# Center for COMMUNITY PROGRESS
## Vacant Spaces into Vibrant Places

# Improving Data and Information Systems to Tackle Vacant and Abandoned Property in Lafayette, LA

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## I.    EXECUTIVE SUMMARY

In March 2014, the Lafayette City-Parish Consolidated Government ("LCG") applied for and was awarded a Technical Assistance Scholarship by the Center for Community Progress ("Community Progress") in the program area of Data and Information Systems. As an awardee of the Technical Assistance Scholarship Program ("TASP"), LCG received 200 hours of expert technical assistance from Community Progress and its project consultant, Location Age. The technical assistance team performed an assessment of LCG's current data acquisition processes through telephone and on-site interviews with relevant LCG departments and agencies, and other Lafayette community leaders. The team also reviewed relevant community documents and data, conducted online research, and analyzed and mapped Lafayette Parish property data. This report serves as one of the deliverables identified in the Center for Community Progress' TASP Professional Services Agreement with Lafayette City-Parish Consolidated Government. The other deliverables for this project include a final presentation of key recommendations to local stakeholders and the provision of initial implementation support for the recommendations. Recommendations were presented on November 6, 2014 and as part of the implementation support, a web application prototype was developed using available property data from disparate sources to demonstrate steps towards data integration.

**Figure 1: Lafayette Parish by Parish Council District**
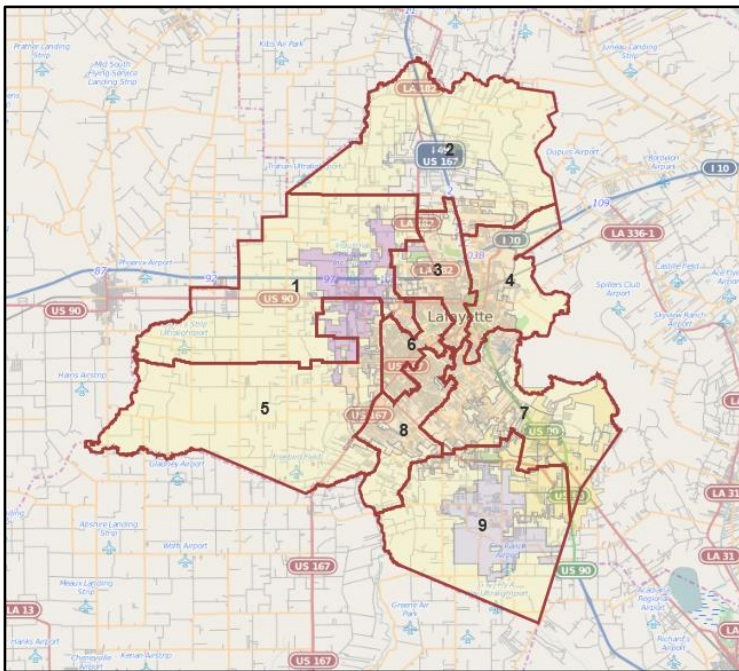


Source: Lafayette Consolidated Government, 2014 and Lafayette Parish Tax Assessor, 2014.

Between 2006 and 2014, LCG experienced a nearly 60 percent increase in adjudicated properties[1] which has contributed to an increasing inventory of problem properties. Lafayette leaders sought assistance in improving their use of property and neighborhood data, understanding that high quality data analysis creates a launching point for smart strategies to tackle the growing problems of vacancy and abandonment. LCG departments and the Lafayette Parish Tax Assessor have already made great strides in building their internal information technology infrastructure, but currently lack a coordinated vision or plan for using the relevant property and neighborhood data housed within their respective databases. Additionally, stakeholders are currently lacking complete, accurate

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[1] Defined in "Background" on page 3.

and public data on problem properties throughout Lafayette Parish to use for comprehensive analysis.

A number of policy challenges exist that are currently preventing many problem properties from being returned to productive use, which we define as a use that has tax paying status or no longer has a blighting effect. The recommendations put forth in this report, if implemented effectively, will build the foundation for data-informed strategies to address problem properties. As per the assistance requested in LCG's Technical Assistance Scholarship Program application, Community Progress and Location Age have focused this project solely on the topic of data and information systems. This technical assistance does not examine other operational and policy reforms that will be necessary to properly address the issue of problem properties in Lafayette Parish.

The aims of this TASP project were (1) to begin integrating existing data systems that will build the foundation for a unified Geographic Information System ("GIS") - based property and neighborhood database, and (2) to begin the development of applications that can improve information sharing between LCG departments and with the public to help inform policy decisions and strategies related to problem properties. There were several specific objectives for the technical assistance to LCG, including:

- Automate the integration of specific LCG business systems for key data regarding problem properties and neighborhood conditions.
- Apply geospatial information and software to visualize, present and analyze data regarding problem properties and neighborhood conditions.
- Develop geospatial models and web applications that can disseminate property related information and provide an "early warning system" for property and neighborhood decline.

> **REPORT DEFINITIONS**
>
> *Adjudicated Property:* An adjudicated property in Lafayette is a property with a tax title that has been listed at Tax Sale due to unpaid liens or taxes. When the tax title goes unsold, LCG becomes the default bidder and therefore the property is "adjudicated" to LCG. Not all adjudicated properties are vacant and abandoned.
>
> *Problem Property:* A problem property as defined in this report is a property that is vacant (not lawfully occupied), abandoned (not being properly maintained) by its owner, possesses significant code violations, is tax-delinquent, and/or is adjudicated. "Problem property" is an umbrella term for all property that is having a blighting effect on the community.

The improvement of data access and delivery will be critical to the development of policy and operational changes aiming to identify, prevent and manage problem properties in Lafayette Parish. These efforts however can only be successful with the commitment of a diverse group of stakeholders within and outside of LCG, who are willing to track, manage and share critical property and neighborhood data, and coordinate corresponding policy and operational changes.

In this report, we share our observations and findings from our research and interviews with Lafayette stakeholders and offer a number of organizational, technical, and information sharing recommendations for stakeholders to consider. The following recommendations are the most critical to achieving the aims of this project:

1. Form a working group of key stakeholders and an agency lead who can monitor and manage the actions and efforts around addressing a growing problem property issue in Lafayette Parish. Focusing early working group conversations on property and neighborhood data will not only help this data-specific project be successful in the long-term, but it will also help to inform critical future policy and operational decisions around problem properties. Discussed further in **Organizational Recommendation 1.**

2. Collect and properly manage comprehensive property and neighborhood data in existing property databases for future integration. A unified property information system will only be as valuable as the data that it contains. Discussed further in **Organizational Recommendation 2**.

3. Begin a *Problem Property Support Project,* or an IT strategy focused specifically on the topic of problem properties, to create visibility of and encourage focused action around the challenges of problem properties throughout LCG and across other entities that collect, analyze, and disseminate important information regarding these properties and related neighborhood trends. Discussed further in **Technical Recommendation 3.**

4. Develop an effective, two-way data sharing and working relationship between LCG and the Lafayette Parish Tax Assessor[2] that will improve the management and usefulness of property related information throughout Lafayette Parish. Discussed further in **Information Sharing Recommendations 1 and 2.**

## II.    BACKGROUND

### A.   *Vacancy and Abandonment in Lafayette Parish*

Lafayette Parish is a thriving, historic community in south Louisiana. Lafayette Parish leaders are committed to supporting smart development and community programming that continues to attract new residents and improve the quality of life for existing residents. The amelioration of problem properties that harm residents and their respective neighborhoods is a critical step in the community revitalization process and, Lafayette Parish, like many of its sister communities throughout Louisiana and the southeast, has been experiencing an increase in problem properties. Adjudicated property has become a significant problem for Lafayette neighborhoods – especially those in Lafayette's urban core. In Louisiana when property taxes accrue and go unpaid, the municipality may place a tax lien on the property and offer it for sale at a public auction. If the property fails to sell at auction the municipality becomes the default bidder and the property becomes adjudicated to the municipality. **In the last eight years, the number of adjudicated properties in Lafayette Parish has increased from 735 in 2006 to 1,146 in 2014. This represents a 56 percent increase during that period [See Figure 1].[3]** The most significant increases have been found in Council Districts 3 and 4, with the McComb Veazey

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[2] While this project focuses on LCG's efforts, other municipalities way want to use this as a model for their own data sharing initiatives with the Lafayette Parish Tax Assessor, or other data holding entity.
[3] According to data provided by Lafayette Parish Tax Assessor's Office. Any error in calculation of these data is the sole responsibility of the report authors.

neighborhood seeing the most significant concentration of and the greatest increase in adjudicated property. These districts are also made up of predominantly African-American residents, suggesting a disproportionate impact.

As Lafayette stakeholders pointed out, adjudicated properties often result in vacancy and abandonment, thus the concern with their increase in number. Joint research conducted by Southern University Law Center ("SULC") and LCG found that the average length of time in adjudication for the properties studied was 13 years. (See Appendix B). During this time, many of the properties fall into disrepair.
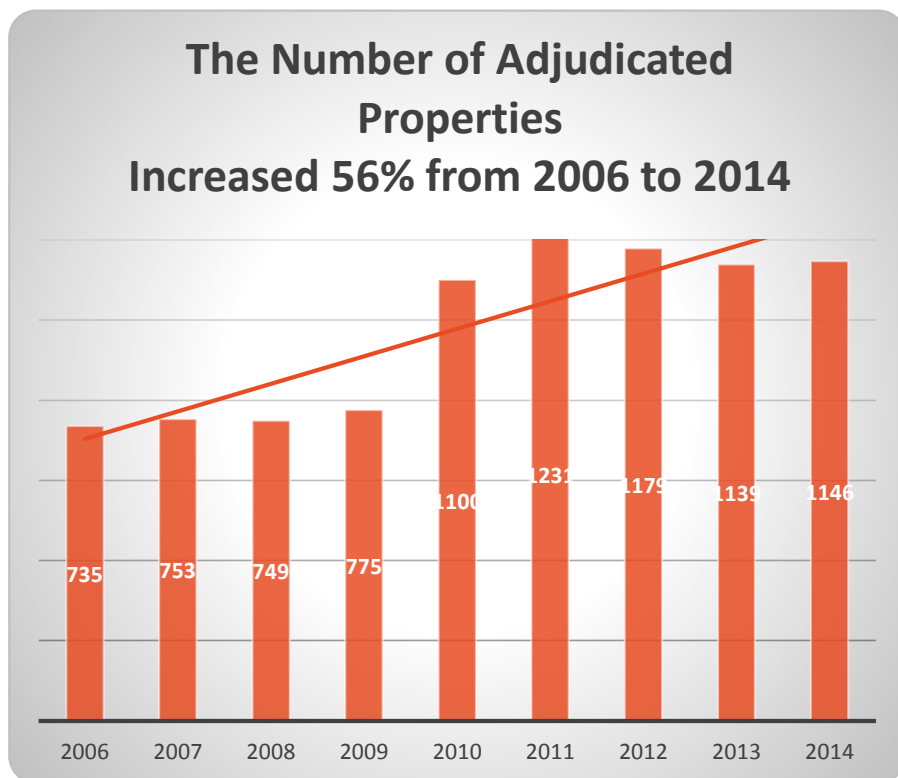
Though adjudication status often correlates with vacancy and abandonment, not all adjudicated properties may be considered *currently* vacant and abandoned. Therefore, the count of adjudicated properties should not be mistaken for the count of vacant and abandoned property in Lafayette Parish. Other data are also critical to understanding the full picture of vacancy and abandonment.

**Figure 2: Growth in Adjudicated Properties in Lafayette Parish, LA**



The Number of Adjudicated Properties Increased 56% from 2006 to 2014

| Year | Value |
|------|-------|
| 2006 | 735 |
| 2007 | 753 |
| 2008 | 749 |
| 2009 | 775 |
| 2010 | 1100 |
| 2011 | 1231 |
| 2012 | 1179 |
| 2013 | 1139 |
| 2014 | 1146 |

Source: Data provided by the Lafayette Parish Tax Assessor's Office, 2014. Numbers represent properties not bid on at the tax sale.

According to the 2010 U.S. Census, there were **a total of 6,114 vacant non-seasonal residential units in Lafayette Parish.** This accounted for 6.53% of all residential units. Additionally, according to 2010 U.S. Postal Service data, **there was an estimated 859 residential properties that were considered vacant for a period of 12 months or longer.**

There are other privately held properties, both vacant and owner- and renter-occupied in poor condition that contribute to neighborhood distress across Lafayette Parish. Currently the LCG Code Enforcement Division reports over 800 vacant and occupied structures on its master list of code violations, and the LCG Public Works Department estimates 325 complaints each month

for overgrown and debris laden properties (both with and without structures).[4] This number however jumps significantly during the summer months, and according to the Department of Public Works,[5] vacant and adjudicated properties are often the most frequently cited. For example, the vacant and adjudicated property featured in a photo on the cover of this report has been cited 16 times since January 2010, just by the Public Works – Environmental Quality Division. The Code Enforcement Division also pointed out that the majority of code violations are found in Lafayette Parish Districts 3 and 4, consistent with concentrations of adjudicated property. The Police Department called attention to the problem of absentee landlords – who own, but refuse to maintain their properties and ignore criminal activity taking place at their properties.

**Figure 3: Screenshot of ESRI ArcGIS Online Web Map Prototype Displaying Adjudicated and Vacant Property Records with Crime Hotspots**
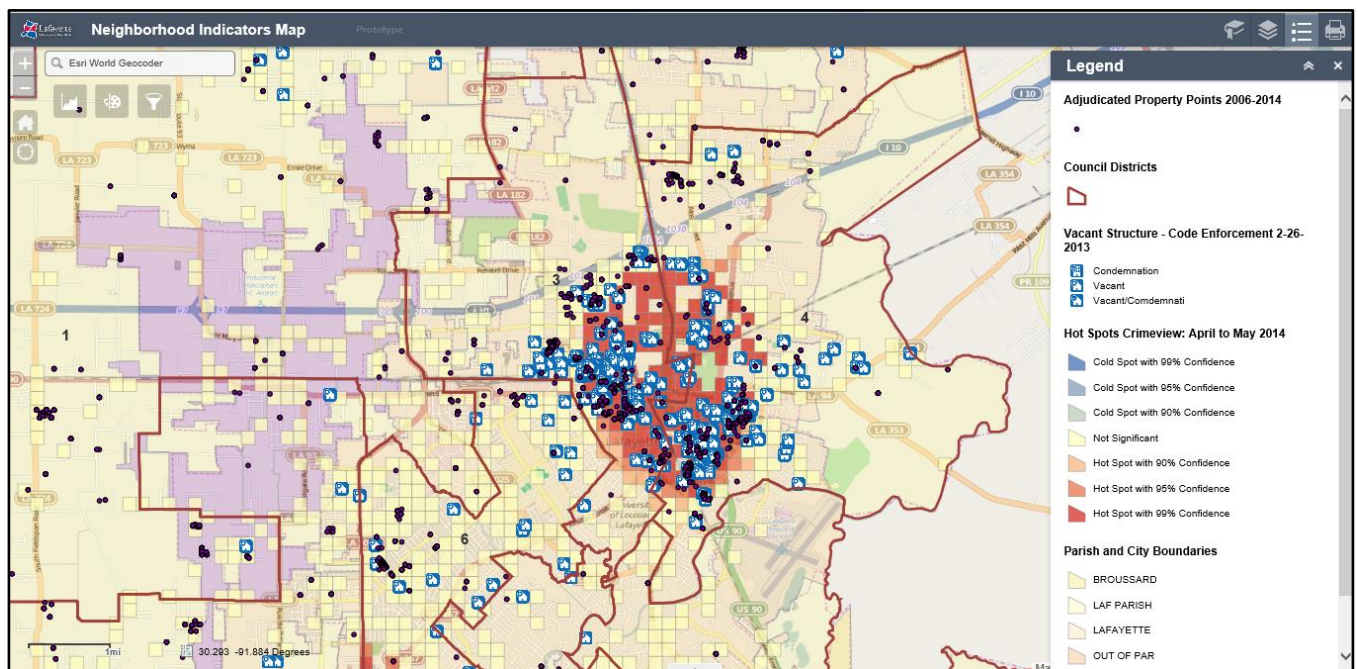


The web map prototype above was developed for the purpose of this TASP project and is discussed further in the *Technical Recommendations* beginning on page 24. It shows a concentration of vacant properties (blue boxes), adjudicated properties (black dots) and crime hotspots (red and orange) in a select few parish council districts. Data was provided by Lafayette Consolidated Government (2014) and the Lafayette Parish Tax Assessor's Office (2014).

Research conducted in communities across the country has shown that vacant and abandoned properties, in addition to being eyesores, threaten the health and safety of residents, diminish the investments of neighboring property owners by lowering their property values, and put

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[4] Russell Bourg, Supervisor, Environmental Quality, Lafayette Consolidated Government. Email communication 11/13/14.
[5] Russell Bourg, Supervisor, Environmental Quality and Mark Pope, Manager, Environmental Quality in communication with the authors, 8/6/2014.

additional strain on public service delivery. For example, in Austin, Texas, blocks with vacant properties had 3.2 times as many drug calls to police as blocks without them[6] and in Cuyahoga County, Ohio, the presence of vacant, tax-delinquent and foreclosed properties lowered property values by 9.4 percent.[7] For a list of research measuring the costs of problem properties in other communities, see Appendix A: *The Direct and Indirect Costs of Vacant and Abandoned Property: Annotated Bibliography.*

Problem property interventions also have *positive* impacts as evidenced in Oklahoma City, where returning a vacant or abandoned property to productive use saved up to $1,700 in public safety service costs on that property and raised property values for neighboring owners by 12 to 29 percent.[8]

### B.  *Local Stakeholders' Efforts to Address Vacancy and Abandonment*

Lafayette stakeholders have not been silent on the issue of problem properties. Community leaders have engaged in a number of critical initiatives to bring attention to problem properties in Lafayette and have begun implementing changes and launching initiatives to address them:

### 1)  *Developed 20 Year Long Term Plan Calling Attention to Revitalization and Data*
PlanLafayette, a long range comprehensive plan for Lafayette Parish, was adopted by the Lafayette City-Parish Planning Commission in June 2014, and was subsequently endorsed by the Lafayette City-Parish Council in July. PlanLafayette serves as a guide for the next twenty years of development in Lafayette Parish. Of particular importance to this project are two aspects of the Plan. The first is in the Community Character section, where Goal 4 calls for Lafayette stakeholders to "protect and revitalize neighborhoods and assets." Stakeholders acknowledge that without a strong grasp on the property and neighborhood data that are available, it will be especially challenging to track the changing health of neighborhoods and monitor the progress being made with interventions seeking to "protect and revitalize" Lafayette's neighborhoods. The second part of PlanLafayette worth highlighting here is the Land Use section that identifies a "lack of accurate, parcel-based land use information in GIS to track and plan for land use changes in Lafayette." This recognizes the need for reliable parcel data to guide comprehensive plan implementation. LCG has also designated staff to guide implementation of PlanLafayette and begin monitoring its progress.

### 2)  *Championed Neighborhood Planning Efforts*
LCG and Lafayette residents championed the creation of neighborhood planning groups, known in Lafayette as neighborhood coteries, to not only call attention to resident concerns but, more importantly to be active in the planning process and in community revitalization efforts. Members of the neighborhood coteries were critical participants in the interview process for this TASP project and provided important insight into data that are most useful for residents and for the development of neighborhood level responses to problem properties.

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[6] Frank S Alexander, *Land Banks and Land Banking,* Center for Community Progress (2011), 16.
[7] Stephen Whitaker and Thomas J. Fitzpatrick IV, The Impact of Vacant, Tax-Delinquent and Foreclosed Property on Sales Prices of Neighboring Homes, Federal Reserve Bank of Cleveland (2011).
[8] *Addressing Vacant and Abandoned Buildings in Oklahoma City: Prevalence, Costs, and Program Proposals,* GSBS Richman Consulting (2013), 30.

### 3) Formed Research Partnerships to Study Problem Properties

In addition to comprehensive planning efforts, Lafayette stakeholders have also begun to tackle the issue of problem properties directly. The LCG - Planning Division has established a critical partnership with the Southern University Law Center ("SULC") to engage in research around adjudicated property. Law students, based on input from LCG and neighborhood coteries, or neighborhood planning groups, have processed title histories on adjudicated properties, learning more about the process leading to their adjudication, the length of time they remain adjudicated and held from the market, and their growth in number across Lafayette Parish.

### 4) Took Urgent Action Against Problem Properties

Another initiative recently created to tackle problem property includes Operation Blight Out, a special effort by LCG to condemn and in some cases to demolish structures deemed unsafe.

Lafayette Police have also taken legal action against behavioral nuisance properties, which as the department explained, are often synonymous with vacant, and/or blighted property. The legal process is however lengthy and extremely resource intensive, making it a difficult action to pursue. A Neighborhood Action Team ("NAT") bringing together a diverse set of stakeholders, including Police, also meets on a regular basis to discuss intervention strategies for nuisance properties.

### 5) Advocated for Important Statewide Reform

Finally, in 2012 Lafayette stakeholders joined a Louisiana Statewide Coalition to reform state legislation in order to address local concerns about vacancy and abandonment. This collaborative effort led to a public referendum reducing the redemption period for blighted, abandoned or vacant properties sold at tax sale from three years to 18 months. The coalition also saw the passage of state enabling legislation allowing municipalities, at local option, to enact ordinances to enforce code violations through lien foreclosure. This legislation[9] is a critical tool putting "teeth" into code enforcement and providing enforcement options not currently available to Lafayette City-Parish Consolidated Government. If this legislation is implemented, irresponsible property owners will no longer be able to avoid penalties for maintaining blighted properties. Property owners who fail to voluntarily comply with housing and health codes would face foreclosure and sale of their property at public auction. This legislation has been used in New Orleans with great success. Property owners in New Orleans, fearing seizure and foreclosure of substandard properties, voluntarily paid code enforcement citations and remediated violations. This resulted in the collection of over $4 million in back taxes and code enforcement fines between 2010-2013, and also contributed to increased code compliance rates.

## C. The Importance of Data Collection, Sharing and Dissemination in Tackling Vacancy and Abandonment

Vacancy and abandonment are complex issues for any community, and require a coordinated and comprehensive effort among stakeholders to reach effective policy strategies. All

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[9] Louisiana Revised Statute 13:2575.

governmental departments, outside agencies and community leaders that play a role in acquiring, maintaining, holding or disposing of problem properties should be a part of developing and implementing a solution. For example in Lafayette, the LCG Codes Division addresses all structural blight on both occupied and vacant structures; Public Works addresses illegal dumping and overgrown vacant lots; Community Development links property owners to important rehabilitation and demolition grant programs; neighborhood coteries engage their neighbors in planning efforts and help disadvantaged neighbors to maintain their property; and finally, LCG's Information Services and Technology department, and the Lafayette Parish Tax Assessor store, maintain and facilitate the use of critical data needed for neighborhood revitalization. All of these actors, along with a number of others not mentioned, play a critical role in maintaining and improving the quality of life for Lafayette Parish residents. Each day they are collecting or using valuable data that can not only inform their immediate actions, but can also help to inform a larger comprehensive effort across stakeholders.

Collecting, understanding and sharing the right property and neighborhood data provides the foundation for smarter policies to revitalize neighborhoods. Table 1 on page 10 offers a basic list of important property and neighborhood datasets needed to better understand neighborhood conditions and intervene appropriately.



Vacant, adjudicated property in Lafayette. Photo by Center for Community Progress

**Table 1: Basic Property and Neighborhood Datasets**

| CATEGORY | KEY INFORMATION | DATA SOURCE |
|---|---|---|
| Basic Property Information | <ul><li>Basic property characteristics (lot and building size, number of units, year built, land use)</li><li>Ownership (public, private, private – absentee)</li><li>Owner vs. Renter-occupied</li><li>Assessed value</li></ul> | <ul><li>City and County property records</li><li>Auditor, Treasurer or Assessor</li><li>U.S. Census</li><li>PolicyMap</li></ul> |
| Sales and Mortgages | <ul><li>Annual single family sales</li><li>Annual home purchase mortgages</li></ul> | <ul><li>City and County Property Records</li><li>Home Mortgage Disclosure Act Data</li><li>PolicyMap</li></ul> |
| Tax status | <ul><li>Tax arrears</li><li>Tax exemptions</li></ul> | <ul><li>Auditor, Treasurer or Assessor</li><li>Tax Claim</li></ul> |
| Mortgages, other liens and foreclosure filings | <ul><li>Mortgage and tax foreclosure filings</li><li>Lien amount and status</li><li>Sheriff's sales</li></ul> | <ul><li>Sheriff</li><li>Auditor, Treasurer or Assessor</li></ul> |
| Building/Housing/ Code Enforcement | <ul><li>Building Permits</li><li>Complaints</li><li>Citations</li><li>Condemnations</li><li>Nuisance abatement actions taken by type</li><li>Receivership status</li></ul> | <ul><li>Building, Housing and Code Enforcement Departments</li></ul> |
| Vacancy and abandonment (for both lots and structures) | <ul><li>Utility shut-offs</li><li>Mail stops and forwarding</li><li>Visual evidence of neglect</li></ul> | <ul><li>Public utilities</li><li>U.S. Postal Service</li><li>U.S. Census</li><li>PolicyMap</li><li>Surveys or citizen reports</li></ul> |
| Crime and Fire | <ul><li>Crime and fire reports at specific addresses and by block</li></ul> | <ul><li>Police Departments</li><li>Fire Departments</li></ul> |
| Redevelopment or other formally-designated districts | <ul><li>Development priority areas</li></ul> | <ul><li>City/County planning and economic development</li><li>CDCs and other nonprofits</li></ul> |

Note and Source: Modeled after a similar table created in the 2005 report, *Cleveland at the Crossroads: Turning Abandonment Into Opportunity* by the National Vacant Properties Campaign: http://preview.usmayors.org/brownfields/library/cleveland0605.pdf

**III. OBSERVATIONS AND FINDINGS**

As a part of technical assistance delivery, the Community Progress technical assistance team conducted two 2-day long site visits and met with multiple LCG departments and other local stakeholders to better understand current data collection practices and assess the opportunities for improved data access and delivery. In addition to these two site visits the technical assistance team also held follow up conference calls and interviews to glean additional information and hear from stakeholders who were unavailable during the site visits. These departments, agencies, and stakeholders included:

- LCG - Information Services and Technology
- LCG - Community Development
- LCG - Police Department
- LCG - Planning, Zoning and Development
- LCG - Public Works: Environmental Quality
- Lafayette Neighborhood Coterie Representatives
- Lafayette Parish Tax Assessor

The following sections summarize our key findings and observations from these site visits and interviews.

### A. Current Property-Based Tracking Systems

Currently various LCG departments and the Lafayette Parish Tax Assessor are collecting a number of important property related datasets in at least four different databases. These datasets analyzed together can help stakeholders to assess and understand the current and changing conditions of Lafayette's neighborhoods. Below is a list of the current databases being utilized to gather property and neighborhood related data:

#### 1) Cityworks

Cityworks is a GIS-based asset management tool, used within LCG to track public complaints, as well as Transportation and Public Works projects/issues, and is proprietary to Azteca Systems. LCG – Public Works enters environmental quality complaints into Cityworks. If a complaint requires a follow up project, it is manually duplicated in TRAKiT as a work order for planning, scheduling, follow up and completion tracking.

Cityworks uses the Oracle based enterprise geodatabase for the source of GIS layers and uses SQL Server for its tabular data.

#### 2) TRAKiT Land Management Software

TRAKiT, a land management software product created by CRW Systems, is managed and housed within the Information Services & Technology ("IS&T") Department. There are currently a total of 5-6 TRAKiT users across LCG departments: LCG - Code Division, LCG - Public Works, LCG - Planning, Zoning and Development, and Police. For example, LCG - Public Works, Environmental Quality enters complaints into Cityworks as service requests. If a project

is needed to abate a complaint, it is then entered by Public Works staff into the TRAKiT system. Properties are listed by address in TRAKiT, with a code citation number attached.

The TRAKiT system provides a number of different functional modules. The following modules are used by LCG:

- *LandTRAK* – Address Point Numbers (points/polygons) representing pseudo-parcels and based on structures.
- *CodeTRAK* – Code enforcement violations, Public Works Environmental Quality projects, condemnations.
- *PermitTRAK* – Demolition permits; building including electrical, plumbing, new construction permits for Commercial, Residential and Mobile Home.
- *BusinessTRAK* – Occupational licenses.
- *ProjectTRAK* – Subdivisions.
- *eTRAKiT* – Contractor inspections, status of permits and inspections.

Currently the public interface of TRAKiT displays limited information such as address, zoning designation (only for plan review) and the name of the contractor assigned to the property.

TRAKiT uses GIS data exported from the Oracle enterprise geodatabase into TRAKiT's SQL Server database. Small Parcel polygons were created using buffers of the property address point layer for TRAKiT to use in lieu of the parcel layer.

### 3) *Lafayette Parish Tax Assessor's GIS Database*

The Lafayette Parish Tax Assessor's property management system is a publicly searchable online database housed in a GIS environment. It currently contains a set of geographic parcels for the entire Parish, providing a basis for joining, or appending the attributes of, other important spatial property data collected by other entities to the parcel layer created by the Tax Assessor. These parcel areas are linked to property, lot and ad valorem taxing data along with other property characteristics. The system also provides the file numbers for Clerk of Court records. Several LCG departments such as Community Development, Public Works, and Police are currently using the Tax Assessor's online database to locate Clerk of Court record data. Neighborhood coterie chairs stated that they also use the Tax Assessor's property database to access the Clerk of Court file numbers, and then request copies of Clerk of Court files using the number retrieved from the Tax Assessor's website.

Tax Assessor Database online: http://www.lafayetteassessor.com/PropertySearch.cfm

### 4) *CrimeView*

CrimeView is a crime analysis and mapping tool developed by the Omega Group and used in numerous police departments across the country. LCG's CrimeView provides crime data to both internal LCG users (the Police Department in particular) and the public. This includes data from 911 calls for service, records management (for incidents and offenses) and junk vehicle records.[10] The data are processed and geocoded (located) within an ESRI environment to produce geographic crime information that can be mapped for internal and public use. For

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[10] Arson data is tracked separately by the Fire Department

internal use, the data is geocoded to the address, however, for the public it is located by the street block. The crime data are displayed through an ESRI ArcIMS-based mapping application, proprietary to the Omega Group. A public version of the crime map data provides a 90 day history of crime information (excluding sex crime and juvenile crime), while the internal version, viewable to LCG Police, provides additional crime history, as well as more crime types and details.

CrimeView online: http://crimeview.lafayettela.gov/

### B. Current Data Collection, Storage and Analysis

#### 1) Disconnected Systems and Lack of Data Automation

There are currently at least four systems that collect and use property and neighborhood related data, including TRAKiT, Cityworks, the Lafayette Parish Tax Assessor's GIS database and CrimeView discussed above. There are also a number of other important public data sources, and data being collected through research conducted by SULC on adjudicated property that can help build a comprehensive picture of current and changing neighborhood conditions. Currently various LCG departments and the Lafayette Parish Tax Assessor are collecting a number of important property related data, that together help with the assessment and analysis of current and changing conditions of Lafayette's neighborhoods. Each entity however collects and inputs its database information independently with few direct links to the other departmental databases. While these data siloes exist, the LCG – Information Services and Technology Division is responsible for developing and managing the systems regarding data services, databases and application software, and dissemination across the LCG enterprise infrastructure. There is limited documentation regarding the data that is available to users from LCG information systems. For example, much of the code violation information exists in paper records with a subset of this information entered in TRAKiT, a database to which the Planning Division cannot link. As described in the initial Technical Assistance Scholarship Program application, the LCG Planning Division will request, clean and manually input data from various departments each year in order to better understand neighborhood conditions.

The lack of data automation and integration of the four property-related systems is contributing to the problem of limited coordination around using and disseminating property and neighborhood information.

As an example, in meeting with the Community Development Department we heard that a number of barriers currently exist in identifying appropriate properties for its rehabilitation programs. Access to accurate and up-to-date property data would be particularly helpful in targeting its outreach efforts. Because of current federal grant restrictions the Department is able to only provide assistance to select property types, i.e. those that have clear title, are not located in a flood zone, do not have significant lead paint or asbestos issues, are owner-occupied or can be brought fully up to code with the financial assistance provided. The Department identified the following data to help staff narrow the pool of eligible properties and target their outreach:

- *Current Flood Zone Map Layer*[11] to rule out property in these areas.
- *Home Construction Dates* to identify property likely to contain high concentrations of lead.
- *Code Violations* to more quickly identify properties that may be in need of repair support.
- *Ownership Status* to more quickly identify heirship properties with fractured titles.
- *Occupancy Status* (owner versus renter) to more quickly rule out rental properties from the eligibility pool.

Making these data available in one integrated and automated database would allow various LCG departments to more easily access regularly updated data. These data exist internally and externally but as mentioned above in separate databases.

### *2) Limited Communication, Regular Analysis and Data Sharing*

There were few examples where information system data from multiple departments were being applied to address broad challenges such as problem properties and declining neighborhood conditions. The frequency of multi-departmental meetings and communication regarding property and neighborhood data appeared to be low. Without regular review and communication, data quality and tracking issues go unresolved, and various departments that in one way or another deal with problem properties, lack a comprehensive view of the property and neighborhood conditions.

At the time of our initial assessment, there were also no formal data sharing agreements in place across departments or with outside entities to facilitate regular data sharing, or outline the proper uses of data by various parties. This seems to have further limited the availability of important property and neighborhood datasets across entities. Even if datasets were currently being shared on a regular basis within and outside of LCG, not having a formal agreement makes data sharing arrangements more vulnerable to leadership and staffing changes over time.

To begin furthering and formalizing a data sharing relationship, the Lafayette Parish Tax Assessor, as part of this project work, provided LCG with a data sharing agreement for property parcel and related data (GIS and property descriptive data). This is a significant step forward for LCG to work with the Tax Assessor's office and to have access to critically important property parcel information for use in dealing with problem properties and all other property-related information needs. The agreement is currently being reviewed by LCG and will hopefully be completed before the end of 2014.

### *3) Questionable Data Quality and Storage*

In our requests for data and interviews with various LCG departments, it became evident that some property data may not be properly recorded and stored within LCG information systems. Without quality property and neighborhood data, analysis becomes significantly limited.

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[11] Currently the Community Development Department only has access to a 2010 map layer.

Currently the Code Division tracks property status in paper files, and it is unclear how much of these data are then transferred to the TRAKiT database. Data spreadsheets pulled from TRAKiT for use in this project seem to indicate that many property variables are not being fully recorded using the software. This is problematic when trying to develop a comprehensive property and neighborhood information system. Data should be tracked using the appropriate information system rather than paper filing (and historical data should be transferred into TRAKiT) to ensure complete and timely code violation data. This will provide LCG departments with easier access to both current and historical property data.

Data spreadsheets pulled from Cityworks for use in this project were similarly limited. Many of the data variables simply had null, or empty, fields, meaning no values recorded. It is unclear if the property information is not being tracked at all, or is not being fully inputted into the appropriate databases. Regardless, this lack of available, complete property data from these databases presents a major obstacle to understanding current neighborhood conditions, and being able to track problem property interventions over time. It also points out that current software is likely not being used to its full potential by some LCG departments. Improving these data should be made a top priority. A unified property information system will only be as valuable as the data that it contains.

See Appendix C for the *Data Requirements Matrix*, a table of relevant property related data, and the accompanying data source. This Matrix was developed with LCG to begin identifying some of the most relevant property and neighborhood datasets that LCG and other entities are responsible for developing and maintaining.

### 4) Lack of Data Standardization and Unique Property Identifiers

In order to provide meaningful information and analysis on problem properties, a broad set of data needs to be brought together. This can only be done if the disparate systems and databases have the linkages to join related data. In many cases, these key linking fields do not exist. Implementing the use of unique property identifiers as key fields for relating property information would be a significant improvement in the development and integration of problem property data.

Two standardization challenges that further inhibit the linkages and automatic updating of LCG property data are worth highlighting: First, the existing databases use different data sources and entry methods, resulting in a lack of consistency. For example, TRAKiT and Cityworks use two different data sources for GIS data. Cityworks uses a live connection to the LCG ESRI geodatabase. TRAKiT does not have that same live connection. Instead it must be manually updated. This means that TRAKiT does not necessarily have the most up to date information from the LCG geodatabase.

Second, we heard from multiple LCG departments that efforts to manage property information were hampered by the lack of up-to-date, unique property identifiers like the Parcel Identification Number (PIN) also called the Tax Assessor Account Number. There are no LCG department data, either geographic or otherwise, that include the latest set of these unambiguous identifiers. Departments have no option but to use old property parcel data, structure addresses (and several other versions of address data) to manage and link property related information. This method can only be partly successful, as it still complicates the process of updating data. The

lack of standardization makes it difficult to link property data for the purpose of widespread user access and to conduct the necessary ongoing analyses to understand changing neighborhood conditions. Access to the Lafayette Parish Tax Assessor parcel map layer and related data would allow LCG departments to have the most current set of property data to display via GIS maps and join to other property-based data. In this way, the quality of property data within LCG and resulting analyses would improve significantly.

### C. Lafayette Stakeholders Define Their Ideal Data System

Throughout the site visits and additional follow up conversations, Lafayette stakeholders shared with us what they would like to accomplish with an improved process and system for collecting and analyzing property and neighborhood data. In sum, stakeholders would like to:

#### 1) Use data to effectively communicate the problem of vacancy and abandonment

The most important step to appropriately respond to the challenges of vacancy and abandonment, is to have a clear understanding of the problem itself and the impacts of vacancy and abandonment in the community. This implies accurate and up-to-date data that provide a clear understanding of current individual property status as well as the ability to understand trends in vacancy and abandonment over time. These data would then be available for wide dissemination to those organizations and individuals who are actively engaged in helping to address the issues. Without these data on hand, or without presenting these data in a clear way to local decision-makers, there is little hope for developing a successful, targeted intervention. It is clear from the data that have already been gathered on adjudicated property, that these particular properties play a role in neighborhood decline in the City of Lafayette, and increasingly so outside the City in other parts of Lafayette Parish. LCG research estimates $600-1,000 in annual maintenance costs per adjudicated property.[12] Using current available numbers on adjudicated property, this would amount to roughly $916,800 in maintenance costs each year for adjudicated property alone. This is a conservative estimate; it does not account for other associated billing and filing costs and other major costs including falling property values, loss of tax dollars, and more frequent police and fire calls.

LCG staff stressed the need to better understand the current costs of vacancy and abandonment in Lafayette Parish. For example, some of the questions that stakeholders would like to answer include: *What is the cost to LCG each year in services and are problem properties lowering surrounding property values, contributing to increased crime, or discouraging nearby property owners from maintaining their own property? What are the immediate costs of maintenance, of billing, or filing liens on these problem properties? How does this cost compare in the long term to the immediate costs to probate and clear title to certain problem properties in order to get them back into productive, tax-paying status? Is LCG in fact spending more money in the long-run by continuously maintaining these properties rather than defining a clear disposition process?*

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[12] LaComb, Chad (2014) *Geospatial Analysis of Factors Predictive of Blight and Adjudication in Lafayette, LA* (Abstract).

LCG stakeholders expressed interest in understanding how direct and indirect costs have been measured in other communities. To provide some examples, we have included as Appendix A, a list of recent studies conducted across the country. Some measure direct municipal and regional costs incurred by police, fire, code enforcement and other departments, as well as indirect costs, like decreasing property values and losses in future tax revenue.

## 2) *Use data to inform future policy decisions, and encourage better tracking of the Comprehensive Plan implementation efforts*

Lafayette stakeholders stressed that in addition to understanding what the current vacancy and abandonment data are and what the problem looks like, there is a strong desire to identify a way to predict, and therefore prevent future occurrences of vacancy and abandonment. Stakeholders would like to develop an "early warning system" that automates predictive modeling, and flags areas and/or specific properties that are at greatest risk for future decline. An "early warning system" for at-risk properties would allow LCG departments and outside entities to align and focus their efforts in such a way to slow or stop a harmful downward trend.

In addition to informing policy decisions, LCG would also be much better positioned to monitor progress of its comprehensive plan implementation efforts. PlanLafayette identifies a number of metrics to measure progress. One such metric that directly relates to the problem property issue is the frequency of code citations issued.

## 3) *Have data available across LCG departments and agencies to inform smart investments and targeted intervention*

LCG stakeholders would like to have property and neighborhood data available across departments so that each respective department can better understand the full picture of problem properties across Lafayette Parish. Additionally a robust and widely accessible database would help to reduce cumbersome efforts for gathering data. Departments would ideally be able to measure neighborhood condition using the comprehensive property and neighborhood data in a mapping format, and target their respective interventions – i.e. outreach for housing program assistance, code enforcement, beautification, and nuisance abatement.

## 4) *Publicly display data to help guide decision-making and resident-driven interventions in neighborhoods*

Representatives from the Lafayette neighborhood coteries expressed a strong interest in having problem property data and neighborhood condition data available through a single, user-friendly interactive web map with a number of key data layers. Representatives explained that these data would let them know what the current status of a property is, for example, whether the code enforcement department has cited that property, whether the property is up for sale, or is possibly adjudicated to LCG. This would help them to respond accordingly – e.g. reaching out directly to the owner and providing support with minor home repairs or mowing the lawn if the owner cannot afford or is physically unable to perform the maintenance, or reaching out to an owner's family member to alert them to the problem. One coterie representative even pointed out that there are a number of youths in her neighborhood that the coterie often asks to help mow overgrown lots, and that knowing which lots to focus on, would be especially useful. The data points that neighborhood leaders were particularly interested in accessing through one user-friendly interface included:

- Vacant properties
- Adjudicated properties
- Lafayette Parish Clerk of Court records (record number at minimum)
- Ownership information
- Mortgage foreclosures
- Code violations
- Liens
- Crime

Residents are a critical ally in any effort to improve neighborhoods. While they have intimate first-hand knowledge of the conditions in their neighborhood, knowing the current status of LCG's involvement with problem properties allows them to stay informed and effectively support the intervention efforts.


## IV. RECOMMENDATIONS AND CONCLUSIONS

We developed a number of recommendations based on meetings and interaction with LCG and other Lafayette community leaders. They are categorized into three groups: Organizational, Technical and Information Sharing. The *Organizational Recommendations* focus primarily on ways that LCG departments can improve data collection, foster communication across entities, and build internal capacity for data collection and geospatial analysis. The *Technical Recommendations* demonstrate how customized web mapping applications can integrate disparate systems and databases in a map format and facilitate opportunities for regular data analysis using LCG's existing IT infrastructure. Finally, the *Information Sharing Recommendations* offer ways in which LCG and other entities can more easily share data through formal agreements that result in improved and more comprehensive data for all participating parties. These recommendations support the overarching goal of reducing and/or eliminating current problem properties, as well as preventing future problem properties. However, LCG may realize many other benefits throughout the organization from these recommendations. The recommendations are as follows:


### A. Organizational Recommendations

### 1) Build a Collaborative and Measured Approach

The response to the problem of vacant and abandoned properties requires not only an inter-departmental effort by LCG but active involvement from other community organizations. We recommend a comprehensive, yet focused approach in which all stakeholders can participate. In our conversations with the Lafayette Police Department and the Public Works – Environmental Quality Division, we learned of a Neighborhood Action Team ("NAT") that brings together a diverse set of stakeholders to tackle nuisance properties. The Neighborhood Action Team model was described as a success in addressing a number of nuisance properties collaboratively. For example, the Police and Public Works Department worked together to identify and clear properties with tall grass and a high criminal incidence rate, in order to provide

visibility for the police officers assigned to observing and acting on criminal activity that's occurring at the properties.

LCG should consider establishing a similar model to the Neighborhood Action Team with a general focus on problem properties, but address the specific challenges and opportunities for data sharing across multiple departments and entities. If LCG were to form such a group, organizers should consider including representatives from the following departments and agencies:

- LCG – Planning, Zoning and Development Department
- LCG – Police Department
- LCG – Fire Department
- LCG – Information Services and Technology Department
- LCG – Public Works Department
- LCG – Community Development Department
- Representatives from the incorporated and unincorporated areas
- Lafayette Parish Tax Assessor's Office
- Representative(s) from the Neighborhood Coteries
- Lafayette Comprehensive Plan staff
- Representatives from Southern University Law Center

Six of the eleven agencies and departments listed above, along with a few not listed, are active members of the existing Neighborhood Action Team. This provides a great foundation for aligning efforts between critical stakeholders around tackling problem properties.

It became clear during our technical assistance visits, that increasing communication across departments and divisions has many benefits. Having a diverse set of partners in the same room talking about their various data needs generally results in both short-term and long-term positive outcomes. For example, in a meeting between staff of the LCG Planning and Code Enforcement Divisions, the Code Enforcement Division expressed an interest in seeing its code violation data in a map format. This resulted in a quick response from Planning Division staff offering to map the Code Enforcement Division's data. This was an example of how simply increasing opportunities for communication around property and neighborhood data can help groups better target their efforts and activities.

In addition to simply forming a working group around this topic, defining and reviewing performance metrics around problem properties provides for an informed discussion of tactics and strategies. The working group, or task force, developed should establish goals, and define metrics to measure the progress towards these goals. LCG has already begun the process of establishing metrics in PlanLafayette. One approach to metrics review that engages a diverse set of stakeholders is embodied in the CitiStat process or program (similar to the Lafayette Police CompStat program). This process or program has been implemented in many state and local government organizations across the country (See Appendix D). In short, a "Stat"-like process would:

- Define the key metrics regarding vacant and abandoned property.

- Data on problem properties would be reviewed frequently according to the defined metrics (typically every two weeks) in an inter-departmental meeting with all decision-makers and stakeholders.
- Actions and decisions regarding tactics and strategies would be monitored closely by an assigned team and reviewed again at the next meeting.

The tenets of a performance-based "stat" process include:

- Accurate and Timely Intelligence Shared by All
- Rapid Deployment of Resources
- Effective Tactics and Strategies
- Relentless Follow-Up and Assessment

The City of New Orleans BlightSTAT program and process offers a number of good practices that LCG may also want to consider. Current departments involved in BlightSTAT include the Department of Code Enforcement, the Office of Community Development, the New Orleans Redevelopment Authority, the Law Department and the Office of Information Technology and Innovation.

**Figure 4: Sample code enforcement tracking measure from New Orleans' BlightSTAT**
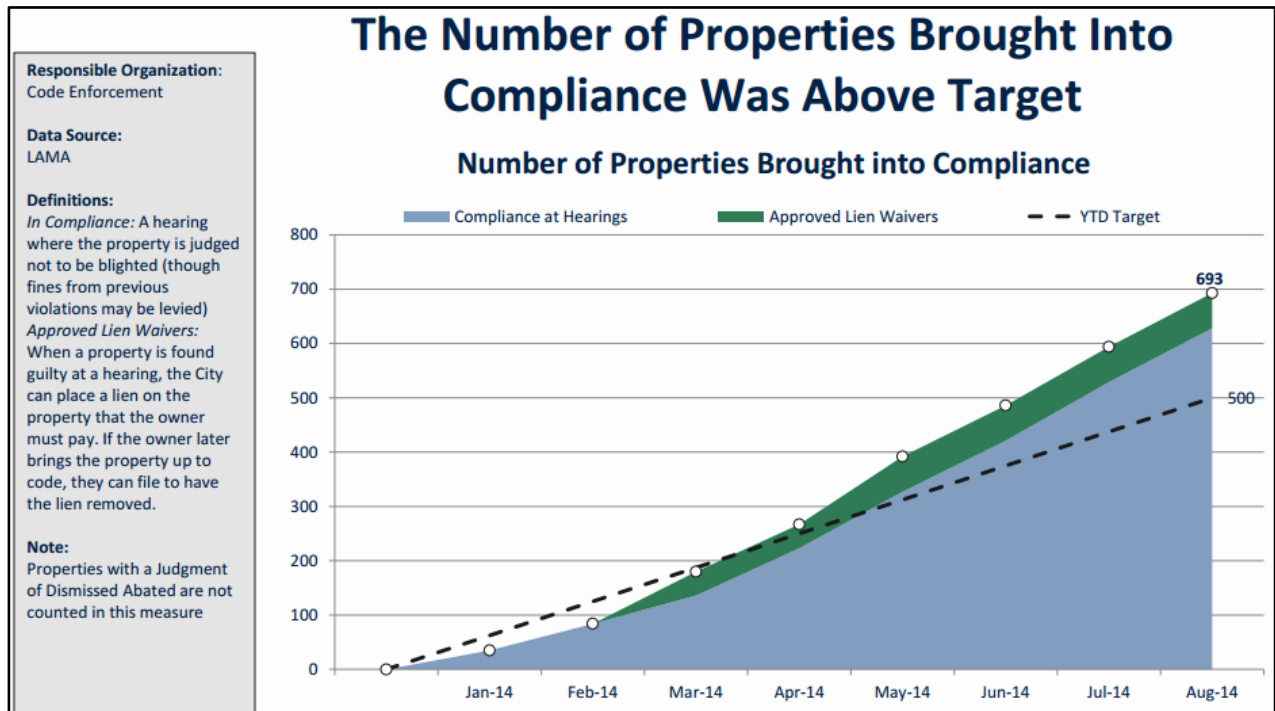


Sample code enforcement tracking measure taken from August 2014 BlightSTAT report.
Source: City of New Orleans, Office of Performance and Accountability, 2014.

To view the City of New Orlean's BlightSTAT homepage, including a complete list of monthly BlightSTAT reports, visit: http://www.nola.gov/performance-and-accountability/reports/blightstat/

Additionally, to help display the ongoing status of problem properties for the public in New Orleans, the City worked with the company, CivicInsight to develop BlightSTATUS, a public web mapping tool. (See Appendix E for screenshots demonstrating this public interface and the code enforcement data displayed.)

## 2) Collect and Manage Comprehensive Property Condition Data

### a. Prioritize the Collection and Tracking of Code Division Data

The Code Division of the Planning, Zoning and Development Department is key to tracking predictive indicators, status and progress regarding problem properties. The information tracked by the Code Division in paper records include number and type of code violation, property condition, vacancy status, and code compliance. It is unclear if all of these data are also recorded in TRAKiT (as discussed further on pages 14-15). We recommend that LCG carefully review the current code enforcement violation data management processes. All code enforcement violation information should be entered into an automated tracking system (TRAKiT) to ensure the timely and accurate recording of property condition data. Ensuring that this information is regularly recorded and tracked in TRAKiT will be critical to sharing the data across departmental users, and measuring progress of interventions over time.

PlanLafayette currently identifies the number of code citations as a metric, but code citations present only a partial or inconclusive picture. For example higher citation numbers can be simply a sign of stricter code enforcement, or a sign of actual heightened code violations by property owners. It is therefore important to look more broadly not just at code violations, but also at code compliance and improved property conditions in order to gain a better understanding of how neighborhoods are changing over time, and how effective current code enforcement actions are.

The City of New Orleans, through its BlightSTAT tracking offers a number of good practices for code enforcement measurement. Using more robust code enforcement datasets, the code enforcement department was able to measure the impacts of utilizing the city's code lien foreclosure option (which as mentioned in the introduction, is now permitted across Louisiana at local option). The City of New Orleans was able to track cost recovery and increasing code compliance rates, demonstrating the progress being made through its code enforcement efforts.

### b. Explore the Use of a Parcel Survey to Enrich Existing Property Data

Beyond data generated through a code enforcement department, a number of cities across the country have performed parcel level surveys to also build a robust dataset of property conditions. Using carefully defined housing condition categories, trained volunteers and/or paid staff have surveyed individual properties, generally residential, using mobile phone applications, or paper based recording. Lafayette's neighborhood coteries offer a promising mechanism for possibly mobilizing groups to conduct this type of survey in the future, if that is something LCG wished to pursue. The survey should be completed within a short timeframe to ensure property condition data are from the same point in time, and can be reassessed and accurately compared to future numbers. Below are a few example cities that have conducted parcel based

condition surveys at various scales (number of properties surveyed) and using different levels of technology (paper-based vs. mobile applications):

- **Large-scale, "high-tech" example:**
  **Detroit, Michigan – MotorCity Mapping Project**
  Using private sector and philanthropic financial support, the team leading the project trained and paid 150 Detroit residents to survey 380,000 individual parcels across the entire city of Detroit. These data collectors utilized a mobile app called Blexting created by Loveland Technologies to track property condition information and photograph each parcel. This data was used to develop a comprehensive blight elimination strategy for the city of Detroit.
  *Learn more here: https://www.motorcitymapping.org/about*

- **Mid-scale, "high-tech" example:**
  **Gary, Indiana**
  Sponsored by a multi-stakeholder partnership including the City of Gary and the University of Chicago, and utilizing a mobile app created by LocalData, over 60 volunteers surveyed over 11,000 parcels across the city of Gary.
  *Learn more here: http://localdata.com/case-gary.html*

- **Mid-scale, "low-tech" example:**
  **Flint, Michigan**
  Using an initial grant from a local community foundation, community leaders from across the city, and City of Flint staff together conducted a citywide parcel survey, relying on data collectors using a standardized paper-based format to record all of the property condition information. These data were used to support the City's comprehensive planning effort. The first phase included only residential parcels, with a second phase covering all commercial property.

A number of other examples of parcel surveys exist across the U.S. The above offer a few examples covering the spectrum of technology, cost, and scale.


3) *Enhance GIS and Technical Coordination,  Communication and Capacity*
  a. **Develop an IS&T GIS Division Mission Statement**

We recommend that the IS&T GIS Division develop a mission statement that describes its key functions and responsibilities within LCG. The mission statement would be distributed to LCG departments and agencies as well as external organizations if appropriate. LCG departments need to have a clear understanding of the information and support functions that will be provided by the IS&T GIS Division. In this way, departments will be able to make informed requests to the GIS Division and manage other needs when necessary.

Departments focused on geospatial information and technologies play an increasingly important role in government. For LCG, the IS&T GIS Division should be actively working with all departments and be aware of all data that exists as well as data that need to be further

developed in order to successfully support other LCG departmental projects. In this way, the GIS Division can help other departments plan and estimate data and application development efforts for specific purposes and projects. Beyond managing geospatial data, GIS organizations have an important responsibility to communicate and coordinate with all other departments. Below is a list of items to consider for the mission statement.

*The IS&T GIS Division will:*

- Coordinate LCG interdepartmental GIS efforts to maximize the value of Lafayette Parish investments and outcomes regarding the application of geographic information and technologies.
- Manage an LCG Geospatial Data Repository to store and disseminate various business information in a geographic format to LCG departments and external partners.
- Support LCG decision-makers through the use of accurate and timely geographic information and analyses.
- Promote the appropriate use of LCG geographic information assets through public and private agreements, partnerships and programs.
- Recommend policies, licensing and standards to support the proper control and protection of LCG geographic information assets.

### b. Organize a GIS User Group

Create a LCG Interdepartmental GIS User Group with representatives from active GIS-enabled LCG Departments to share technical expertise and coordinate on GIS-related projects. The group would meet regularly to provide updates regarding data and application enhancements within their departments. Departmental project plan reviews would provide opportunities to reveal new sources of information and to enhance LCG geospatial infrastructure and databases. The agenda for these meetings would typically include one or two significant geospatial project reviews or presentations and then include an update from all departments about current or planned projects. LCG could consider a phased in approach of this model, beginning with regular user updates on problem property related projects only. The first meeting could include an overview of the Problem Property Support Project described in, *Technical Recommendation 3* beginning on page 25, and how it relates to other agencies and their data. This form of regular communication across LCG GIS users helps to build internal capacity by developing users' skillsets, building awareness of geospatial database content, coordinating efforts, and avoiding duplication of work. Developing and supporting a strong GIS user-base across LCG departments will contribute to enhanced geospatial projects that disseminate relevant property and neighborhood data effectively, and drive more informed decision making across the LCG departments that these GIS users support.

### 4) *Implement a Comprehensive and Consistent Approach to Addressing*
Addressing, or assigning an address to a property, is more complex in practice than in theory. Separate and different addressing databases are maintained by LCG, Lafayette Parish Tax Assessor, LUS and the 911 District. Inconsistent addressing creates significant compatibility

issues for data sharing, integration and analysis. Efforts to link disparate datasets for analyses become more difficult.

We recommend having the 911 Lafayette Parish Communication District assign and maintain all addressing for the parish to ensure that addresses are consistent. The 911 District can put public safety first and make use of existing relationships with key organizations to coordinate and define property and building addresses throughout Lafayette Parish. The groups involved should include LCG Departments as appropriate (e.g. Police, Fire, Planning, Zoning and Development and Community Development) as well as:

- 911 Lafayette Parish Communication District
- Lafayette Parish Tax Assessor
- Lafayette Parish Sheriff's Office
- Representatives from incorporated and unincorporated areas
- Lafayette Airport Commission
- Lafayette Parish School Board

Processes should be reviewed and modified to ensure that addresses are assigned or altered to maximize rapid and efficient 911 public safety emergency response by police, sheriff and fire personnel.

### B. Technical Recommendations

The following recommendations involve actions that the IS&T GIS Division, with the support and cooperation of other LCG departments, can take to improve and support the collection, dissemination and analysis of property and neighborhood data. These recommendations aim to address LCG's current challenges, particularly around the problems of disconnected databases, and lack of data sharing and regular analysis, discussed in our Observations and Findings beginning on page 11. IS&T is identified as a key actor in implementing these recommendations as it is responsible for overseeing the management and use of three of the four property databases (TRAKiT, Cityworks and CrimeView) that house important property and neighborhood data. The IS&T GIS Division also operates LCG's ESRI ArcGIS Online account which can be used to develop useful web mapping applications to integrate and automate data. Because LCG has already made significant investments in its IT infrastructure, particularly its ESRI software and licensing, we tried to develop action items that would utilize existing IT investments and could be implemented with LCG's existing resources, provided these recommendations are made a priority within LCG. The items below were presented as a proposed work plan to the IS&T GIS Division following in-depth discussion of current department capabilities and TASP project goals. The majority of the items in the work plan below reflect tasks that IS&T can implement using its existing capacity. Location Age, as part of this project, was also available to provide technical support as needed within the project

contract period and within the budgeted project hours to begin implementation of these action items.[13]

### 1) *Expand and Enhance Geospatial Infrastructure*

Continue to develop and expand the IS&T GIS information databases and their content including linked business system data.

a.  Formalize a LCG Enterprise Geospatial Data Repository for geospatial data.
b.  Document the contents and distribute the geospatial data catalog to LCG Departments.
c.  Work with LCG Departments to identify data that can be integrated into the Enterprise Geospatial Repository such as Code Enforcement violations, building permits, public complaints and other business data.
d.  Make full use of the existing ESRI Enterprise License Agreement that provides access to a wide range of GIS software products.
e.  Use ESRI ArcGIS Online or Portal as an interdepartmental GIS collaboration tool.
f.  Utilize ArcGIS Online Web AppBuilder for rapid application prototyping and development. [See examples below in #3 of application prototypes that could be built using ArcGIS Online.]
g.  Encourage and support updates to the enterprise geospatial data repository by other agencies. Users from multiple departments can be authorized to edit different parts of the same geographic data layer using a "versioned" ESRI geodatabase.
h.  Enforce geospatial data standardization through the ESRI geodatabase schemas and ArcGIS data models (templates) as well as LCG standards.
i.  Apply ESRI geodatabase replication techniques where appropriate to eliminate duplicate or redundant datasets and ensure synchronization of separate datasets.
j.  Continue the existing integration with LCG Document Management Systems including OnBase and SharePoint. This enables documents, images and drawings to be queried and retrieved by location in a quick and convenient manner.
k.  Make use of dynamic address geocoding services for integration of dynamic datasets that require frequent import.

### 2) *Create a geospatial data development plan*

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[13] As part of the implementation of the TASP project recommendations, Community Progress and Location Age requested a number of property and neighborhood datasets to begin building web application prototypes in an ArcGIS Online account. We successfully received parcel map layers from the Lafayette Parish Tax Assessor after signing a data sharing agreement to use these data for the purposes of the project. These data were integrated into the web application, along with 2013 CrimeView data (at block address level) and a code enforcement data spreadsheet. As of November 24, 2014, we had not yet received additional, complete property and neighborhood data generated by LCG departments that could be integrated in the web application. Data from the eTRAKiT and Cityworks databases were largely incomplete and offered few valuable data points to join spatially with other important datasets.

LCG should create a data development plan for those geographic layers and/or data that do not currently exist but are needed by LCG departments.

3) ***Implement a  <u>Problem Property Support Project,</u> or an IT strategy focused on problem properties, to provide LCG with the ability to disseminate and analyze data on problem properties and related neighborhood information***

The project would develop data automation to allow applications to maintain an up-to-date view of problem properties across Lafayette Parish and help to identify areas of Lafayette Parish that are at risk of decline. Subsequent phases of the implementation would expand the source data, analysis and application functionality based on evolving needs. LCG should consider the following project plan for a <u>Problem Property Support Project</u>:

    a.    Enhance LCG integration of geospatial data with business system data for the problem property project (based on data sharing agreement discussed further in Organizational Recommendations below).

- Prototype the integration of property parcel geospatial data from the Lafayette Parish Tax Assessor's Office along with the use of the Parcel Identification Number (Account Number) as the primary key field for linking data.
- Develop geographic data layers linked to:
  o Code Enforcement violations (TRAKiT)
  o Permits (TRAKiT)
  o Code Complaints (Cityworks and TRAKiT)
  o Tax Sale Properties (LUS and Sheriff's Office)
  o LUS data such as Utility Shut-Offs

    Other relevant property and neighborhood related datasets are highlighted in Appendix C, *Data Requirements Matrix*.

    b.    Develop a working prototype of a Predictive Model or "Early Warning System" for property and neighborhood decline.

- Develop a Risk-Based Typology based on various risk factors and scoring scenarios that signal possible future property and neighborhood decline. At-risk indicators may include data from 3.a. above and may also include:
  o Occupancy status
  o Tax liens
  o Crime statistics
  o Absentee ownership
- Using GIS software tools, create the Risk-Based Typology model and feature classes that will store the risk level values.
- Execute this model and generate the most relevant risk values for Lafayette Parish properties and neighborhoods based on a normal distribution of property risk-based scores.

- Transfer the "high risk" properties into a software tracking tool (TRAKiT) and neighborhood typology layers into web mapping tools (discussed below) for intervention follow up and tracking.
  c. Develop working prototypes for Problem Property Information Dissemination
    - Develop GIS software map services to make key data available to the prototype applications.[14] These include:
      o The current set of adjudicated properties.
      o Tax sale properties.
      o Vacant properties
      o "High risk" properties
      o Neighborhood typology layers
    - Problem Property Map Prototype No. 1 would make use of the current adjudicated properties and the base map. The location of all current adjudicated properties would be displayed along with visual density (clustering) indicators.
    - Problem Property Map Prototype No. 2 would make use of the property risk levels to identify the locations of all at-risk properties within the risk-based typology.
    - A Problem Property Dashboard could then be created that could, for example, categorize and summarize problem properties by Council District and jurisdiction. The proposed working group, discussed in *Recommendation A, 1,* could identify the most critical metrics to track through the Dashboard.

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[14] Using available data, Location Age developed a working Problem Property Support Project application in ArcGIS Online for LCG use.

**Figure 5: Screenshot of Sample ESRI ArcGIS Online Web Map Utilizing Various Property and Neighborhood Data Layers**
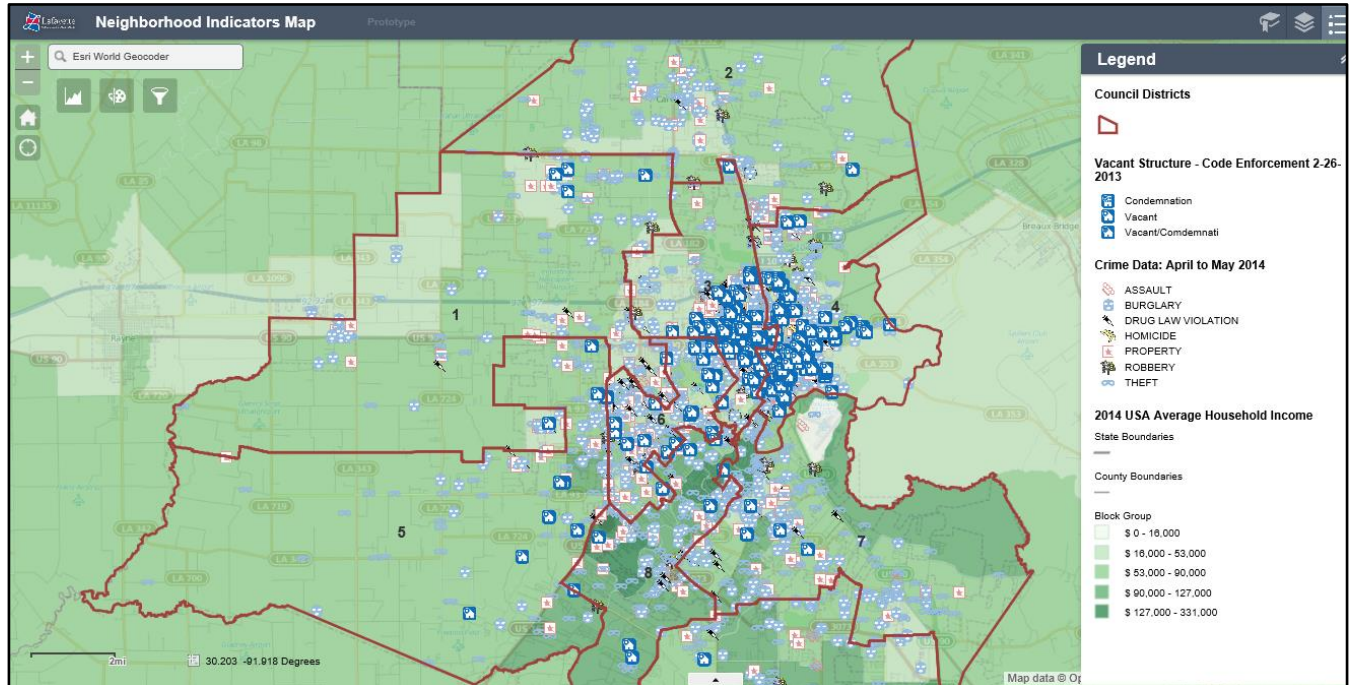


The above web map was developed utilizing an ESRI GIS tool available to LCG. It is a sample interactive map that allows for various data layers to be turned on in order to examine the relationships between important property and neighborhood conditions. This particular map displays limited information including vacant and condemned property data from the LCG Codes Division (spreadsheet), crime activity from CrimeView and external household income data.

### C. Information Sharing Recommendations

Since an organization-wide, comprehensive geospatial data repository integrates many data from various departments and external organizations, it is appropriate to make sure these data are well described in terms of how they are used and with whom they are to be shared. Some data may be sensitive or confidential and others may be intended for certain audiences with distribution restrictions. Examples include crime data and sensitive infrastructure data (i.e. some utility data). Some organizations, internal and external, may be reluctant to share data without a clear description of how the data will be used and possibly distributed. Organizations also expect that users are informed about the sources of their data and will expect this information to be conveyed along with its publication or distribution.

In order to encourage and enforce data sharing arrangements, we have provided some recommendations that will enable the IS&T department to be a responsible custodian of data from other organizations. This will help to maintain effective relationships with these organizations along with enhancing and expanding the overall content of the enterprise geospatial data repository. These recommendations include:

*1) **Document and communicate data sharing requirements with LCG departments***

These data sharing requirements should describe the management and distribution of LCG Enterprise Geospatial Repository by the IS&T GIS Division to external organizations.

*2) **Develop a data sharing agreement between LCG and the Lafayette Parish Tax Assessor***

It is critical to develop a data sharing agreement in order for LCG to gain access to the Tax Assessor's property parcel layer and data, and for LCG to share geospatial and other data with the Tax Assessor's Office.[15] LCG currently manages property related data with addresses which is problematic. Using a unique property identifier will increase accuracy in match datasets and eliminate redundancies.

    a. Document responsibilities of LCG Departments and the Lafayette Parish Tax Assessor in the appropriate management of shared data and distribution criteria for third parties.

    b. Coordinate and communicate information that will help to improve, enhance, correct or clarify shared data. Any errors or questions generated through the use of the data should be communicated to the owner. For example, if an LCG department utilizing Tax Assessor data discovers any incorrect or inconsistent data, this should be communicated to the Tax Assessor's office via regular data reporting. The Tax Assessor should then in turn correct this data in the original database to reflect the most current and accurate information for all parties' benefit.

    c. Describe and share LCG geospatial and other data with the Tax Assessor's Office.

    d. Describe and share the data from the Lafayette Parish Tax Assessor that is of interest to LCG operations. The data will include geospatial property parcel data and property ownership and other data.

    e. Support the use of the unique Parcel Identification Number (Property Account Number) for the sharing of property data within LCG and with the Lafayette Parish Tax Assessor Office.

*3) **Define data sharing plans and necessary agreements for external organizations and the public***

LCG should review the types of data sharing agreements that are necessary for external organizations and the public. For instance, it would be important to indicate that the data are provided "as is" and identify any liability or distribution limitations.

*4) **Define data sharing and dissemination standards for the publication of LCG managed data via the Internet***

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[15] The Lafayette Parish Tax Assessor issued a data sharing agreement during the project period. LCG seeks to have direct access to the Lafayette Parish Tax Assessor parcel data through this data sharing agreement following formal approval by the City-Parish Council. An ordinance was submitted and will be up for a vote on December 16, 2014. This will be an important step in improving property related data sharing across organizations.

If LCG decides to make GIS data downloads available via the LCG website, then the organization should develop a disclaimer that describes the distribution agreement the user enters into prior to downloading data.

### 5) *Explore the ability for the public to download a subset of LCG geospatial data from the LCG website*

Making data available to the public is important. LCG departments should examine how critical data can be easily downloaded from the LCG website.

### 6) *Establish a parish-wide, multi-stakeholder working group (described above in Organizational Recommendation 1)*

Creating a working group to continue discussing data sharing opportunities for LCG and other organizations will be important to the sustainability of these activities. Among other things, this will help identify existing datasets prior to allocating resources to create them. To accomplish improved data collection, management and dissemination, it will be critical to establish regular communication between the necessary departments and external organizations. The multi-stakeholder working group mission is to discuss strategies for improving current data sharing practices for the purpose of better understanding Lafayette's neighborhood markets and vacancy concerns, as well as be positioned to monitor the impacts of its ongoing interventions.

### D. Conclusion

While a number of recommendations have been provided above, we would encourage LCG to adopt, at a minimum, four core approaches to tackling the challenges of problem properties in Lafayette Parish through the lens of data and information systems. The first is to form a working group of key stakeholders and an agency lead who can monitor and manage the actions and efforts around addressing a growing problem property issue in Lafayette Parish. This is in reference to **Organizational Recommendation 1, Build a Collaborative and Measured Approach**. The second is to collect and properly manage comprehensive property and neighborhood data in existing property databases, described in **Organizational Recommendation 2**. A unified property information system will only be as valuable as the data that it contains. The third, identified in **Technical Recommendation 3,** is to begin a Problem Property Support Project, or IT strategy, that will help to create more visibility of the problem throughout LCG and across entities that collect, analyze, and disseminate important information regarding problem property status and neighborhood trends. Finally, we encourage LCG and the Lafayette Parish Tax Assessor to develop an effective, two-way data sharing and working relationship (described in **Information Sharing Recommendations 1 and 2**) that will improve the management and usefulness of property related information throughout Lafayette Parish.[16]

In Lafayette, improvement to data tracking and continuous analysis can help to inform a clear disposition policy to return problem properties to productive use, and to align code enforcement, community development, resident-driven interventions, and other strategies in a way that maximizes potential for neighborhood improvement. It would also better position stakeholders to measure the impacts of their future problem property interventions. Lafayette stakeholders have

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[16] Both the Lafayette Parish Tax Assessor and LCG, prior to the conclusion of this project, began important steps towards formalizing such a data sharing agreement.

already taken important steps towards addressing problem properties through comprehensive planning efforts, neighborhood driven action, nuisance abatement initiatives, state legislative reform, and a number of other actions. An integrated and robust data system for property and neighborhood data, coupled with this existing community momentum and awareness around problem properties will help to further these local actions and make a true positive impact for all those living in Lafayette Parish.

## V. APPENDICES

A. *Recent Studies Showing the Direct and Indirect Costs of Vacant and Abandoned Property,* Annotated Bibliography developed by Center for Community Progress
B. *Geospatial Analysis of Factors Predictive of Blight and Adjudication in Lafayette, LA* by Chad LaComb
C. Data Requirements Matrix
D. "Baltimore CitiStat: Mapping Municipal Accountability" in the ESRI publication, *Measuring Up: A Business Case for GIS* by Bill Ballard
E. BlightSTATUS interface screenshots