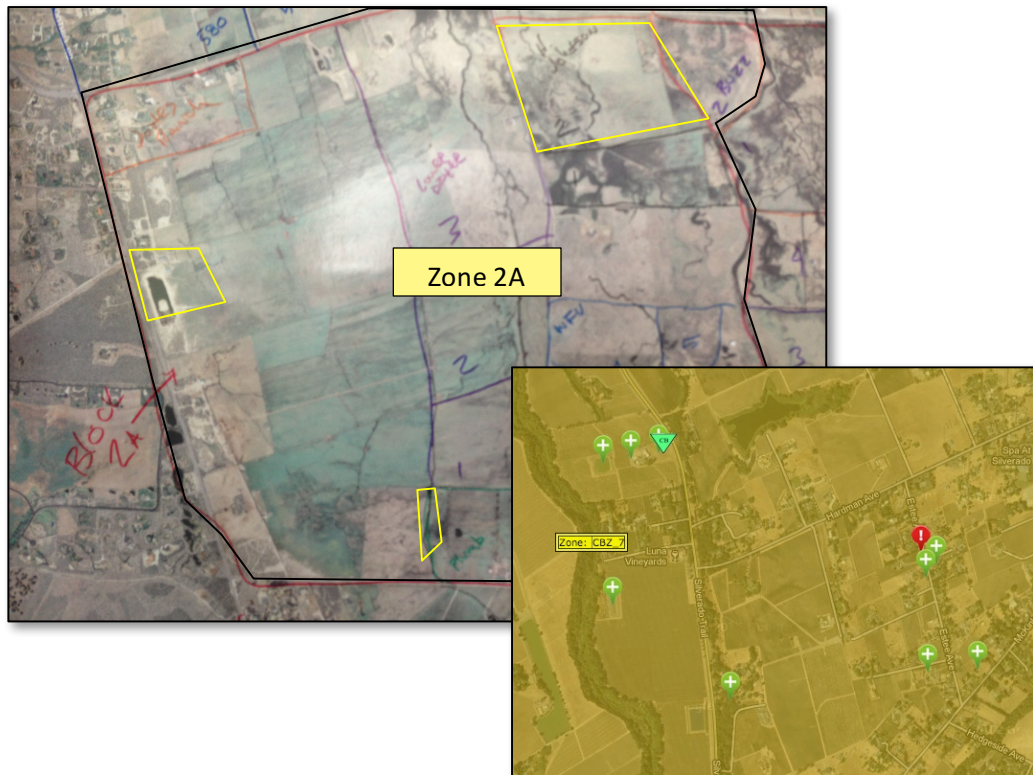
- View Treatments-current and past
- Submit Service Requests
- Dead Bird Notification
- View in Spanish or English (optional)

16. Web-site entry of service request straight into database and maps (with supervisor review first)

17. Location and activities performed as part of a service request gets associated with the service request (this could be addressed with optional user-defined location groupings, described below)

Please see Service Request section for additional information regarding features 16 and 17.

Source Management for BCMC:



Utilizing the unique ability to create Sources within these Zones, **MapVision**® provides the ability to record and monitor treatments and activities to include identification of Waters of the US and any NPDES monitoring issues.

Leading Edge will provide the ability to create and identify Sources in any geographic area as a Zone. Within this zone surveillance data, such as traps, dips, LRC, visual observation, etc. will help determine treatment response strategies such as inspection, ground or aerial treatments, source reduction, or granular applications may be needed by way of an ATV or by air, thus multiple smaller temporary blocks could be drawn to identify this treatment as illustrated by the yellow blocks. Additionally, the zone may require numerous “spot” treatments for “bull holes”, treated with briquettes.

All treatments within this zone will be tracked by the Activity Card, which will identify all actions associated with this Zone or Source to include, but not limited to:

- Date
- Zone
- Technician
- Action (Specific Activity such as inspection, treatment, etc.)
- Equipment Used
- Material used
- Amount of time and material
- Units, Acres, spots, SF, Linear feet, etc.
- Dips
- Samples taken
- Species identified
- Larval counts
- Weather conditions
- NPDES
- Ground Treatment polygon creation
- Etc.

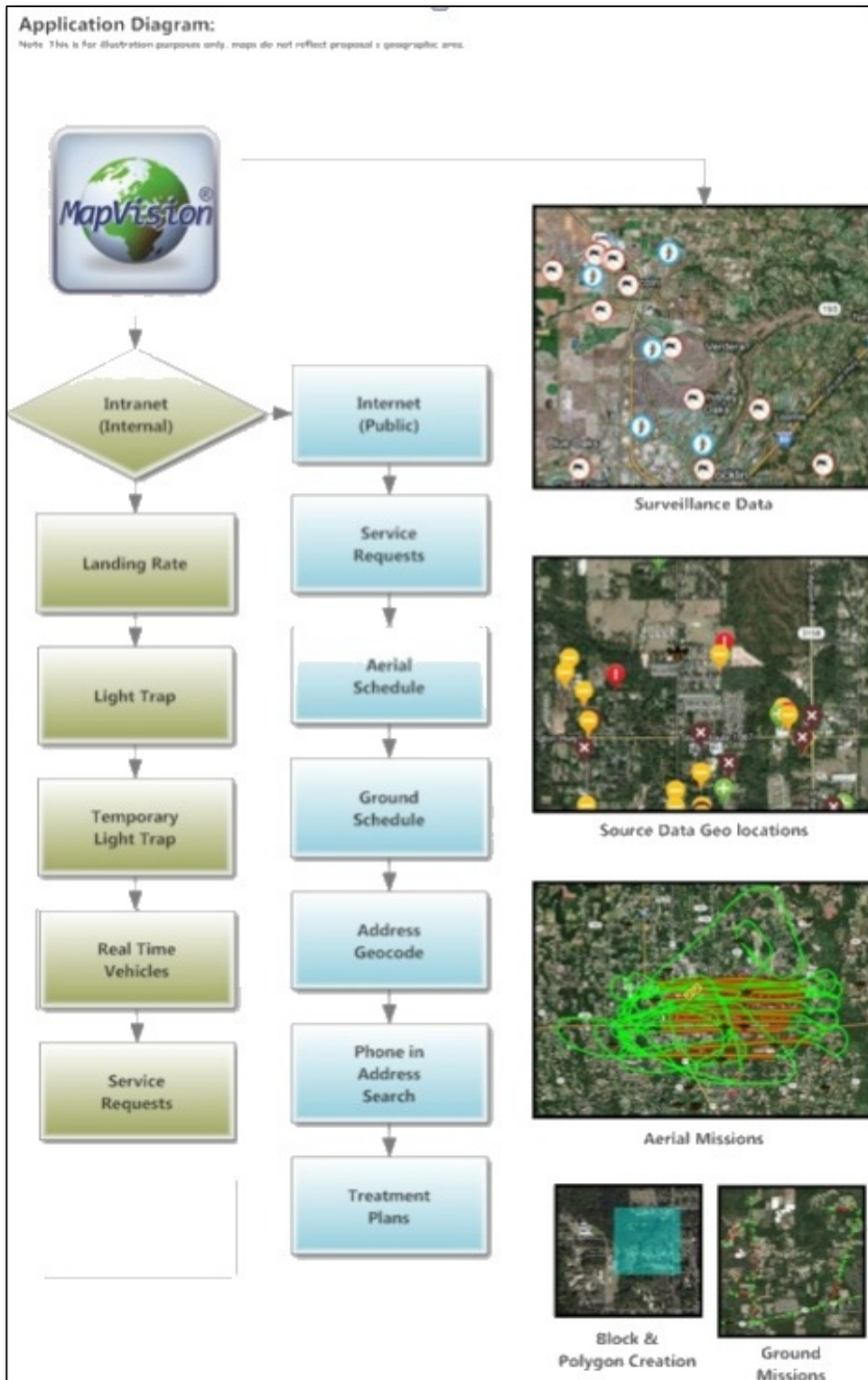
This data will be included in any potential reports in which **BCMC** determines are applicable to their system, to include NPDES reporting, state, local, operational and managerial reports if required.

Leading Edge provides several users input forms available on line and offline while in the field or office to include but not limited to:

- Activity Card
- Service Request
- Source Details
- Trap Counts
- Larval identification and counts
- Lab Testing results

Leading Edge provides numerous error traps and messages to the user to ensure accurate information is being selected and entered.

Application Diagram:





MapVision® Data Management System

The **MapVision® Data Management System** will contain all the needed logical, design choices and physical storage parameters needed to generate storage tables and thus a foundation that will create reports and queries. Some of the features will include, but not limited to the following:

- Data entry, updates and deletions
- Data retrieval, summarization

The formulation of this design will be predicated on an understanding of your current and desired data collection process, input process and report generating capabilities. These will be enhanced base on your needs and our discussion.

The **MapVision® Data Management System** is designed to consolidate **BCMC's** current database collection from sources such as; VCMS, Excel, MS Assess and Shape file(s) to name a few.

Leading Edge Associates, will provide BCMC a new relational database using a collection of tables (called relations) to represent both data and the relationships among this data. **MapVision®** Data Management System provides numerous advantages: Web-based, stability, remote access, data structure, authorization control, processing speed, modular development, and independent back-up functionality. Additional advantages include:

- Remote Login from other PC's, laptops, home and or office.
- Accuracy, Compact and Flexible
- Mobility
- All sources referenced by technicians based on GPS site location (reduces entry errors)
- Sharing of information, web-based, Cloud computing
- Provides monitoring via an Administrator
- Security & Redundancy
- Reporting Capabilities

The information in BCMC's database will be stored on an independent, third party server with **MapVision®** as described above.

Accessing and Retrieving Data – Accessing desired records from BCMC's database though the use of Indices, which are data structures that permit more efficient access of records, will provide an efficient means of retrieving data. An index is built on one or more attributes of a relation; such attributes constitute the search key. Given a value for each of the search-key attributes, the index structure can be used to retrieve records with the specified search-key values quickly.

Data Entry Forms – BCMC's **MapVision®** Data Management System will include **Data Entry Forms** to allow data entry from remote and office computer locations and provide documentation of data entry.



Data Retrieval and Reporting: - Data manipulation is the retrieval, insertion, deletion, and modification of information stored in the database. A query is a statement requesting the retrieval of information. The portion of a data-manipulation language that involves information retrieval is called a query language. Leading Edge will deploy SQL for both data-definition and data-manipulation functions and queries. SQL provides a complete data-definition language, including the ability to create relations with specified attribute types, and the ability to define integrity constraints on the data.

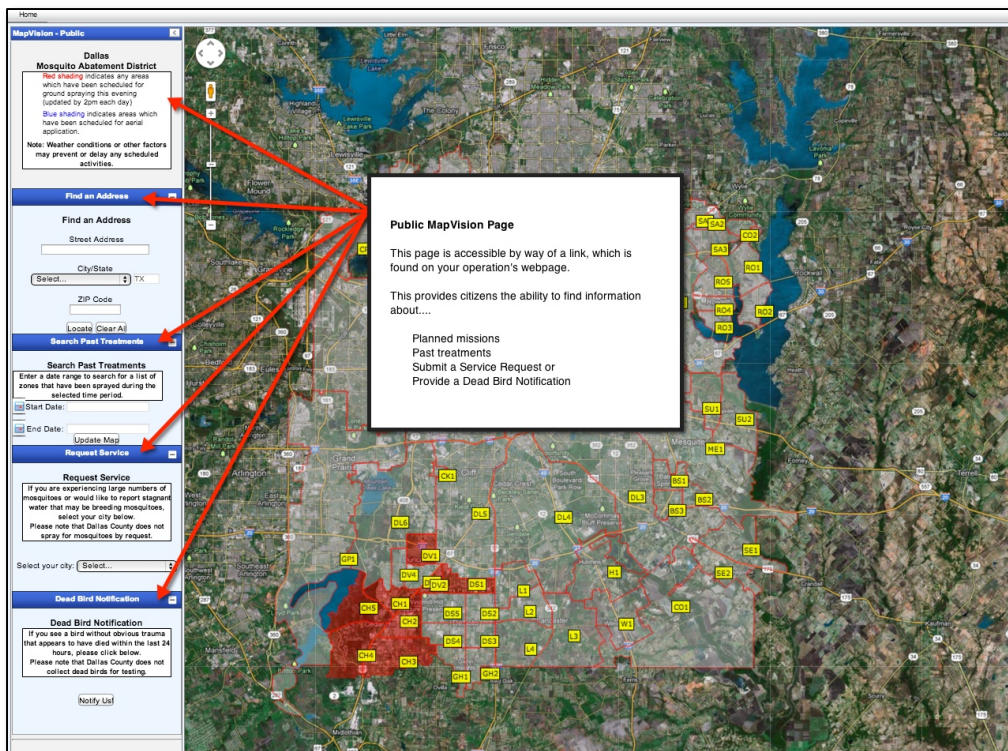
Forms interfaces – Forms will present a screen view that looks like a form, with fields to be filled in by users. Some of the fields may be filled automatically by the forms system. Report writers permit report formats to be defined, along with queries to fetch data from the database; the results of the queries are shown formatted in the report.

MapVision® Real-Time Service Request System

Feature:

- Public accessible service request submittal, automatically viewed by supervisor; automatically dispatch to field (shows up on map) once approved

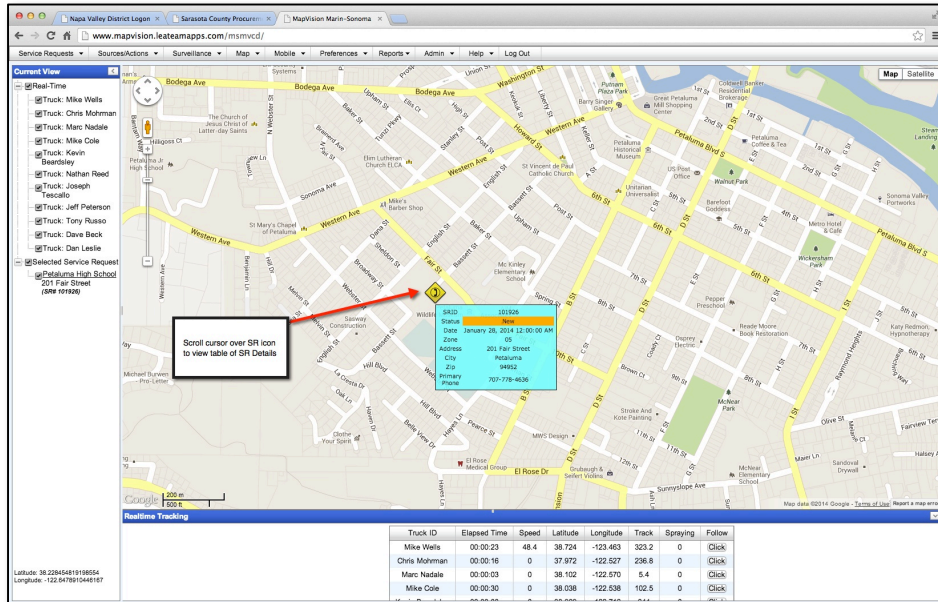
Leading Edge will establish a link on **BCMC's** website providing citizen's the opportunity to view treatments for both ground and aerial missions. This transparency will be determined by **BCMC's** administration prior to implementation. Below is an example of a current customers Public **MapVision®** website.



- Web-site entry of service request straight into database and maps (with supervisor review first)

Citizen's can select a number of features on the Public Page, which **BCMC** will define with the help of Leading Edge to include providing citizens to complete and submit a Service Request. Below illustrates the Service Request Entry form. Once citizens submit SR form, it will be placed in an administrative

Once submitted, the Service Request will be posted to the database, mapped and held in a query for administration or supervisor review. Upon acceptance of the Service Request, it will be automatically sent to the field to the zone and or Technician responsible.



Should a citizen call to report a Service Request, the Service Request can be taken and posted internally following the same process. Historical information/notes are preserved for the service request citizen and or source/sources associated with the service request.

Service Request Details

SRID: 101926
 Taken By: Paula
 Request Date: January 28, 2014
 Assigned To: Trisciuzzi, Angelo (Tony)
 Request Status: New

Customer Details:
 Name: Petaluma High School
 Pri. Phone: 707-778-4636
 Alt. Phone:
 Service address is not the Customer's location.
 Please send Email notifications.
 I wish to remain anonymous.

Service Location:
 LocID: 105993
 Address: 201 Fair Street
 City: Petaluma State: CA
 Zipcode: 94952 County: Sonoma
 CrossStreet: English Street Zone: 05
 Latitude: 38.2280053 Longitude: -122.64751739999997

Service Requested:
 Mosquito Yellowjacket Rodent Fish
 Dog Status:
 Card of Finding
 Completed Request

SR Notes | SR Action History | Mosquitoes | Yellowjackets | Rodents | Fish

Date	SRID	Employee	Comments
January 28, 2014	101926	Paula, Delsid	Loretta works for the Petaluma City Schools Maintenance Dept. She called in about a pond at the high school with larvae in it, she said when you get to the school check in at the office and someone will show you where the pond is.

Add Note Entry: Add Notes Entry

17. Location and activities performed as part of a service request gets associated with the service request (this could be addressed with optional user-defined location groupings, described below)

Any activities or Source (location) actions will be recorded through the Technician’s Activity Card and associated with the Service Request or Source.

Below is a line item time card entry for a service request. The following image is the details and actions the technician performed for this service request

	14SB00SR	03	0	0	AC	0	0.5	RT	NOH checked ponds left note	101894		
--	----------	----	---	---	----	---	-----	----	-----------------------------	------------------------	--	--

Service Request Details

SRID:

Taken By:

Request Date:

Assigned To:

Request Status:

Customer Details:

Service address is not the Customer's location.

Name: Email:

Pri. Phone: Please send Email notifications.

Alt. Phone: I wish to remain anonymous.

Permission Level:

Sources Tied to this SR

14WST0SR

14SB00SR

Service Requested:

Mosquito Yellowjacket Rodent Fish

Dog Status:

Service Location:

LocID:

Address:

City: State:

Zipcode: County:

CrossStreet: Zone:

Latitude: Longitude:

<< first < prev 1 next > last >> Display:

Date	SRID	Employee	Comments
January 10, 2014	101894	Steve, Miller	Spoke with Addie made new pond a source
January 7, 2014	101894	Paula, Delsid	There are three ponds. Two are connected and are uphill and east of the big white house. (Just downhill from small well house next to driveway) The other pond is downhill and nestled into the corner of the big white house. Thanks.

Citizen’s service requests are collected, stored, retrieved and distributed to the field technician in real time within seconds. Technicians can receive and respond to Service Requests in real time or reassign to a technician who is closer to the service request or if the service request is assigned to the wrong technician.

The Application Diagram below details the flow and functionality of the **MapVision**™ Real-Time Service Request System

A- Accessing the **Client’s MapVision**® Internet website, citizens provide their location information and the nature of the problem they are experiencing. This data will match the current service request form used by **BCMC**. Once submitted, **MapVision**® confirms with the citizen that their service request has been received. This is confirmed again to the citizen, as **MapVision**® sends an email to the citizen within 3-5 seconds.

B- The service request data is then displayed internally to **BCMC’s** staff using the **MapVision**® intranet web site. Staff can view the service request over maps or in a



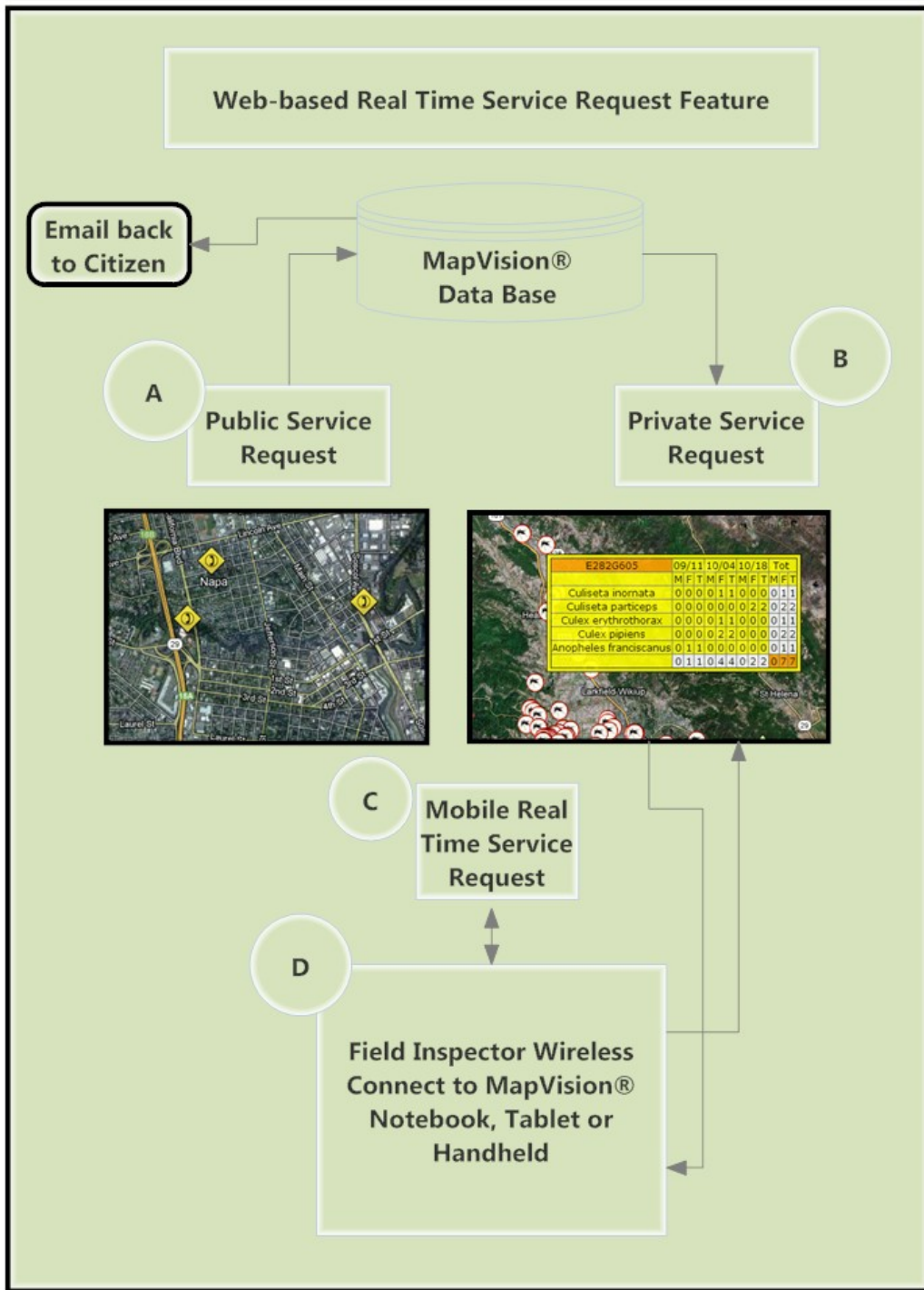
report format. An individual, all or a range of service request can be viewed over **MapVision®** maps.

C- In real-time, once a service request is submitted by citizens, the service request is distributed to a field inspector in the field. At this time, the Administer can review, approve and assign the SR.

D- Once the field inspector responds to the service request and completes the service request, the associated data is automatically updated on the **MapVision®** site.

Note: Excludes all hardware cost associated with mobile computers, broadband equipment and service

Application Diagram:



MapVision® Reports

Solution: To provide a customized, efficient, single source of data to compile and populate required regulatory forms for submission to various agencies to include state, federal and local governments if applicable.

The reports below are examples of the YTD and single month Trap Summary. (This can also be viewed as a Daily Trap Report) These are populated by the Lab and are available to administrators and technicians. Both reports reflect the genus, species, male/female and totals.

Trap Summary for -- Any																																			
Year Totals																																			
Month	AEDES					ANOPHELES			COQ	CUL	CULEX						MAN	PSOROPHORA				URANOTAENI		Other		TOTAL									
	Albopictus		ATL	SOLL	TRI	VEX	CRU	QUAD	PERT	INOR	ERRA	NIGR	QUINK	REST	SAL	TAR	TIT	CIL	COL	FER	HOW	SAPP		F	M	F	M	F	M	T					
	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	T				
January																															0	0	0		
February																															0	0	0		
March																															0	0	0		
April																															0	0	0		
May																															0	0	0		
June																															0	0	0		
July																															0	0	0		
August																															0	0	0		
September	178	57			24	1		136	31	130	15	120	0	1163	0																	5935	1080	7015	
October																																0	0	0	
November																																0	0	0	
December																																0	0	0	
TOTALS	178	57	0	0	24	1	0	0	136	31	130	15	120	0	1163	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5935	1080	7015

September																																						
Date	Source	AEDES					ANOPHELES			COQ	CUL	CULEX						MAN	PSOROPHORA				URANOTAENI		Other		TOTAL											
		Albopictus		ATL	SOLL	TRI	VEX	CRU	QUAD	PERT	INOR	ERRA	NIGR	QUINK	REST	SAL	TAR	TIT	CIL	COL	FER	HOW	SAPP		F	M	F	M	F	M	F	M	T					
		F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	T				
2013-09-23	Bayou D'Inde	0	0	0	0	0	0	0	0	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	4	48	
2013-09-23	Carlys	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	0	21
2013-09-23	Choupique Bayou	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	14	
2013-09-23	DeQuincy	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	3	31	
2013-09-23	Edgeth	0	0	0	0	0	0	0	0	4	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	10	71
2013-09-23	Gross Road	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	8	23	
2013-09-23	Houston River	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	
2013-09-23	Moss Lake	0	0	0	0	2	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136	6	142	
2013-09-23	N Toomey	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	

MapVision® provides three report methods, which will meet additional potential Feature Requirements requested. Additionally, it should be noted that many queries resulting in a tabular presentation could be downloaded as a CSV file and or printed as a PDF.

- Custom Reports
- Static Reports
- Report Writer (web-hosted or desktop solution)



MapVision® Custom Reporting provides a unique set of filters or desired search criteria for custom report generation in PDF format. The image below provides the user the ability to produce custom reports based on 15 filter criteria.



NOTICE: Your browser may have default settings preventing images and background colors from displaying correctly.
Check your browser's print settings or options to ensure proper printing.

Preset Configurations

0480 Report NSD-OL Report Reset All

Past Week

March 22, 2013  

March 29, 2013  

Filter Employee

Show All Employees
Acker
Admin
Alynn
Ambroselli

Filter Material

(0)
(22) Agnique MMFG
(39) Agnique MMFG
(15) Altosid Pellets
(3) Altosid Briquets (small)

Report Options

Report Mode:

Group Materials By:

Filter Billed:

Display Billed-Status Column

Display Action Column

Display Zone Column

Filter SourceID

Filter CropCode

(0) Admin/Special
(21) Pasture
(22) Dredge Pond
(30) Pasture, Irr (Waste Water)
(32) Pasture, Irr (Treated Water)

Filter OL

000
001
003
004
006

Filter Zone

0
00
01

Filter Action Codes

(01) General Surv.
(02) Source Inspection
(03) Service Request
(04) Larviciding
(05) Adulthooding

Filter County

Marin
Sonoma


Filter City

-- SELECT --
Agua Caliente
Annapolis

Report Top Area

Text Editing Tools

Font Name and Size: Arial 12 Font Style: B I U A_x A^x Undo/Redo Alignment Paragraph Style: Normal Indenting and Lists

Insert Item 

Create Report

Other examples of reports include Materials and Equipment List.

Report Examples:

Material List

[Return to main map](#)
[View a printable version](#)

[Add a Material](#)

<< first < prev 1 next > last >>

MaterialID	Description	Quantity	UnitOfMeasure	Group	Max Rate	MinRate	RN	Report	Visible	Residual	Auto Fill	Manufacturer
5	Agnique	-1	GAL	LV	1000	0.001	2302-14	1	1	10	GAL	Cognis Corporation
6	Altosid Liquid Larvicide	-4	GAL	LV	1000	0.001	2724-392	1	1	5	GAL	Wellmark International
7	Altosid Briquets	-104	EA	LV	1000	0.001	2724-375	1	1	30	EA	Wellmark International
8	Altosid Pellets	-81.500625	LB	LV	1000	1	2724-448	1	1	10	LB	Wellmark International
9	Altosid XR Briquets	-9	EA	LV	1000	0.001	2724-421	1	1	150	EA	Wellmark International
10	Anvil 10 10	0	GAL	AD	1000	0.0001	1021-1688-8329	1	1	10	GAL	Clarke
11	BioMist 31-66	0	GAL	AD	1000	0.0001	8239-43	1	1	1	LB	Bayer Environmental Science
12	CocoBear	-5	GAL	LV	1000	0.0001	8329-93	1	1	10	GAL	Clarke
13	Fourstar 90 Day	-22	EA	LV	1	1	83362-3	1	1	90	EA	Fourstar Microbials LLC
14	Dibrom	-5.35	GAL	AD	1000	0.0001	5481-480	1	1	1	GAL	AMVAC
15	Natural XRT	0	EA	LV	1000	0.0001	8329-84	1	1	120	EA	Clarke
16	Mosquitomist Two	0	GAL	AD	1000	0.0001	8329-18	1	1	1	GAL	Clarke
17	Permanone 10EC	0	GAL	AD	1000	0.0001	432-1132	1	1	10	GAL	Bayer Environmental Science
18	Permanone 31-66	0	GAL	AD	1000	0.0001	432-1250	1	1	1	GAL	Bayer Environmental Science
19	Suspend SC	0	GAL	AD	1000	0.0001	432-763	1	1	30	GAL	Bayer Environmental Science
20	Scourage 18% 54%	-12	GAL	AD	1000	0.0001	432-716	1	1	1	GAL	Bayer Environmental Science
21	Vectobac 12AS	-5	GAL	LV	1000	0.0001	73049-38	1	1	5	GAL	Valent BioSciences Corporation
22	Vectobac G	0	LB	LV	1000	1	73049-10	1	1	7	LB	Valent BioSciences Corporation
23	Kontrol Mosquito Larvicide	-0.10359375	GAL	LV	1000	0.0001	43748-10	1	1	7	GAL	Masterline
24	Vectobac WDG	0	LB	LV	1000	0.0001	73049-56	1	1	7	LB	Valent BioSciences Corporation
25	Vectolax CG	0	LB	LV	1000	0.0001	73049-20	1	1	7	LB	Valent BioSciences Corporation
26	Vectolax WDG	0	LB	LV	1000	0.0001	73049-57	1	1	14	LB	Valent BioSciences Corporation
27	VectoMax CG	0	LB	LV	1000	0.0001	73049-429	1	1	10	LB	Valent BioSciences Corporation
28	AquaResin	-5.5	GAL	AD	1000	0.0001	2724-786	1	1	1	GAL	Bayer Environmental Science
29	Zenivex E4	987.957	GAL	AD	1000	0.0001	2724-907	1	1	1	GAL	Wellmark International
30	Duet	-1.0168125	GAL	AD	1000	0.0001	1021-1795-8329	1	1	1	GAL	Clarke
32	Aqualuer 20-20	0	GAL	AD	1000	0.0001	769-985	1	1	1	GAL	All Pro
33	test material	0	gal	AV	1000	0.001		0	1	11	gal	wellmarks

<< first < prev 1 next > last >>

Generally, any query of the system will produce a data table, which has filters and both a CSV and PDF buttons for creating and printing the table. For example, below you will find a Service Request query.

Service Requests (56 Total Records)

Filter selections: Past 2 Years (January 1, 2013 - January 31, 2014)

Filter SR-Status: Open, Closed

Request Type: Show All, Mosquito, Special-Event, Other

Filter technician response: Any


Report Buttons: CSV/PDF

Display: 10 | Show/Hide Total Records: 56

RequestDate	SRID	Last	First	Address	Zone	City	Pri. Phone	Assigned To	Technician Completed	Status	M	S	O	LastModified
1/6/2014	89	Merwin	Laura	4711 Cedar Creek Circle	SA3	Sachse	972-998-9139		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-07 16:15:49
1/1/2014	88	Wilson	Roberta	414 Pogue St	CH2	Cedar Hill	972-291-2700		<input type="checkbox"/>	Open	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-07 16:06:10
11/6/2013	87	Pick	Chris	3900 Main St	RO4	Rowlett	214-235-5685		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2013-11-15 21:41:10
10/4/2013	65	King	Sherin	431 W. Wintergreen	DS1	DeSoto	9727809777		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2013-11-15 21:42:03
9/17/2013	63	Anonymous	Anonymous	156 Cochran	ME1	Mesquite			<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:56:49
9/13/2013	62	Harrington	Patricia	9919 Newheart	DS1	Dallas	817-404-8503		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2013-11-14 19:35:31
8/23/2013	60	Hall	Kevin	1008 Highview Rd	W1	Hutchins	214-601-2768		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:55:55
8/21/2013	59	Scott	Michelle	1245 Shoreline Drive	DS3	DeSoto	972-223-8031		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:55:09
8/21/2013	61	Ingram	Sidney	9310 Westfield dr	RO2	Rowlett	940-453-6446		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:56:20
8/14/2013	57	Hudgin	Karen	822 Cherlyne	CH5	Cedar Hill	9722912091		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:54:38

CSV/PDF << first < prev 1 2 3 4 5 6 next > last >> | Display: 10 | Show/Hide Total Records: 56

By clicking on the PDF button on the above illustration, a PDF will be created for Service Requests.



Service Requests

Created: 01/31/14

RequestDate	SRID	Last	First	Address	Zone	City	Pri. Phone	Assigned Technician To	Technician Completed	Status	M	S	O	LastModified
1/6/2014	89	Merwin	Laura	4711 Cedar Creek Circle	SA3	Sachse	972-998-9139		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-07 16:15:49
1/1/2014	88	Wilson	Roberta	414 Pogue St	CH2	Cedar Hill	972-291-2700		<input type="checkbox"/>	Open	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-07 16:06:10
11/8/2013	87	Pick	Chris	3900 Main St	RO4	Rowlett	214-235-5685		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2013-11-15 21:41:10
10/4/2013	65	King	Sherin	431 W. Wintergreen	DS1	DeSoto	9727809777		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2013-11-15 21:42:03
9/17/2013	63	Anonymous	Anonymous	156 Cochran	ME1	Mesquite			<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:56:49
9/13/2013	62	Harrington	Patricia	9919 Newheart	DS1	Dallas	817-404-8503		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2013-11-14 19:35:31
8/23/2013	60	Hall	Kevin	1008 Highview Rd	W1	Hutchins	214-601-2768		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:55:55
8/21/2013	59	Scott	Michelle	1245 Shoreline Drive	DS3	DeSoto	972-223-8031		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:55:09
8/21/2013	61	Ingram	Sidney	9310 Westfield dr	RO2	Rowlett	940-453-6446		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:56:20
8/14/2013	57	Hudgin	Karen	822 Cherlyne	CH5	Cedar Hill	9722912091		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:54:38
8/12/2013	52	Nightingale	Diana	6102 Faringdon Lane	RO5	Rowlett	214-755-0531		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2013-11-14 19:43:36
8/12/2013	56	Hardcastle	Brian	428 Ramblewood Circle	DS2	DeSoto	972-230-5469		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2013-11-14 19:46:03
8/12/2013	66	LILES	BRANDI	11303 SEAGOVILLE	BS3	Balch Springs	2147553628		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:58:09
8/8/2013	55	Hoffman	Sandy	4910 Petersburg Dr	RO3	Rowlett	214-661-8000		<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2014-01-03 14:54:08



MapVision® Mobile and SprayVision™

Feature:

Robust real-time update of data; back up cache when cell phone connectivity not available; auto-synchronization when re-connected.

MapVision® Mobile is used when technicians are in excellent, poor or no cellular coverage areas. **MapVision® Mobile** runs in the background at all times, providing the technician 100% access to data and application features when disconnected from the cellular network.

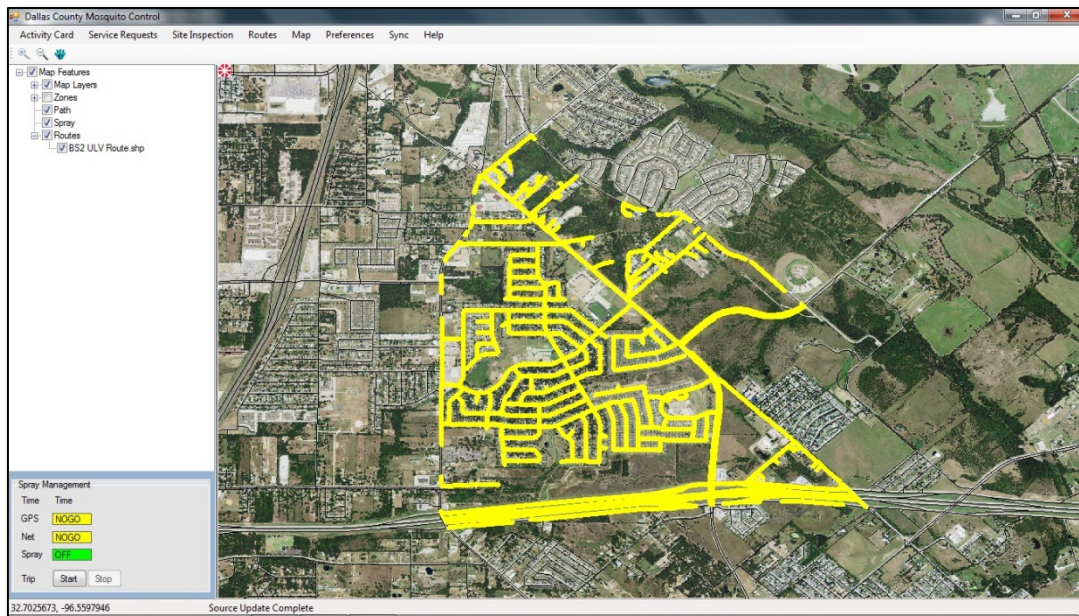
The database table replication is performed using a robust and very successful proprietary last changed validation and synchronization logic to replicate all data for each and every table.

The user interface is seamless, meaning there is no requirement to perform any kind of manual synchronization process. If **MapVision® Mobile** is not connected to the Internet due to no available cellular connectivity, data sets are stored locally on the client system. The validation and synchronization process automatically monitors both the connectivity status and quality of connection and performs synchronization autonomously when connectivity is automatically reestablished.

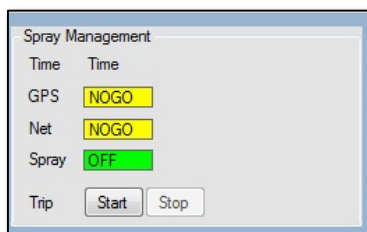
1. Real-or near real time connectivity to the **MapVision®** Core and Data Management System
2. Real-or near real time data-exchange for retrieving data sets associated with all aspects of vector control operations such as field activities and actions, source inspections, service requests, historical data, etc.
3. Real-or near real time data collection associated with all vector control operations performed by field technicians
4. Real-or near real time retrieval and addition of data collection to and from the **MapVision®** Data Management System
5. Post mission replay of asset tracking of land or marine based vessels that includes both Pre and Post data
 - a. Time
 - b. Date
 - c. Ground speed
 - d. Direction
 - e. Heading
 - f. Spray switch status

Mobile systems' Route Editor

Creating adulticiding or larvaciding routes is performed using the **MapVision®** Mobile Route Editor. Users can create routes based on zones, polygons or a “lasso” method that provides the user the ability to draw custom shaped areas. The streets that are captured within these areas produce a yellow street route that is seamlessly loaded to each MapVision system mobile computer.

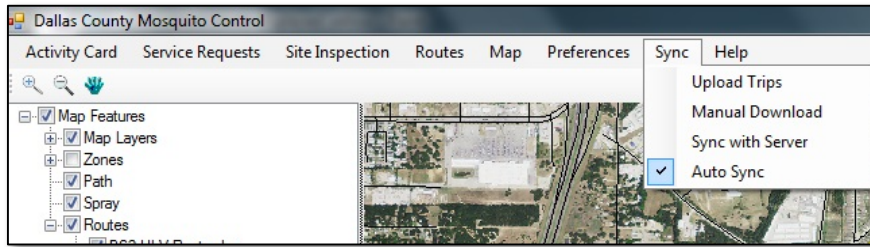
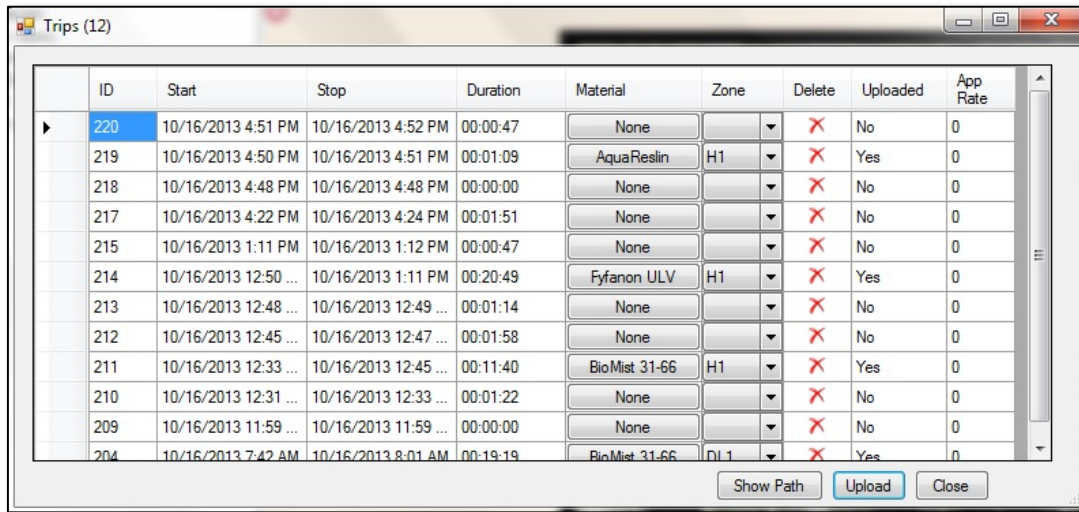


Located in the lower left corner of the navigation panel is the Spray Management Form which provides the user a real time status of the system.



Uploading Sprayed Route Treatments

Spray route treatments can be uploaded manually or automatically through the **MapVision®** proprietary synchronization process. Below are a few of the screen shots for uploading treatment trips.

ID	Start	Stop	Duration	Material	Zone	Delete	Uploaded	App Rate
220	10/16/2013 4:51 PM	10/16/2013 4:52 PM	00:00:47	None		X	No	0
219	10/16/2013 4:50 PM	10/16/2013 4:51 PM	00:01:09	AquaReslin	H1	X	Yes	0
218	10/16/2013 4:48 PM	10/16/2013 4:48 PM	00:00:00	None		X	No	0
217	10/16/2013 4:22 PM	10/16/2013 4:24 PM	00:01:51	None		X	No	0
215	10/16/2013 1:11 PM	10/16/2013 1:12 PM	00:00:47	None		X	No	0
214	10/16/2013 12:50 ...	10/16/2013 1:11 PM	00:20:49	Fyfanon ULV	H1	X	Yes	0
213	10/16/2013 12:48 ...	10/16/2013 12:49 ...	00:01:14	None		X	No	0
212	10/16/2013 12:45 ...	10/16/2013 12:47 ...	00:01:58	None		X	No	0
211	10/16/2013 12:33 ...	10/16/2013 12:45 ...	00:11:40	BioMist 31-66	H1	X	Yes	0
210	10/16/2013 12:31 ...	10/16/2013 12:33 ...	00:01:22	None		X	No	0
209	10/16/2013 11:59 ...	10/16/2013 11:59 ...	00:00:00	None		X	No	0
204	10/16/2013 7:42 AM	10/16/2013 8:01 AM	00:19:19	BioMist 31-66	DI 1	X	Yes	0

To select multiple TRIPS, select the Zone for each trip and highlight multiple rows. Click **UPLOAD**. A message will confirm the successful upload of the Trips.

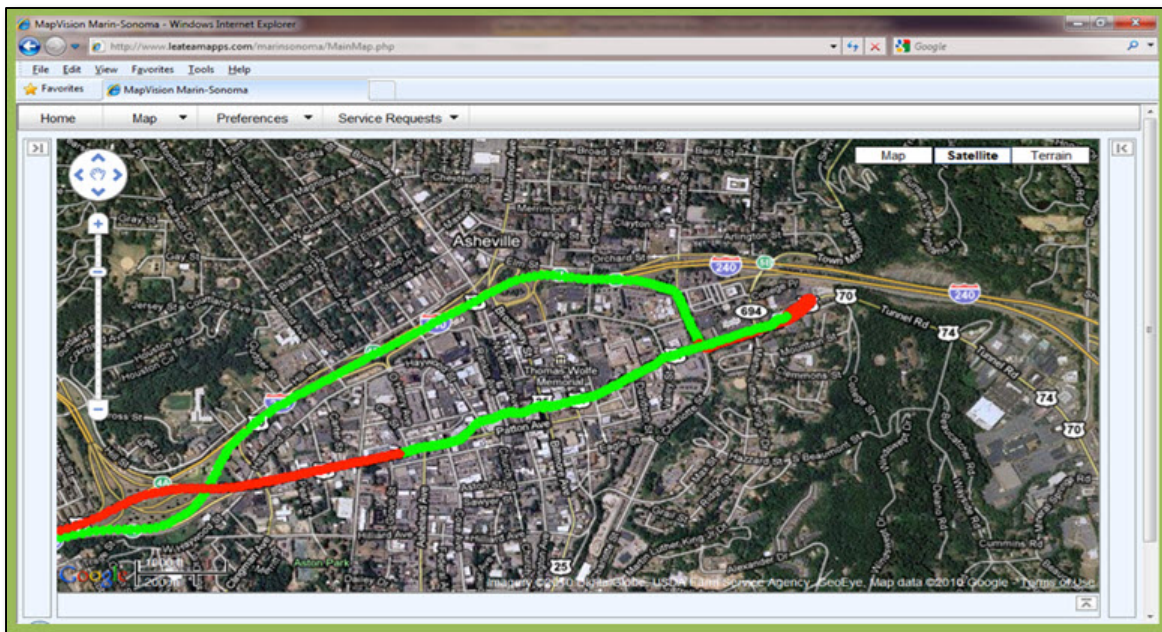
Displaying Previously Sprayed Route

If a Route is partially treated one night, that treated route can be **LOADED** on the map so the technician can begin treating the Route the next evening or later in an evening by **Select SYNC>UPLOAD TRIPS>** Select the Trip by clicking on the row (highlight in blue) and click on **LOAD**. The **RED** and **GREEN** snail trails of the treated route will be displayed on the map. You can now continue treating where the prior technician left off.

ID	Start	Stop	Duration	Material	Zone	Delete	Uploaded	App Rate
220	10/16/2013 4:51 PM	10/16/2013 4:52 PM	00:00:47	None			No	0
219	10/16/2013 4:50 PM	10/16/2013 4:51 PM	00:01:09	AquaReslin	H1		Yes	0
218	10/16/2013 4:48 PM	10/16/2013 4:48 PM	00:00:00	None			No	0
217	10/16/2013 4:22 PM	10/16/2013 4:24 PM	00:01:51	None			No	0
215	10/16/2013 1:11 PM	10/16/2013 1:12 PM	00:00:47	None			No	0
214	10/16/2013 12:50 ...	10/16/2013 1:11 PM	00:20:49	Fyfanon ULV	H1		Yes	0
213	10/16/2013 12:48 ...	10/16/2013 12:49 ...	00:01:14	None			No	0
212	10/16/2013 12:45 ...	10/16/2013 12:47 ...	00:01:58	None			No	0
211	10/16/2013 12:33 ...	10/16/2013 12:45 ...	00:11:40	BioMist 31-66	H1		Yes	0
210	10/16/2013 12:31 ...	10/16/2013 12:33 ...	00:01:22	None			No	0
209	10/16/2013 11:59 ...	10/16/2013 11:59 ...	00:00:00	None			No	0
204	10/16/2013 7:42 AM	10/16/2013 8:01 AM	00:19:19	BioMist 31-66	DI 1		Yes	0

Buttons: Show Path, Upload, Close

After a treatment has been uploaded, the **MapVision®** system displays the treatment as depicted below:





SprayVision™ GPS

Leading Edge's SprayVision™ GPS is designed to integrate with a portable computer with connectivity through the type 2 high-speed USB port. SprayVision™ GPS incorporates a highly accurate WASS GPS receiver, producing a data stream of precise geographic coordinates, speed, heading, time, date and the spray status (on/off).

SprayVision™ GPS is manufactured using integrated circuit boards and packaged in a high impact plastic enclosure. SprayVision™ GPS is typically installed under the vehicles dashboard or seat.

An Example of real time connectivity

A-The field technician is wirelessly connected to **MapVision®** through **MapVision® Mobile** using a laptop or tablet touch screen PC. All data associated with field data collections, historical inspections, treatments, service request are accessible in real-time. Below is a field technician's time card where all activities, products applied, lab results, equipment used, source details, server requests and historical activity is accessed and updated in real-time.

The screenshot shows a web-based application interface for recording field activities. The main window is titled "Action Details" and is overlaid on a satellite map. The form contains the following fields and sections:

- ActionID:** -1
- Date:** July 23, 2013
- Employee:** Mapvision, Admin
- Start:** 09 : 41 : AM
- End:** 09 : 41 : AM
- Material:** N/A
- Amount:** 0.0
- Area treated:** SQ
- Larval Surveillance:**
 - Dips: 0
 - Avg. larvae/dip: 0.000
 - Sample taken:
 - Stages found: Eggs Instar1 Instar2 Pupae Instar3 Instar4
- Adult Surveillance:**
 - Max landing rate: N/A
 - Types found:
- Rain Collection:**
 - Amount: N/A in
- Equipment Used:**
- Notes:**

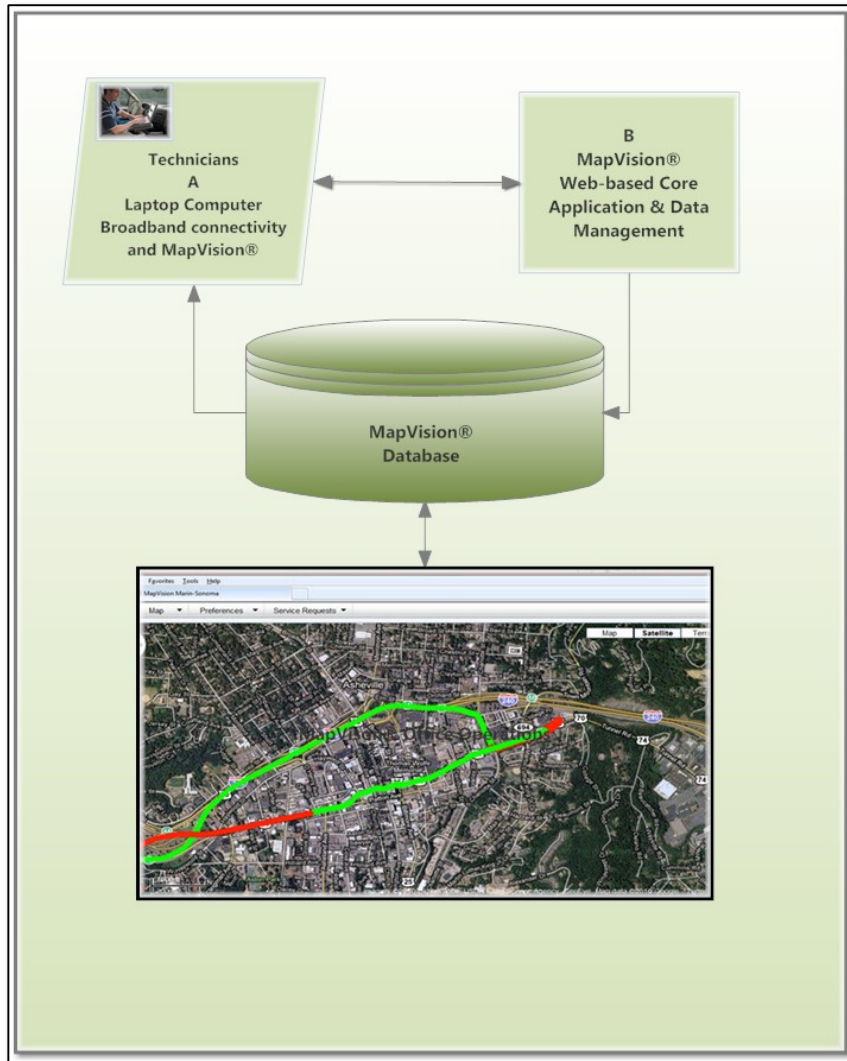
At the bottom right of the form are "Save" and "Cancel" buttons.

B- MapVision® is a web-based application providing unlimited features and data access for the internal operations, public access to time critical information and the security and economy of data preservation.

In this application diagram, **MapVision® Mobile** application is accessing in real-time data sets that are hosted on the **MapVision®** website. An inspector is accessing historical data associated with a source

inspection in the field and updating the activities they have performed. The inspector visibly sees his location relative to the inspection site and simply clicks on the site to begin the inspection.

C- MapVision® is displayed in the operations center in the office; however, **MapVision®** can be accessed through password protection, from any computer with connectivity to the web. This image displays a technicians vehicle in real-time, both the current location and where the historical locations have been.



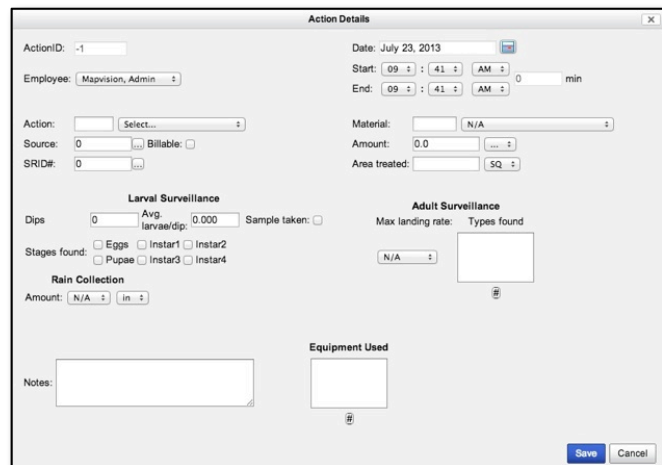
Activity Card - MapVision® provides a unique ability to analyze and optimize resource deployment with a cost or managerial accounting focus and aims to capture a company's costs of production by assessing the input costs of each step of production

- For example, when you create a mission polygon for treatment.... **MapVision®** will calculate the acres, determining the amount and cost of materials, helping to measure and manage your return on investment and efficient use of assets and resources.
- **MapVision®** provides a platform for tracking, measuring and evaluating the performance of your operation.
- Coupled with each operation, **MapVision®** Activity Card records all activities, resources used and results associated with Source locations and activities.
- The input can be sorted by department, team, product, location data and individual productivity by way of the **MapVision®** Activity Card located on **MapVision®** and accessible via the web and or handheld application.
- **MapVision®** provides the ability to measure your investment in specifically designed aerial and ground missions, site data, public service response times, community perception.
- **MapVision®** creates tables and reports based on your defined sorts (i.e. by employee, asset or location for example).

Each entry within an activity card can be customized for a user, such as the time and hours, or rain collection or LRC.

The following illustrates the recording capabilities and functions of the Activity Card:

- Source ID
- Actions
- Materials
- Area Treated
- Amount of Product Used
- Unit of Measure
- Hours
- Vehicle Use
- Dates





Software License & Service, Support and Maintenance Agreement (SSMA):

General Description:

The Software License, Service, Support and Maintenance Agreement (SSMA) will provide updates to application software for compatibility upgrades made by the mapping API and Leading Edge Associates, Inc. Additionally;

- Two-hours each month of phone/email and programming modifications is included in the Service, Support and Maintenance Agreement (SSMA)
- The Agreement will also ensure the use that all software “bugs” and “errors” will be rectified at no additional expense.
- Maintenance program hour time allocations expire monthly and are not rolled-over or accrued to future months.
- Any monthly modifications exceeding the two-hour timeframe, including on-line and telephone support will be billed at \$195.00 per hour.
- Service, Support and Maintenance Agreement (SSMA) also includes all cost associated with website hosting for Internet and intranet sites.

Payment & Terms:

- Leading Edge Associates will provide the services and software described within this proposal at the price and rates provided in the Financial Proposal.
- Payment terms require a 50% payment at the time the proposal is accepted and Purchase Order issued. Remaining balance in equal installments throughout the remainder of the project.
- Upon completion of the project, the Service, Support and Maintenance Agreement (SSMA) will begin and will be billed on a quarterly basis.
- Based on an estimated project start date of **TBD**, the estimated date of completion is **TBD**.
- A detailed timeline will be mutually created along with specific start dates upon acceptance of this proposal.
- Execution of Leading Edge Associates **MapVision**® License Agreement.



Financial Proposal:

Software:

Description	Units	Unit Price	Extended
Please note, this proposal includes a combination of MapVision® Elite and Premier functionality			
MapVision® Website Application Software; <ul style="list-style-type: none"> • Operations, Mapping, Lab, Admin • Real time inventory, • Basic Tier I reporting 	1	\$62,000	\$62,000
Integration of aerial and ground file missions	1	\$5,500	\$5,500
MapVision® Mobile Client based software (ULV, Service Request, tracking and all real time database synchronization)	1	\$14,900	\$14,900
Total Software			\$82,400.00

Administrative: Software License and Service Support and Maintenance Agreement:

Software License:	\$2,500 Annually
Annual Service, Support and Software Maintenance Agreement (SSMA) <ul style="list-style-type: none"> • Payable Annually, beginning at Phase III • Includes two hours of phone, on-line and email technical support each month totaling 24 hours annually. • Should software “bugs” occur, no time will be applied to monthly support hours at no expense to customer. • Hours are non-accruing, do not rollover and can not be “banked” or saved. • The SSMA also includes annual Webhosting. • Begins upon completion of Project. • Any Enhancements identified by customer will be quoted and approved prior to any work being performed. 	\$2,500 Annually



Training & Deployment:

On-Site Training and Live Deployment	\$5,800
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Recurring Annual Expenses:

Administrative – Recurring Software License and Annual SSMA as outlined above:	\$5,000
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Summary of Pricing:

MapVision® Software and other features	\$82,400
On-Site Training and Live Deployment	\$5,800
Administrative: Annual recurring	\$5,000
Total Project	\$93,200.00

Notes:

- Price quote is based on an estimated time for software design, programming, implementation and modifications to all **MapVision®** features
- Additional customization will be identified and a separate quote will be provided.
- Devices, mounting systems, laptops, GPS devices and SprayVision devices are NOT included
- Proposal does not include cellular connectivity, should this option be selected.



Optional features for consideration:

MapVision® Catch Basin iPad App	1	\$6,750	\$6,750
iPad app licenses	TBD	\$150	Annually
Catch Basin iPad Mini with Otter Cases	TBD	\$499	TBD

Acceptance:

The following representatives understand and accept the proposal as outlined above and the expectations and obligations as outlined. Delivery and acceptance is authorized by fax or email.

Michael "Mike" D. Reynolds, Sr.
Leading Edge Associates, Inc.
mreynolds@leateam.com

Leading Edge Associates, Inc.

William "Bill" H. Reynolds, Jr., Owner
Leading Edge Associates, Inc.
www.leateam.com
breynolds@leateam.com

Accepted this ____ day of _____ 2016

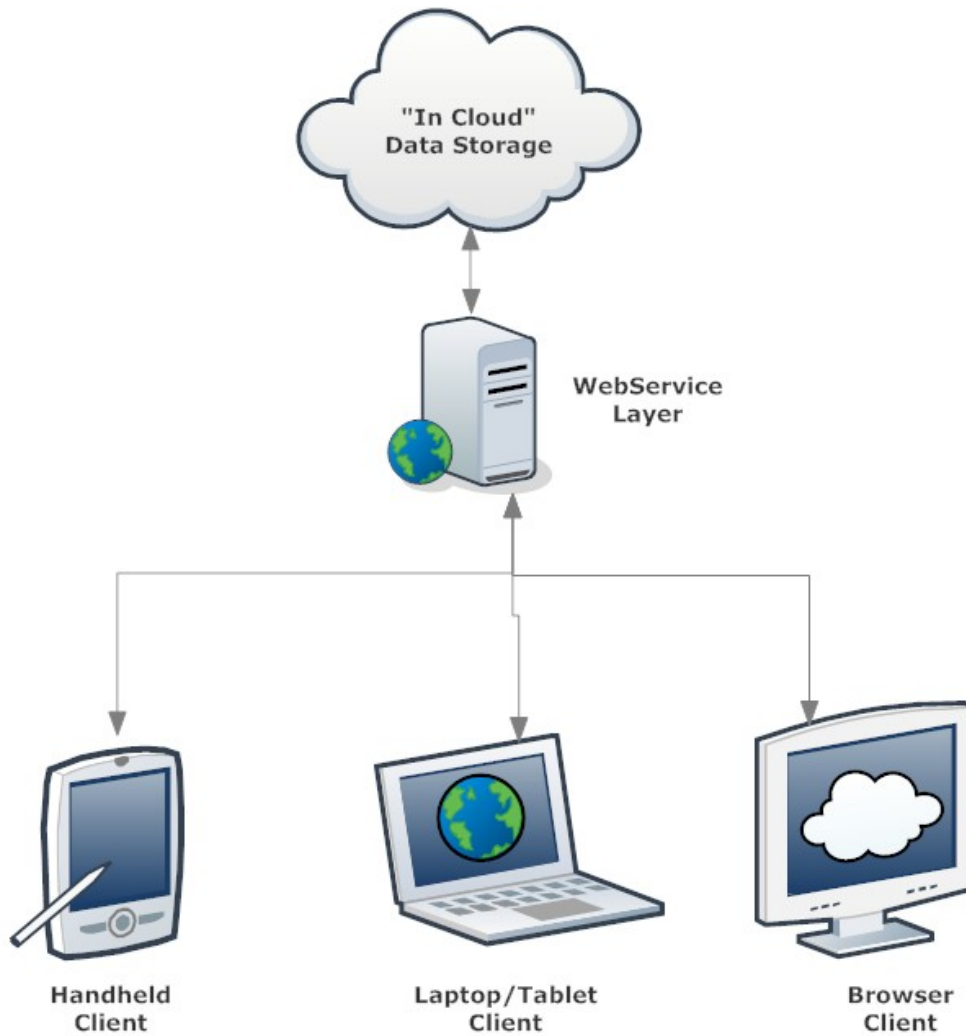
Beaufort County Mosquito Control

Authorized Representative
Beaufort County Mosquito Control

Addendum I

MapVision™ System Architecture


Leading Edge Customized MapVision® Enterprise Architecture



Three client applications communicate with a single "middle man" for shared functionality. Functions from all client applications operate with similar routines and simultaneously communicate with the database.

Addendum II

MapVision® Feature list

 MapVision 1.0 Features Comparison	MapVision Express	MapVision Elite	MapVision Premier	MapVision Enterprise
Operations				
Activity Card	✓	✓	✓	✓
Sources	✓	✓	✓	✓
Materials	✓	✓	✓	✓
Employees	✓	✓	✓	✓
Zones		✓	✓	✓
Service Requests		✓	✓	✓
Mosquitoes		✓	✓	✓
Yellow Jacket nests		✓	✓	✓
Rodents		✓	✓	✓
Fire Ants		✓	✓	✓
Equipment		✓	✓	✓
Mapping				
Sources	✓	✓	✓	✓
Zones	✓	✓	✓	✓
Truck Trail Replay - spray & no spray (Included with purchase of Flow Control)	✓	✓	✓	✓
Adult Surveillance		✓	✓	✓
Larval Surveillance		✓	✓	✓
Rainfall Surveillance		✓	✓	✓
Sentinel Chickens Testing Results			✓	✓
Disease Testing Results (Positive WNV, etc.)			✓	✓
Dead birds, squirrels			✓	✓
Treatment Plans/Polygons			✓	✓
Aircraft Flight Recording			✓	✓
Shapefiles			✓	✓
Laboratory				
Mosquito Identification		✓	✓	✓
Adult Trap Counts		✓	✓	✓
Larval Counts		✓	✓	✓
Landing Rate Counts			✓	✓
Ticks				✓
Resistance Management				✓
Bioassays				✓
Mapping of Resistant Populations				✓
State Resistance Data Auto sync (PART, Ca.)				✓
State Mosquito Abundance & Disease Testing (carcasses, sentinel surveillance)				✓
Sentinel Flock Management				✓
Other Arthropod ID and Testing				✓
Rodent/Wildlife Disease Surveillance and Testing				✓
Reports				
AG Report	✓	✓	✓	✓
NPDES Report	✓	✓	✓	✓
Trips with Flow Control option	✓	✓	✓	✓
Route Replay (with Flow Control option)		✓	✓	✓
Inspections & Treatment Report		✓	✓	✓
Rainfall Report		✓	✓	✓
Lab Report		✓	✓	✓
Trips Report		✓	✓	✓
Service Request Report		✓	✓	✓
Equipment Inventory Report			✓	✓


 MapVision 1.0 Features Comparison	MapVision Express	MapVision Elite	MapVision Premier	MapVision Enterprise
Product Inventory Report			✓	✓
Source Report				✓
Source Reduction Report				✓
Community Report				✓
Employee Performance Report				✓
Administration				
Manage System Data	✓	✓	✓	✓
Employees	✓	✓	✓	✓
Source Type	✓	✓	✓	✓
Materials	✓	✓	✓	✓
Activity Actions		✓	✓	✓
Species List		✓	✓	✓
Real Time Service Requests			✓	✓
Real Time tracking of Assets (vehicles, boats)			✓	✓
Data Migration			✓	✓
State Public Health Reporting (DACS/Gateway)			✓	✓
Real Time Tracking of Materials & Equipment			✓	✓
Invoice, Billing and Receivables				✓
Time Card Management System with Validations				✓
My Tasks Feature				✓
Heightened Surveillance Module (Invasive species, newly emerging pathogens)				✓
Configurable Options				
Flow Control	✓	✓	✓	✓
Catch Basin App iPad		✓	✓	✓
Aerial and Ground Module (spray block design)		✓	✓	✓
Tidal Monitoring		✓	✓	✓
Data Migration			✓	✓
Weather Overlay			✓	✓
Time Card Management System with Validations				✓
Inventory Management System				✓
Website Design & Seamless Integration				✓
State Public Health Reporting (i.e. DACS/Gateway)				✓
Bar Code Management System for Inventory and Laboratory Specimen*				✓
Aerial Swimming Pool data - migration and Imagery*				✓
Water Quality Testing & Fisheries Management*				✓
Research Data Overlay System (Field and Laboratory)*				✓
Insectary Management*				✓
* Under development				



Exhibit A – Laptop Specifications:

Recommended Specifications for Laptops/Tablet PCs

Intel Core i5 or i7 370M, 2.40GHz, 1066MHz 3M L2 Cache
Intel Core i5 or i7 Processor
4.0GB-8.0GB, DDR3-1333 SDRAM, 2 DIMM
Internal English Keyboard Single Pointing
Express Card without modem
160GB Hard Drive 9.5MM, 5400RPM
Dell Touchpad with Anti-microbial protection
14.1 inch Wide Screen WXGA+ Anti-glare LED Panel, Mobile Broadband Ready
Genuine Windows 7 Professional, 64-bit, no media, English
65W 3-Pin, AC Adapter
US - 3-FT/Flat 45W/64W Power Cord 3 Wire
Cyberlink Power DVD 8.3,no Media
Dell WLAN 1501 (802.11b/g/n) 1/2 Mini Card
6-Cell/54-WHr Battery



Frequently Asked Questions (FAQ)

FAQ	Leading Edge Response:
Define and execute unit, beta, and acceptance test plans	Upon acceptance of this proposal, Leading Edge will provide a detailed timeline to include detailed plans for design, implementation of a beta site known as the “Dev”/“Staging” site as well as a “Live”/“PROD” site to provide a platform for implementation of features, beta testing, feedback and detailed benchmark acceptance plans
Compatible with netbooks, laptops, tablets and desktops	MapVision® is designed as a web based system accessible through either Firefox or Google Chrome browsers. The system is compatible with Windows based laptops, tablets and PC as well as Mac OS, iPad and iPad Mini operating systems. The MapVision® Mobile client based application is compatible with Windows 7 and 8.
Discourage inappropriate and unsafe use of the equipment and internet, e.g. allow access to intranet and email, but disallow personal use, or use while driving	Leading Edge will work with the customer’s administration and IT department to provide limitation and controls in compliance with computer access security policies as well as provide training to administrative staff on website monitoring, history retrieval and broadband data monitor.
Web accessible data server, managed offsite—with replication or backup to our local server	Leading Edge provides a web hosted sever with multiple redundancies and back up of data. This data can be shared and downloaded to the customer’s servers/clients. Frequency of download and location will be determined during the initial onsite design phase of the project.
Access Control: Login security with defined roles and permissions	Through admin access, each user on the system will be assigned a permissions level and individual feature access and feature access read, write, edit and modify data will be controlled by an administrator. These settings are available in the Administrative, Manage Employee tables.
Define the new database structure—including data entities and relationships	The illustrations above provide a high level view of the basic architecture of the MapVision® system, however, the database structure and relationships are a proprietary component of the intellectual property of the source code. All users of MapVision® are licensed users of the product but LEA retains ownership of the brand name, software and database properties. LEA will provide users access to the relationships of the

	tables if custom report writers are desired.
Rights to and ownership of data solely belong to customer	The data is the property of our customers as stated in the MapVision ® Software License Agreement
Determine physical location of database server and method of access	The physical location of the database server is located in Texas with secondary and tertiary locations in Minnesota and the United Kingdom. However, additional locations are utilized.
Define and implement maintenance plan	<p>The Service, Support and Maintenance Agreement (SSMA) will provide updates to application software for compatibility upgrades made by the mapping API and Leading Edge Associates, Inc. Additionally;</p> <p>Two-hours each month of phone/email and programming modifications is included in the Service, Support and Maintenance Agreement (SSMA) Maintenance program hour time allocations expire monthly and are not rolled-over or accrued to future months.</p> <p>Any monthly modifications exceeding the two-hour timeframe, including on-line and telephone support will be billed at \$195.00 per hour.</p> <p>Service, Support and Maintenance Agreement (SSMA) also include all costs associated with website hosting for Internet and intranet sites.</p> <p>All time associated with requests for reported software bugs or enhancements are not deducted to the monthly service and support hours.</p>
Define and implement data replication for field clients, and local customer server	<p>MapVision® deploys a field client application called MapVision® Mobile that is used when technicians are areas with poor or no cellular coverage.</p> <p>MapVision® Mobile runs in the background at all times, and when disconnected from the cellular network MapVision® Mobile provides the technician with access to data and the application 100% of the time while in the field. When reconnected to the cellular network, the client-stored data is synced with the server automatically.</p> <p>The database table replication is performed using a robust and very successful proprietary last changed validation and synchronization logic to replicate all</p>

	<p>data for each and every table with any change. The user interface is seamless, meaning there is no requirement to perform any kind of manual synchronization process.</p> <p>If MapVision® Mobile is not connected to the internet due to no available cellular connectivity, data sets are stored locally on the client system. The validation and synchronization process automatically monitors both the connectivity status and quality of connection and performs synchronization autonomously when connectivity is automatically reestablished.</p>
<p>Build up and deploy database</p>	<p>MapVision® includes the creation of the server hosting hardware and software. Subsequent to the server deployment, Leading Edge Associates is responsible for the database deployment, website construction and all table relationships. Once the instance is deployed, each customer will be provided credentials to access to the site.</p>
<p>Define data cleanup plan— removing errors, adding needed information, and standardizing data</p>	<p>Within the scope of this proposal, customers require the provider to standardize the current data sets to be migrated into the MapVision® database.</p> <p>Customized scripts are writing that standardize all table data sets. These routines identify issues such as inconsistent data conformity. Leading Edge Associates have performed many data migration processes across the country and have identified several common issues within prior databases such as MS Access, VCMS and other data sources such as Excel, and CSV files.</p> <p>Examples of this process is zone numbers expressed as 3A and 3a, same city names spelled differently, apostrophes causing database inaccessibility, location id's related to latitude and longitude and latitude and longitude formats incorrect and inconsistent.</p> <p>This process of migration standardizes all geo-referenced objects using industry standard location services. Each and every object that has a location associated will be geocoded. Objects that fail the geocoding process are stored off for review and correction. This is one of the many examples of data cleanup, error correction, data enhancement and standardization of the current data sets.</p>

<p>Migrate current data to Insulate with cleanup</p>	<p>Refer to requirement above “Define data cleanup plan— removing errors, adding needed information, and standardizing data”</p>
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Hilton Head Island Branch Library - Hilton Head Island Land Trust Memorandum of Understanding

Memorandum of Understanding Between
Hilton Head Island Land Trust
and
Hilton Head Island Branch Library of the Beaufort County Library System

This Memorandum of Understanding (MOU) sets forth the terms and understanding between the Hilton Head Island Land Trust and the Hilton Head Island Branch Library of the Beaufort County Library system partnering to create and maintain a nature trail and butterfly garden named The Betsy Jukofsky Trail and Garden and an outdoor classroom to be created and named by the HHI Branch Library. There is also a mutual agreement to provide collaborative ideas and materials at the Hilton Head Island Branch Library related to these projects.

Background

The Hilton Head Island Land Trust was created in 1987 as a non-profit, tax-exempt corporation. Its mission is to preserve and protect critical natural habitat and significant historical parcels of land on Hilton Head Island for the enjoyment of future generations. To date the Land Trust has protected approximately 300 acres encompassing critical and unique sea island habitat and an historic Civil War site. The four most significant protected properties are Whooping Crane Pond Conservancy, Cypress Conservancy, the Fort Howell site and the Northridge Park Conservation Areas.

Purpose

This MOU will be for the creation of a nature trail into the conservation area behind the library and a butterfly garden adjacent to the outdoor classroom to be created on the library grounds. The library supports the overall project. The library will allow parking and access to these areas. The library staff will present programming for both adult and children relative to the nature trail. The library will create a collection of books, DVDs, CDs, etc. that focus on local flora and fauna to encourage education and interpretation and the enjoyment and understanding of our beautiful and unique surroundings.

The above goals will be accomplished by the Hilton Head Island Land Trust undertaking and being responsible for the following activities:

Creation and maintenance of the nature trail, headed by Tony Mills from the Low Country Institute with other Master Naturalists, the Town of Hilton Head Island, and with the help of local Boy Scouts.

Creation and maintenance of the butterfly garden with help from local Master Naturalists, Master Gardeners, and garden clubs.

The above goals will also be accomplished by the Hilton Head Island Branch Library of the Beaufort County Library System undertaking and being responsible for the following activity:

Creation and maintenance of the outdoor classroom with help from Master Naturalists and local Master Gardeners.

Funding

This MOU does not obligate either partner to provide direct funding to the other. However, the partners agree to collaborate on grants, sponsorships, and fundraising endeavors that support the purpose of this MOU.

Maintenance and Liability

The Hilton Head Land Trust will be responsible for maintenance of the trail and the garden. The Library will have liability Insurance on the portions of the trail on Library property. The Land Trust will have liability insurance on its property. The Beaufort County Library System will provide insurance for any exhibits that are loaned to the Hilton Head Island Branch Library by the Hilton Head Island Land Trust. The Beaufort County Library will be responsible for the proper maintenance and storage of these resources of the Hilton Head Island Land Trust. Uses of these materials outside of the Beaufort County Library system are to be discussed and agreed to by the partners of this MOU. Reasonable requests will not be refused.

Duration

This MOU is at-will. It may be terminated at any time by either party with 30 days' notice. It may be modified by mutual consent of authorized officials from the Hilton Head Island Land Trust and the Beaufort County Library System. This MOU shall become effective upon signature by the authorized officials of the partnering entities and will remain in effect until modified or terminated by any one of the partners.

DRAFT

Contact Information

Partner name Hilton Head Island Land Trust
Representative Pennie Grimes
Position President
Address P.O BOX 21058, Hilton Head Island, SC 29925
Telephone 843-342-6610
E-mail penniegrimes@gmail.com

Partner name Hilton Head Branch Library
Representative Mary Jo Berkes
Position Branch Manager
Address 11 Beach City Road, Hilton Head Island, SC 29926
Telephone 843-255-6500
E-mail maryjob@bcgov.net

Partner name Beaufort County Library System
Representative Ray McBride, MLS
Position Library Director, Beaufort County Library System
Address 311 Scott Street; Beaufort SC 29902
Telephone 843-255-6471
Fax 843-255-9508
E-mail rmcbride@bcgov.net

Partner Name Beaufort County
Representative Gary Kubic
Position Beaufort County Administrator
Address PO Drawer 1228, Beaufort, SC 29901
Telephone 843-255-2026
Email gkubic@bcgov.net

(Partner signature)
Hilton Head Island Land Trust

Date:

(Partner signature)
Hilton Head Branch, Beaufort County Library System

Date:

(Partner signature)
Beaufort County Library System

Date:

(Partner signature)
Beaufort County Administrator

Date:

Library To Go



Potential Bookmobile Services to Beaufort County

Who needs Bookmobile services in Beaufort County?

- Customers who cannot get to physical buildings:
 - People who live in remote communities
 - Older adults
 - People with disabilities
 - Young children whose parents work
 - Recent immigrants and others for whom the library is an unfamiliar resource
 - People without transportation

What makes a Bookmobile special?

- Unequaled flexibility
- Outreach opportunities
- High visibility in the community
- Excellent PR
- Partnership opportunities
- Acts as a mobile branch without the cost of a traditional library facility
- Provides for an expansion of library services at minimal cost

When and where would these services be provided?

LIBRARY TO GO

Where will you find us next? Track us online at BeaufortCountyLibrary.org/bookmobile

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
WEEK 1	Pritchardville 10:30a-11:30a Buckwalter 12:30p-3:00p	Sea Pines 10:30a-11:30a RiverWalk 12:30p-3:00p	Sun City 10:30a-11:30a Buckwalter II 12:30p-3:00p	Ruth B. Fields 10:30a-11:30a Okatie 12:30p-3:00p	Restock Clean Interior	
WEEK 2	Burton Wells 10:30a-11:30a Gray's Hill 12:30p-3:00p	Laurel Bay 10:30a-11:30a Broad River 12:30p-3:00p	Fripp Island 10:30a-11:30a Rec Center 12:30p-3:00p	Booker T. Washington 10:30a-11:30a (Garage) 12:30p-3:00p	Closed	Community Festival 12:30p-3:00p
WEEK 3	Okatie area 10:30a-11:30a Maritime Center 12:30p-3:00p	Crossings Park 10:30a-11:30a USCB area 12:30p-3:00p	Goodwill Bluffton 10:30a-11:30a Okatie Elementary 12:30p-3:00p	Wendy's Okatie 10:30a-11:30a	Fuel, Restock	
WEEK 4	Social Sec. Office 10:30a-11:30a Drive-In Theater 12:30p-3:00p	Gardens Corners 10:30a-11:30a Yemassee Amtrak 12:30p-3:00p	St. Helena Park 10:30a-11:30a Coursin-Tate Park 12:30p-3:00p	National Guard Armory 10:30a-11:30a Callawassie Store 12:30p-3:00p	Closed	Community Festival 12:30p-3:00p

Sample only

What is the potential cost of this service?

	Impact Fees ¹	Library Budget ²
Vehicle (<i>Customization Cost -TBD</i>)	\$150,000.00	
Staff 1 FTE- Lib I		\$40,000.00 (<i>salary and wages only</i>)
Staff 1 FTE LA I		\$25,000.00 (<i>salary and wages only</i>)
Operating Printing		\$500.00
Operating Cell Phone/MiFi Service		\$1,800.00
Operating Garage		\$2,649.00
Operating Insurance		\$1,200.00
Operating Fuel		\$2,000.00
Operating Materials	\$20,000.00	
Technology	\$10,000.00	
Total estimations	\$180,000.00	\$73,149.00

- 1) Impact fee cost-share to be divided between library benefit districts if approved.
- 2) If proposed FY16-17 library budget is approved, funding above would be unnecessary.