

Graffiti Abatement Coalition

An Anti-Urban Blight Organization

PILOT: 2015 LOUISVILLE ANNUAL GRAFFITI VANDALISM CENSUS

165,237* Instances of Graffiti
Vandalism in Louisville Metro

Acknowledgements

Funding Support

Businesses: Best Wash & Yen Happa

The Graffiti Consultants

Rick Stanton, Director – Over the past year, Rick provided mentoring and data to the GAC and its officers. His direction in co-designing the Louisville graffiti vandalism census was instrumental to its completion. Thus, the GAC is in his debt.

Center for Neighborhoods

Tom Stephens, Director
Christi Stevens, GIS Mapping and Data Coordinator

Louisville Metro Office of Management and Budget

Dee Allen, Open Records Coordinator

Louisville Metro Police Department

Lieutenant Jamey Schwab

Atherton High School, Jefferson County Public Schools, Louisville, Kentucky:

Rita Cron Hines, Community Outreach Coordinator – Rita was able to impress the value of this service project on more than 25 high school students. Atherton's student involvement will serve as a model for volunteer recruitment on future projects.

Thomas Aberli, School Principal - Thomas has been proactive about eliminating graffiti from his school and enthusiastically endorsed the participation of Atherton's students in volunteering for civic activities.

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Final Draft (revision 16) for Public Release

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Executive Summary

2015 Louisville Graffiti Census (PILOT)

Residents, businesses, and visitors of Louisville are privileged to be in an area with a rich history, vibrant art and music community, wide cultural diversity, and dense commercial districts. However, in the past decade graffiti vandalism has surged, becoming a prominent nuisance to its citizens and harming development and growth. The first step in a best practices program to combat issues of graffiti vandalism is to institute a city wide graffiti vandalism census.

The main objective of the Graffiti Vandalism Census is to determine the graffiti count, that is, to provide a single value for how many instances of graffiti vandalism there are in the city.

Performing the census annually allows city leaders to effectively answer Gauguin's¹ three fundamental questions so informed decisions can be made:

- Where have we been?
- Where are we now?
- Where are we going?

This census allows Louisville to answer: "Where are we now."² Annual performance of the census will develop a history that will help answer the other two fundamental questions.

The merits of a well-designed, well performed census is that the census is reproducible, and will yield the same results independent of who is performing it.

As a pilot program, the 2015 graffiti vandalism census did not cover the entire City of Louisville Metro and required extrapolation. Based on the extrapolation of the census data collected from the survey area, there are projected to be:

- **40,789** extrapolated instances of graffiti vandalism in the urban services district that conform to the parameters of the study. This value is a biased to be undoubtedly less than the total amount of graffiti vandalism existing within that area.
- **165,237** extrapolated instances of graffiti vandalism that conform to the study parameters in the entire city of Louisville Metro.

¹ Paul Gauguin was a French artist who created a thought provoking oil on canvas painting "D'ou Venons Nous / Que Sommes Nous / Ou Allons Nous in 1897.

² The census covers ~14 percent of the Urban Services District (<3 percent of metro Louisville)

The Census is regarded as the most important step in fighting graffiti vandalism because it is a careful study that demonstrates unequivocally the level of the problem. Armed with this information the city leadership can develop a program, a roadmap to a graffiti free city using methods and best practices developed in other cities that have enjoyed success.

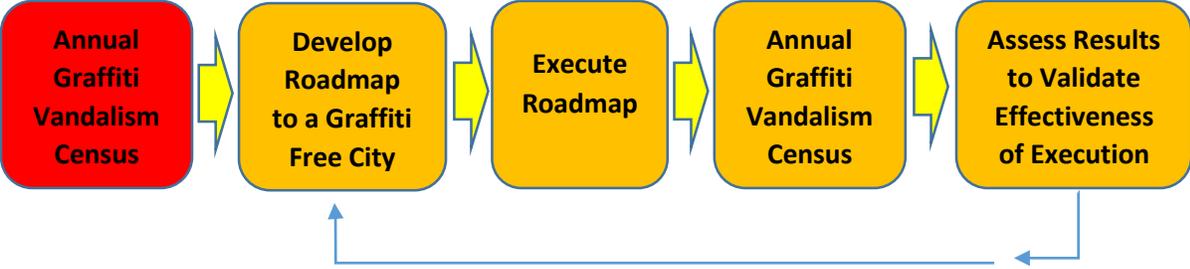


Figure 1 Census usage as part of complete graffiti abatement/prevention program

Introduction

2015 Louisville Graffiti Census (PILOT)

Graffiti is an international phenomenon; it arises organically and spontaneously just as the tendency of youth exists to finger write in the dust on a vehicle's back windshield. However, graffiti vandalism is often confused with the goal of artistic self-expression. Graffiti vandals have self-centered often malicious intentions as opposed to the often touted image of oppressed artistry. With the advent of the internet and social media, the ideology of an individual graffiti vandal in a remote city can converge rapidly with the rest of the world. As a result, graffiti vandalism can grow rapidly both through bootstrapped innovation and/or rapid indoctrination in any metropolitan area if not controlled.

Why perform a graffiti vandalism census?

A graffiti vandalism census is the most important step on the path to Louisville becoming a graffiti free city. The goal of the first census is to answer the following questions:

- How much graffiti exists in the city?
- Where is the graffiti and how is it distributed?
- How many graffiti vandals are committing the damage?
- Is the graffiti related to gang activity?
- How does the geographic distribution of graffiti relate to other city metrics (i.e., crime, poverty, population density)?

Completing this first census and then continuing to perform it annually is a way of gauging if the graffiti vandalism problem is getting worse, better, or changing within the city.

Moreover, answering these questions by performing the census assists city leaders in making a multitude of decisions related to graffiti vandalism:

- How much money to allocate to graffiti abatement and/or prevention;
- Which of the city's districts need money for abatement;
- Where best to deploy law enforcement; and
- Whether current corrections programs and criminal sentencing are effective at preventing recidivism.

The results of the census also provide the opportunity for law enforcement, policy makers, and social scientists to develop and test hypotheses for fighting graffiti vandalism. Such hypotheses to be tested are:

- How increases in Louisville's graffiti vandalism can predict rises in crime.
- How decreasing graffiti vandalism in a Louisville neighborhood reduces crime.
- How Louisville's residents littering habits respond to graffiti vandalism. (1)

Information derived from the census also has broader applications outside of graffiti vandalism abatement, reduction, and prevention. Knowing about increases in graffiti can be useful as a leading indicator of unrest and other more serious crimes, such as burglary and drug trafficking.

Arming city leaders with this information may allow them to diminish or prevent crime waves with targeted programs. (1)

Types of Graffiti

Graffiti originally was a word that literally meant writing on a wall with the context of being illicit. In modern times it has come to be associated with particular writing and street art style. With graffiti the writer's name or symbol is usually the focus, making up the largest part of the work. The following are types of graffiti vandalism currently present in Louisville (see Appendix F – Example Images) for graphical examples of each type of graffiti):



Figure 2 Graffiti Vandalism Example-Tagging

- **Tag or Moniker:** A tag is the simplest type of graffiti and is the most basic version of the writer's street-name or moniker. Tags are usually a one color stylized graffiti writer's signature; if they're associated with a crew³, they might also contain the crew's name or initials. Tags can be seen everywhere and are done with spray paint, marker pens, crayons and etching tools such as drill bits, pens, pencils, and pocket knives. If a tag is put up over another writer's tag or piece, it is considered extremely disrespectful. A graffiti writer will often put his or her tag next to a large mural (also known as a piece) as the work's signature. Typically tags take only seconds to perform. (2) (3) (4)

- **Throw-ups or Throwies:** A throw-up is more complicated than a tag. It may consist of more than one color and be written in bubble letters. Like a tag, a throw-up can be accomplished quickly and repeatedly taking only a few minutes. Usually a throw-up is not space filling; rather just an outline. A throw-up can contain the same information as a tag, such as the graffiti writer's or crew's moniker. (5) (6) (2) In terms of complexity and time investment, a throw-up falls between a tag and a mural. (3) Some graffiti scholars also include small filled in versions of tags as throwups, which is



Figure 3 Graffiti Vandalism Example - Throwie

³ "Crew (*krew or cru*): A group of associated graffiti vandals who often work collaboratively and tag the crew's initials along with their own name. Crew names are often a collection of three or four letters and have numerous, frequently amusing referents." (5) (Request **Error! Reference source not found.** Appendix for list of Louisville based tagging crews).

accomplished by spraying a layer of paint in one color and then outlining it in another color. (7)⁴

- **Mural or Piece:** A large-scale graffiti painting executed directly on a wall usually involving three or more colors that incorporates the writer's moniker in a stylized or artistic form of letters. Murals are typically filled in to completely cover a surface in paint. (2) The term piece is "short for masterpiece." (5) Graffiti writers usually select a large visible expanse of open wall or a framed garage door to place a mural. They can work from edge to edge; the size of the wall, quantity of paint available, and time to work are generally the only limit to the size of the mural. Vandals are known to use ladders to get up high or harnesses and rope to lower themselves down to produce large murals that are out of reach.



Figure 4 Graffiti Vandalism Example- Blockbuster

- **Blockbuster or Roller:** A blockbuster is an extremely large mural, almost always done in a block-shaped style, done simply to cover a large area solidly with two contrasting colors. Sometimes the whole purpose of the blockbuster is to block other writers from painting on the same wall. Blockbusters are usually accomplished with extended paint rollers and gallons of cheap exterior paint. (7)



Figure 6 Graffiti Vandalism Example - "Hello my name is" sticker

Stickers or Slaps: Stickers are

an easy (some say lazy) and quick way for vandals to effortlessly put up a tag quickly.⁵ Graffiti writers used to use the "Hi, My Name Is" name tag stickers, but it is now common to see writers slap the Priority Mail that are free and easy to obtain from the U.S. Post Office.⁶ Vandals take these free

stickers then decorate them with their own tag. In addition, mass produced stickers enable vandals to efficiently vandalize in large quantities with elaborate, professional-looking print with a message or image. Graffiti vandals like stickers because they can take their time on the art in private, then quickly slap them up wherever. (4)



Figure 5 Graffiti Vandalism Example - Priority Mail



Figure 7 Graffiti Vandalism Example - Stop Sign covered in "Slaps"

⁴ Bomb or Bombing: "To paint prolifically over numerous surfaces in an area. Bombers often use tags or throw-ups rather than more complex pieces because they can be executed faster." (5)

⁵ Graffiti vandals also will put up just about any other sticker they can get their hands on such as commercial marketing. Often times the use the stickers to produce so-called humorous results from words already on street signs. (E.g. A stop sign with a statement added via a sticker below the word STOP, such as EATING ANIMALS.)

⁶ There are even instructional websites informing vandals about how to obtain U.S. Postal Service stickers without leaving the comfort of their homes. (See <http://www.instructables.com/id/How-to-Get-and-Make-Graffiti-Stickers/>).

- **Gang Signs:** Gangs will use graffiti messages to stake out territory and instill fear amongst rival gangs. Louisville gang graffiti is most commonly seen as the gang's name, the gang's territory street numbers, and memorials for fallen gang members.
- **Political Speech:** Writing or symbols and art often satirical that draws attention to a political or humanitarian issue.

Examples include:

- Free Nelson Mandela
- Stop Wars
- Man is born free...but is everywhere in chains



Figure 8 Graffiti Vandalism Example:
man removing Hate Speech

- **Hate Speech:** Writing or symbols used to incite hate, fear, and oppression. Some hate speech can be cross categorized as religious speech, as many religious fanatics/zealots will utilize religious ideology to attack other people's beliefs and values.

- **Religious Speech:** Promotion of the religion, religious inspired messages, condemnation of non-believers etc.
 - Artistic images;
 - Messages; and
 - Mixed.



Figure 9 Graffiti Vandalism Example:
Religious Speech



Figure 10 Graffiti Vandalism Example: Street Art

- **Street Art:** Any art developed in the public space. Street Art is often indistinguishable from graffiti vandalism, but is commonly recognized as a way to reduce vandalism. When community oversight is applied, Street Art can increase the commercial value of a previously blighted area. As an example an area of Miami known as Wynwood has purportedly had a great deal of positive effects from street art. Most pieces that are recognized by the community as street art do

not solely feature the artist's name as is generally the case with graffiti. If the Street Art is not commissioned by the property owner and is undesired, however, then it still constitutes graffiti vandalism regardless of the quality or technique.

If the Street Art is ugly but commissioned by the property owner, then as long as it doesn't violate any overlays or public decency laws it is considered protected free speech. In such instances public scrutiny can be abrasive.

Census Design and Methodology

2015 Louisville Graffiti Census (PILOT)

For the graffiti vandalism census data to be meaningful for year to year comparison, it is imperative for the census to be executed annually in the same manner each time it is performed starting from year one. The attributes for conducting it in the same manner include, but are not limited, the following:

- Surveying the same areas;
- Using consistent definitions for counting graffiti (i.e., what constitutes tags and murals);
- Performing census at the same time each year;
- Using the same methods for counting graffiti; and
- Systemically executing the survey with the same instrument and instructions.

Volunteer Recruitment –

Volunteers were recruited through a variety of methods, including a Facebook campaign, council person e-newsletters, emails to GAC volunteers and volunteer coordinators for high schools.

Survey Areas

Originally, the survey areas were created as specific routes mapped out with a program designed for cyclists and runners called “Plot a route” (<http://www.plotaroute.com/>). Using this tool ensured that each route was a specific length. In the end, this tool was quickly abandoned by the surveyors as the printed maps were difficult to use. In future years, while the surveyors are conducting the census, it may be possible to use this tool’s speech function that gives turn by turn directions. Instead, it was sufficient to give the surveyors a simple road map with a bounded area that they were responsible for to ensure complete coverage. The pattern of neighborhoods surveyed vs. neighborhoods not surveyed was based on available volunteer participation. Routes and maps were made for all neighborhoods within the 264 expressway.

Driven routes: In survey areas where less density of graffiti was anticipated, such as residential areas, away from commercial districts, routes were designed to be performed by surveyors traveling by vehicle covering approximately 20 to 25 miles of road and alleyways. The expected average speed for the driven routes was estimated at 10 to 15 miles per hour. In areas with higher densities of graffiti, surveyors were hampered by the constant stopping or slowing to photograph and record each instance of the graffiti vandalism. Therefore, fewer miles were allocated in survey areas with expected⁷ high densities of graffiti.

Pedestrian routes: Within each survey area, some survey routes were designed to be performed by pedestrians due to the expected high density of graffiti on commercial property. Examples of such routes are within the East Market District, known as NuLu, and along the Bardstown Road corridor where graffiti may be smaller in scale and not as visible from the street. Where high graffiti density exists, it also slows the rate of progress in completing a census route to only a few miles per hour.

⁷ Some areas were generally known to have a high graffiti burden from abatement activities.

Survey area boundaries: Using the Center for Neighborhoods’ online Neighborhood ARGIS portal (www.CenterForNeighborhoods.org), boundaries for survey areas were defined as close as possible to neighborhood boundaries. Depending on the size of the neighborhood, neighborhood boundaries were sometimes fractured into more than one survey area (see survey area size in *Table 1: Graffiti Census Actual Totals*). In some cases, a neighborhood boundary edge was extended a couple of blocks if a large man made or natural boundary existed, such as a creek, interstate, or railroad, making it a contiguous area for the surveyors. For consistency purposes, overpasses and bridges were generally bounded on the western side of the obstacle.

Survey area size: Survey areas were generated to allow the surveyors up to two (2) hours to cover the given area by foot or vehicle.

Survey area coverage: To ensure that every road and alleyway in a survey area was traveled, Map My Tracks (<http://www.mapmytracks.com/>), a smart phone app, was used. This program uses GPS and real-time tracking to plot the route the surveyors traveled to prevent double backs that could result in double counting graffiti and to show where the surveyors did not yet survey. During the latter part of the survey for administrative purposes, a screen shot of the app serves as a record that the group completed the area in addition to showing the path taken. It also shows amount of time and tracks the speed along the route.

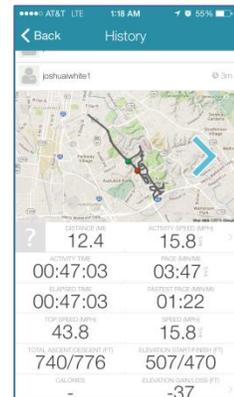


Figure 11
MapMyTracks GPS
tool - Poplar Level
Neighborhood Survey

Tallying Graffiti Census Instrument



The census instrument (See Appendix C: Census Instruments) is a chart for capturing the surveyors’ total tally for different types of graffiti vandalism.

These definitions are used to create a precise reproducible result for surveying an area regardless of whom performed the survey. The types of graffiti tallied were:

- **Tags:** Writings and symbols up to 4 feet by 4 feet. A tag will be counted even if an effort to abate it has been undertaken if the original tag can still be interpreted or discerned. If a tag exceeds 4 feet by 4 feet then it will receive multiple tallies.
- **Murals:** Any multi colored space-filling writing or bubble letter writing larger than 4 feet by 4 feet. There is one tally of graffiti for each 5 feet wide by 7 feet tall section of mural. A mural between 6 and 10 feet wide, for example, would be considered 2 counts. If a mural is still able to be interpreted or discernible as a mural after an attempt to abate it, then it is still counted.
- **Graffiti Scars:** Where graffiti is covered up or removed but the surface was not restored to its original form. The counting method is the same as for tags or murals, as the tally seeks to count the number of instances of vandalism. Graffiti Scars tallies do not apply to stickers.



Figure 12 Graffiti Scar example

- **Stickers:** Stickers of any sort are used by graffiti vandals to vandalize signs and other property. Taggers will often obtain stickers from the U.S. Postal Service and then decorate them with their own tag. Recently, some of the more prolific Louisville vandals are reproducing their tags as professionally printed stickers.
- **Gang Signs:** Graffiti is used to mark a gang's territory. In general, gang signs are not regarded as related to tagging in Louisville. For this year's census, gang signs were rarely found.
- **Other:** In the event the surveyor could not determine how to tally the found graffiti or the found graffiti does not fit within the given types of graffiti, an option was added for tallying "other."

In addition to the graffiti tallied, the surveyors were also required to record the different types of graffiti observed by type of surface. The list of surfaces provided to the survey volunteers can be found in Appendix C: Census Instruments. The types of surfaces were:

- **Public:** Easily identifiable public property such as traffic boxes, government buildings, traffic signs, and municipal trash cans.
- **Private:** Residential and commercial property are classified as private property. Private property included abandoned houses, trash carts, dumpsters, and business signs because they are the responsibility of the owner of the land on which they reside. Abandoned buildings that are in the public domain were treated as private property for the purpose of this census as they are too difficult to discern as public property without extensive research prior to conducting each year's census and including that information on each route for the surveyors. Therefore, there is bias in the survey for how little of the graffiti vandalism is actually the responsibility of the Louisville Metro Government to abate.
- **Distributed Property:** A term coined by the GAC to indicate the property that private entities distribute throughout city easements and on the private property of other entities. A few examples are: AT&T utility boxes, CSX utility boxes, utility poles, manhole covers, newsstands, soda machines, and billboards. These are listed as such because the owner of the land on which they reside is not responsible for removing the graffiti.
- **Vehicles:** Any non-permanent structure is included in this category, such as trailers, pods etc. (Vehicles in the city of Louisville are currently not legally covered by graffiti abatement ordinance.)
- **Other:** In the event the surveyor could not determine the type of surface for the found graffiti, an option was added for tallying "other."

The complete list of definitions provided Survey to volunteers can be found in Appendix C: Census Instruments

Land Surface Area Measurement

The surface area values used to calculate the total graffiti vandalism for the surveyed portion of Louisville Metro were calculated using the online tool Daft Logic (<http://www.daftlogic.com/projects-google-maps-area-calculator-tool.htm>). Polygons were drawn on a Google generated map according to the boundaries of a neighborhood, district, or some other standard geographic figure. With that polygon, the DaftLogic tool's calculator generates the surface area calculation from the map.

The method employed to determine the total graffiti tally for a majority of the urban services district within Louisville Metro is by land area (see Figure 13: Louisville Metro Urban Services District). Using land area ignores a number of factors and will undoubtedly bias the results. However, regardless of bias trending the graffiti tallies up or down, it does provide a reasonable estimate of the amount of graffiti vandalism in lieu of a complete survey.

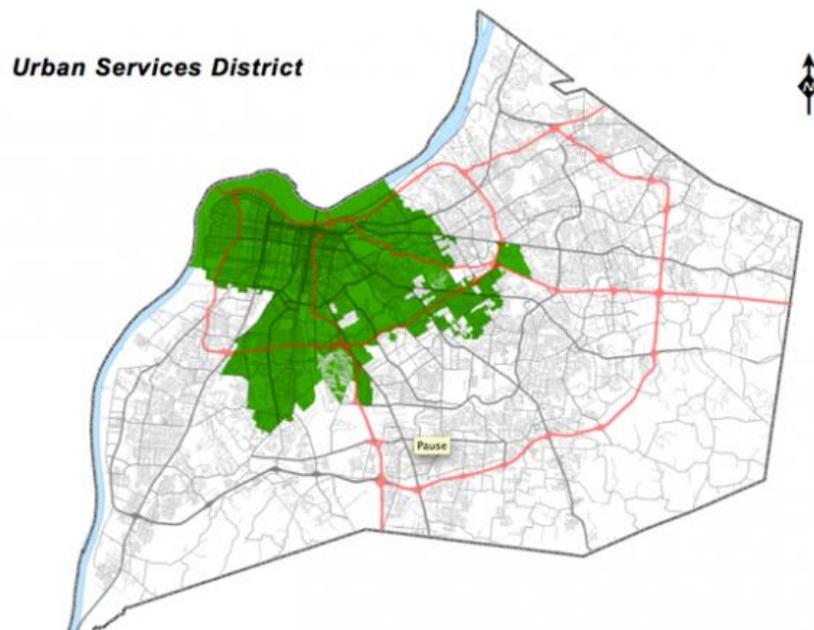


Figure 13: Louisville Metro Urban Services District

Census Results

2015 Louisville Graffiti Census (PILOT)

When reviewing the census data, it is important to understand it only represents the percentage of visible graffiti vandalism from the street and, in most cases, only visible when traveling in one direction. Graffiti on the backs of surfaces, placed on sidewalks, and not visible from the street were not likely counted, except in the few instances of walking routes or when surveyor's exited the vehicle to get better pictures

In addition, the data does not include graffiti properly removed or where a surface was restored. Examples of surfaces not included in the census data: public restrooms; backs, sides, and roofs of structures; abandoned buildings; undersides of bridges; and canals. The census will also be prejudiced to under count with lower tallies of graffiti vandalism than the total count that exists because of graffiti being missed or unrecognized as vandalism that exist in plain sight.

Raw Data

The following table shows the tallied graffiti counts for the different areas surveyed.

Table 1: Graffiti Census Actual Totals

	Totals by Type of Graffiti Vandalism				Totals by Surface Vandalized			Total	Approximate Area Km2
	Tags	Murals	Scars	Total Stickers	Public	Private	Distributed		
Smoketown	612	80	166	45	115	507	63	903	1.21
Butchertown	463	77	597	19	213	299	53	1156	1.43
North Portland	377	51	0	18	123	285	3	446	1.43
East California	270	103	30	6	21	319	33	409	1.69
Germantown (East)	305	7	126	56	171	159	42	494	0.6
Phoenix Hill	306	10	129	13	64	206	75	458	1.16
Germantown (North)	295	3	25	14	178	104	34	337	0.39
Original Highlands	240	5	121	54	106	177	27	420	0.569
East Russel	165	53	67	5	106	100	10	290	1.07
Tyler Park	215	0	0	5	105	100	15	220	1.42
Camp Taylor	112	11	11	16	53	86	0	150	1.17
Shawnee (South)	122	3	49	13	27	115	3	187	2.4
Schnitzelberg Segment	29	0	0	10	28	3	6	39	0.34
Poplar Level	32	0	2	6	21	5	12	40	1.06
Belknap	19	5	12	0	12	6	6	36	2.01
Audubon Park	28	0	4	8	18	18	0	40	2.42
Deer Park	192	0	13	35	114	103	14	240	0.5
Highlands Douglass	26	0	20	1	14	13	0	47	1.67
North Clifton	73	24	22	0	66	21	13	119	0.97
Totals	3,881	432	1,394	324	1,555	2,626	409	6,031	23.509

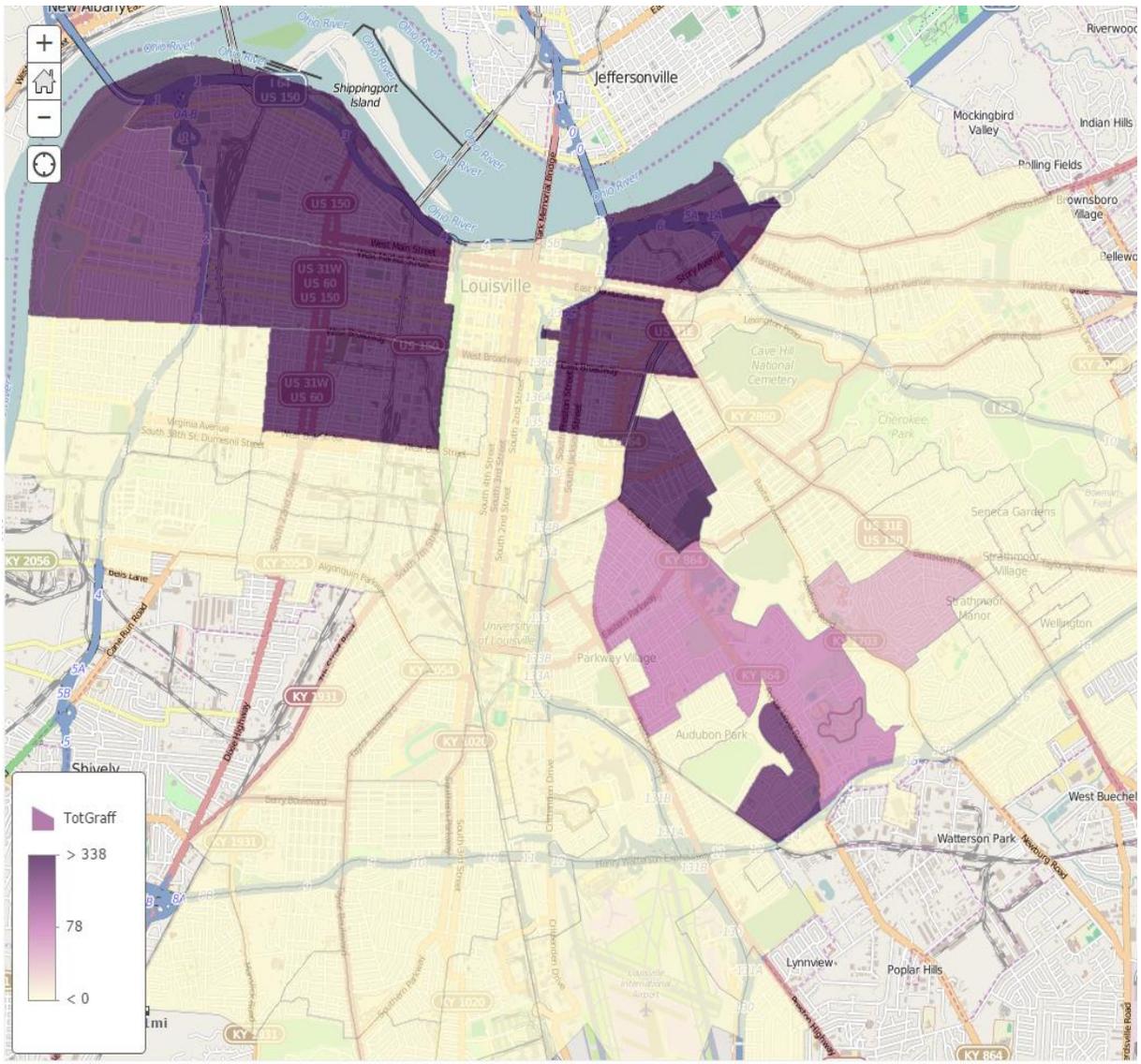


Figure 14: Graffiti Vandalism Heat Map

Extrapolation and Interpretation of Graffiti Tallies

It is not the intent for graffiti censuses to rely on extrapolation. Best practices requires that a total tally of the city's graffiti occur. For this limited pilot census, the actual data is useful to explain the amount of graffiti vandalism occurring in the surveyed areas of Louisville Metro, but it cannot directly estimate the volume or types of graffiti vandalism in its un-surveyed areas. In order to answer how many incidences of graffiti vandalism exist in Louisville, extrapolation of the annual census data is required. At the writing of this report, there is not a known standard method or best fit model to extrapolate the quantity of graffiti in those un-surveyed areas.

Extrapolated Totals

Table 2: Extrapolated Totals

Area Surveyed (KM²)	23.509		
		6,031	Tally for Area Survey

Percentage of total area = Area surveyed / Size of the extrapolated area
 Tally of area surveyed / Percentage of Total Area = Extrapolated Tally

Urban Services District			
Size of Urban Services District (KM ²)	159		
Percentage of Total Area	14.79%	40,789.87	Extrapolated Tally

Non-Rural Jefferson County			
Size of Urbanized Area of Jefferson County (KM ²)	644.1		
Percentage of Total Area	3.65%	165,237.45	Extrapolated Tally

Total extrapolated tally for the Louisville Metro’s Urban Services District that conform to the parameters of the census:

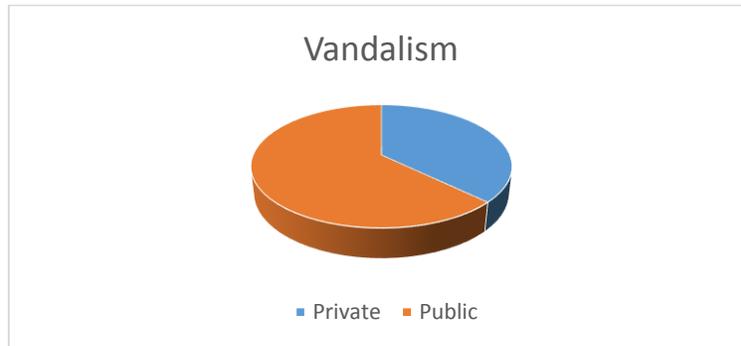
40,790 Instances of Graffiti Vandalism

Total extrapolated tally for the non-rural parts of Jefferson County that conform to the parameters of the census:

165,237 Instances of Graffiti Vandalism

The extrapolated totals may be biased if the un-surveyed areas contain substantially less graffiti than the surveyed areas. While there was no counting involved, surveyors observed the presence of graffiti

vandalism in many other neighborhoods and districts in and around the timeframe that this census was undertaken. In fact, these observations of un-surveyed areas indicated ubiquitous graffiti vandalism after multiple years of inadequate abatement. This is to say that the rate of graffiti vandalism accumulation may be far lower in some areas, however, it has reached the similar magnitudes over time.



Public property is under represented because abandoned properties are counted as private even though they are the responsibility of the city to maintain.

Undercounting of graffiti vandalism of the surveyed area was anticipated and encountered. For instance, in 3 survey areas that were rechecked on foot, they showed that the tally was 25 to 50 percent higher than the original tally counts of the driven route.

In 3 survey areas that were rechecked on foot, they showed that the tally was 25 to 50 percent higher than the original tally counts of the driven route.

There were many tags that were obscured from the street or went unnoticed because of tag size or speed of the vehicle in which the surveyors conducted the original tally. In addition, as previously mentioned, there is a great deal of graffiti vandalism that was not counted in this census, namely public restrooms, public schools, and the backs, sides and roofs of buildings.



Figure 15: Uncounted Graffiti Example –Back of Fire Hydrant



Figure 16: Uncounted Graffiti Example—Water Meter Cover



Figure 17: Uncounted Graffiti Example—Back of Utility Pole

Example Economics

A single census tally for a mural is defined as filled in painted surface area between 16 and 35 square feet (4x4ft² to 7x5ft²). There were 435 murals counted in the survey area. The average cost of a standard 12oz can of Rustoleum spray paint, a common paint used by graffiti vandals as evidenced by cans left behind) is \$4.00.

435 murals x 16ft² = 6960ft² for the lower range of possible surface area of murals.

435 murals x 35ft² = 15225ft² for the upper range of possible surface area of murals.

6960ft² x (\$4.00 / 16ft² per can) = \$1740 minimum cost to produce the 435 murals in the surveyed area.

15225ft² x (\$4.00 / 16ft² per can) = \$3806.25 maximum cost to produce the 435 murals in the surveyed area.

Extrapolating these numbers to the rest of the urban services district and the city results in giving the following ranges.

Mural Economics	Lower range	Upper range
Total predicted spray paint cans for survey area	435	952
Total projected spray paint cans for Urban Services District	2940	6436
Total projected spray paint cans for Louisville Metro	11918	26082
Cost of spray paint cans for survey area.	\$1740	\$3808
Cost of spray paint cans for Louisville Urban Services District	\$11762	\$25730
Cost of spray paint cans for Louisville Metro Mural	\$47671	\$104280

Future Annual Censuses

2015 Louisville Graffiti Census (PILOT)

A proper annual graffiti vandalism census must include the entire metropolitan area of Louisville Metro. By conducting such a metropolitan-wide survey, census biases are removed resulting in a more accurate representation of the volume of graffiti vandalism incidences within Louisville Metro as well as its distribution by type and location.

Other Methods

While there may be a correlation between population density and graffiti vandalism, population density was not used for extrapolation as it is likely only a correlation and not causation. Examples of this can be

seen in the rise and fall of graffiti in industrial and commercial areas of Louisville Metro with the lowest population densities throughout the city.

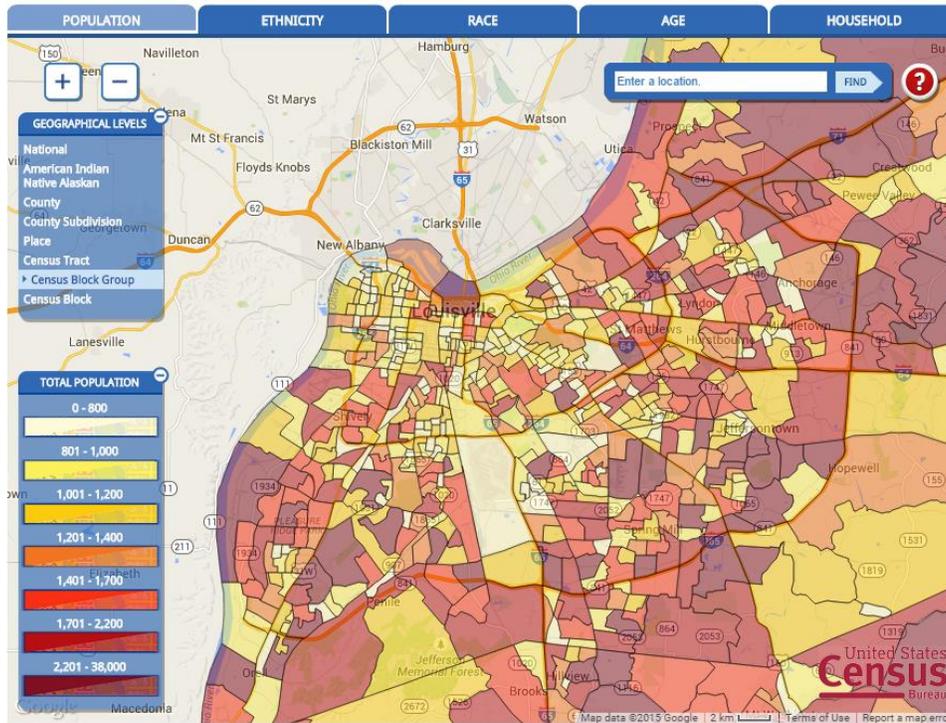


Figure 18: Population Density by Census Block Group

Zoning may be a better fit for extrapolating levels of vandalism. Inside Louisville Metro’s Urban Services District, there is a strong correlation between the patterns of tagging and the type of zoning. However, a complete census will need to be conducted to verify that this correlation is not spurious. For instance areas that are zoned for single family residential without commercial properties within two blocks have much lower graffiti vandalism levels. As observed in the surveyed areas, areas with mixed use, commercial, and industrial zoning that are pedestrian accessible have higher amounts of graffiti vandalism. Abandoned structures result in substantially higher amounts of graffiti on the property and nearby properties.

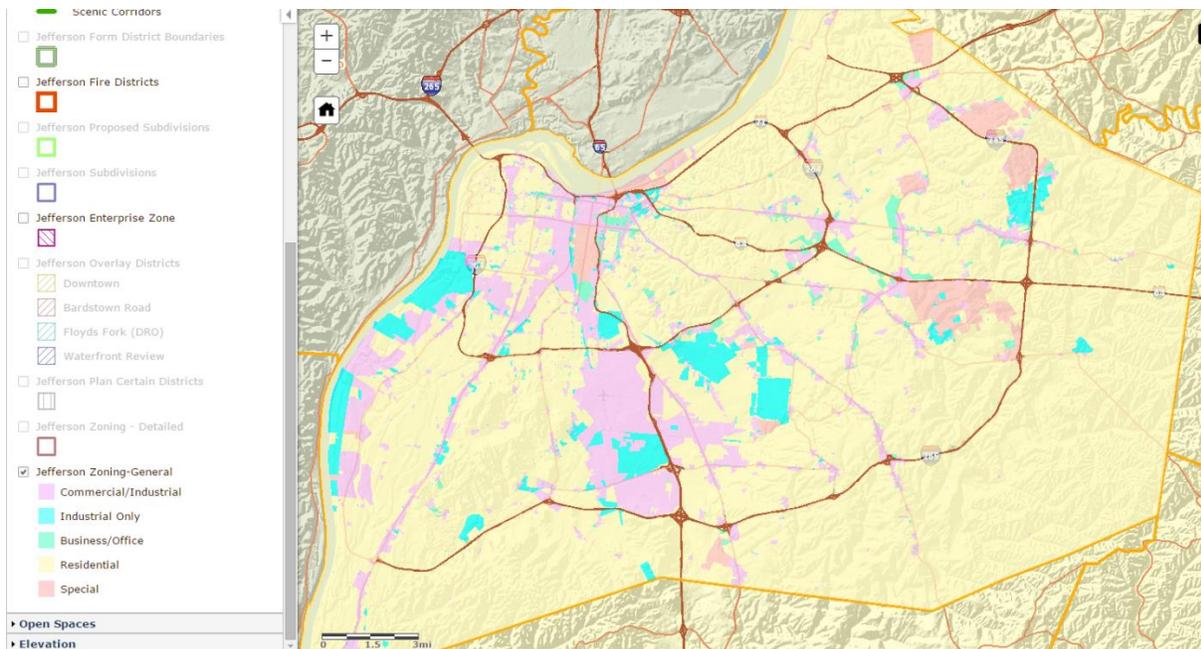


Figure 19: Metro Louisville Zoning

Any future census extrapolation methods should use a coefficient of determination to determine how well the regression line matches the data for areas near rail lines as there currently appears to be a strong relationship between railways and graffiti vandalism.

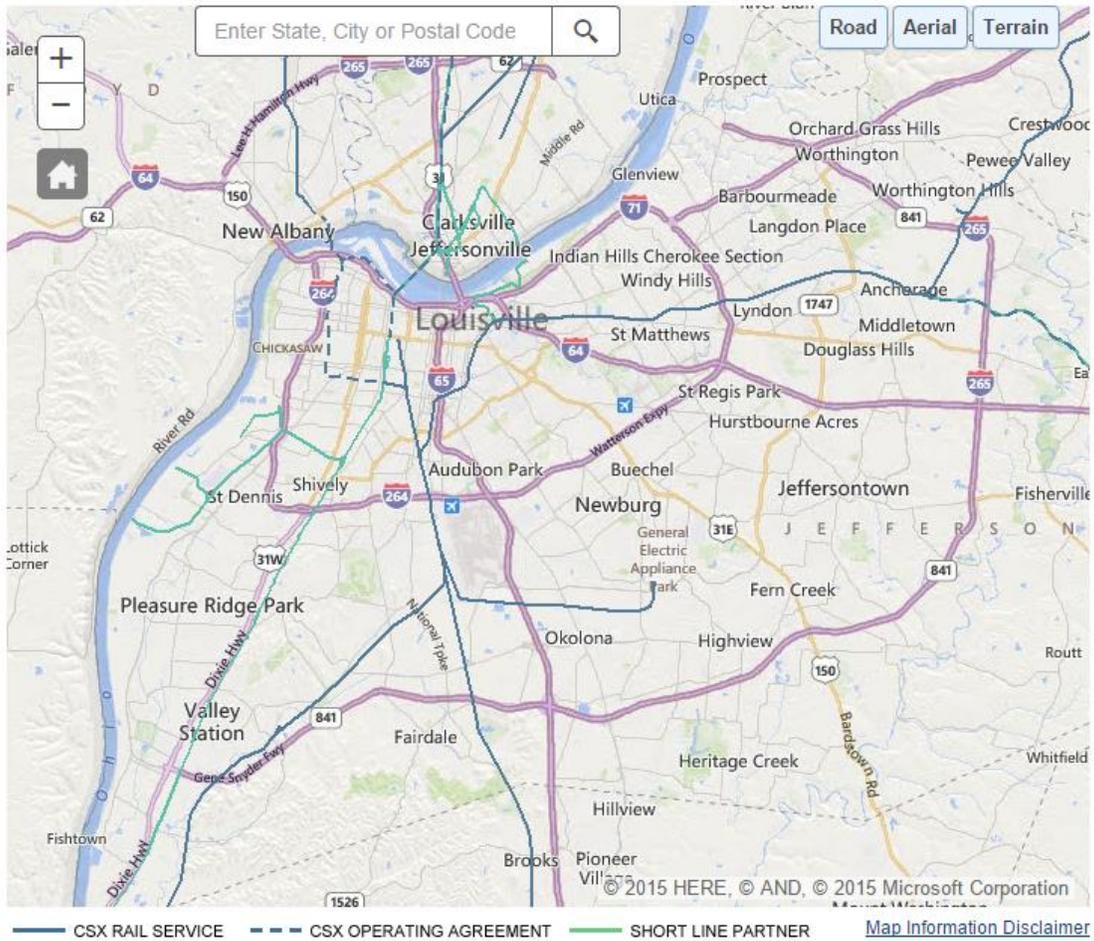


Figure 20: CSX Railroad Map

Recommendations & Next Steps

2015 Louisville Graffiti Census (PILOT)

Develop and fund a full graffiti vandalism census to be performed yearly when graffiti levels are in excess of some threshold (either by density or total count) and to be performed every two or three years when graffiti levels are below that threshold. This will enable count comparisons between years to properly redirect and add resources to areas within Louisville Metro that need attention the most.

The full census should employ more professional resources (for example a statistician) and a wider volunteer recruitment campaign. City employees should function as team leaders for each of the groups and city leadership participation would also increase the perceived legitimacy of the program.

Implement the Roadmap to a Graffiti Free city. (Separate Report) The roadmap is a unified comprehensive plan for complete abatement and prevention of graffiti. Cities that have employed a comprehensive plan have seen their graffiti vandalism drop to triple digits city wide in less than 5 years.

The Roadmap does call for additional tracking information that can assist in census values, such as:

- Implementing a Graffiti Tracking database;
- Tracking Abatement efforts of public staff by location and cost;
- Tracking signage replacement due to vandalism; and
- Making information technology enhancements to the way police incident reports are created to allow them to be filtered for graffiti related arrests and crimes.

Perform a separate focused annual census of Jefferson County Public Schools' properties for graffiti vandalism. A pilot effort was conducted at Atherton High School that yielded valuable information in tracking and identifying graffiti vandals.

Appendices

Appendix A: Louisville Metro Data

Graffiti Vandalism Reports to Metro Call

Graffiti Vandalism Reported to Metro Louisville via 311 as a phone call, website submission, or 311 MSD smart phone app.

Table 3: Graffiti Reports to Louisville Metro

GRAFFITI	
YEAR	TOTAL
1997	999
1998	542
1999	446
2000	681
2001	438
2002	268
2003	439
2004	346
2005	419
2006	422
2007	790
2008	572
2009	487
2010	362
2011	541
2012	747
2013	554
2014	954

Graffiti Vandalism police reports

NOT AVAILABLE IN THE CITY OF LOUISVILLE - Open Records Request #15-1243

Arrests made in connection with graffiti vandalism

Graffiti vandalism abated by Commerce guild using NDF Grants:

Appendix B: Actual Census Data

Available on website GraffitiAbatementCoalition.com -> Annual Census > Raw Data

Appendix C: Census Instruments

These are the documents that were provided to survey volunteers.

Census Instructions

Graffiti Abatement Coalition

An Anti-Urban Blight Organization

Before you start the **Annual Graffiti Vandalism Survey**, please bring the following materials:

- A Water Bottle
- Route Map
- Survey Instructions
- A smile...you are walking/driving the streets of weird Louisville!

The Survey Process

This activity should take you about 2 hours.

To coordinate the efforts of many volunteers, please only travel the route drawn on your map.

You and your team member(s) will use the Graffiti Survey Instrument to tally each graffiti incidence seen **AND** the type of surface where the graffiti occurs. This means for each scrawl of graffiti you see, you should record one mark on the sheet at the cross section for the **type of graffiti** and the **type of property**.

- Routes are set up to be in a neighborhood or thoroughfare. Only record graffiti that you see on your route. Graffiti that is not on your route will be counted by another volunteer or team. The goal is to only count graffiti once; help us to avoid accidentally counting graffiti twice so we do not bias the survey by staying on your route.
-  Keep your eyes peeled! Graffiti can be anywhere (and we mean anywhere!)
-  Help us with pictures!
 - If you would like to use a camera or camera phone to photograph each piece of graffiti, please take and save those pictures. At the conclusion of the survey, a coalition officer will show you how to transfer your photos.
 - Vehicles: Along with the graffiti, make sure you also take a photo of the license plate of any vehicle with graffiti.

Once your survey is completed, please tally your marks for each column.

Each survey area will have police officers making regular rounds through the alley ways and streets as part of their beat. If you have any safety concerns about an area, feel free to call police dispatch at **502-574-7111** for an officer to be dispatched for a drive by. If you require an immediate police response, dial **911**.

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Cheat Sheet About Graffiti

Definitions:

Types of Graffiti

- **Etching** - Graffiti tags that were made with a sharp object, usually on glass or wood.
- **Graffiti Scar** - A completely painted over piece of graffiti which has not been restored to match the rest of the surface.
- **Mural/Piece** - A large (greater than 4'x4'), complex, and labor-intensive graffiti painting. Often incorporate 3-D effects and many colors and color-transitions, as well as various other effects.
- **Sticker/Slap** - Random sticker or stickers with art on them mostly on traffic signs and utility polls.
- **Tag/Moniker** - A stylized signature, normally done in one color. A way of signing a name anonymously. Sometimes random words are used, like Splat, or also symbols.

Types of Property (see list of examples below)

- **Distributed Property** - Special type of corporate property, which exists on a "right of way," land owned by another public or private entity.
Private Property - Property owned by an individual, a business, or a corporation.
Public Property - Property owned by the city, state, or federal government.

Examples of Public, Private, & Distributed Properties:



Public

Traffic Signs, such as:

- Stop signs
- No Parking signs
- highway signs
- street signs

Side walks

Water meters

Traffic utility boxes

Municipal trash receptacles

U.S. Property (post offices, blue U.S. Postal Service mail boxes)

Any structure or item on park property

Private

Buildings

Businesses

Houses

Business signs

Trash carts

Meters

(e.g. gas, electric, water)

Abandoned Buildings

(boarded up structures)

Dumpsters

Distributed

Utility Boxes, such as:

- AT&T
- CSX
- Time Warner / Insight
- LG&E
- Louisville Water Co.

Courier Journal boxes

Utility Polls

Telephone Booths

Donation Bins

□

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Graffiti Abatement Coalition

An Anti-Urban Blight Organization

Route Number: _____						
Graffiti Types	Public	Private	Distributed Property	Vehicles	Other	Total
Tags ¹						
Murals ²						
Graffiti Scars						
Etchings						
Slaps						
Gang						
Other						
Total						

¹ Tally for each 5 feet of width (e.g. 10 foot long mural 6 feet high is 2 mural tallies)

² If a tag is larger than 4'x4' then add tallies for each 4x4 of space

For each instance of graffiti you find, locate the appropriate section on the grid and place a tally mark or number. For example, the tag #AEMO on a residential trashcart should be recorded as a tag on private property. If there are several tags on a surface, a number can be used instead. For example, a lampost with eight tags on it could be recorded with the number 8. When completed please total all the graffiti before turning in your survey sheet.

Tally  or a # e.g. 13

When complete please tally each section then enter the line and column in each of the designated Totals

The Graffiti Abatement Coalition and our partners would like to thank you for your volunteer efforts in this vandalism survey. The information generated by this survey will help direct funding to the areas most affected by graffiti vandalism.

GAC-Rev-1005

Appendix D:

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Appendix E: Glossary

Abatement – from the root to Abate, or remove, refers to the process of eliminating graffiti.

Bombing – See “Throw-up” - “To paint prolifically over numerous surfaces in an area. Bombers often use tags or throw-ups rather than more complex pieces because they can be executed faster.”

Buffer – A person who removes or covers of graffiti

Buffing – The act of covering graffiti with paint

Crew – A group of graffiti vandals that have banded together. Each crew has a name which is usually abbreviated as a 3 or 4 letter acronym.

Moniker – Nick name/alias

Mural – A large (greater than 4x4ft) multi-color, space filling graphical work.

Paint Pens/markers - Tipped pens and markers that are used to write in Acrylic paint, usually reinforced with UV and water resistant materials.



Figure 21 Examples of Paint Pens/Markers

Slap/Sticker – Stickers placed on public or private property without permission. Stickers may be commercial advertising or custom made tags or drawings to represent the graffiti vandal.

Spray Paint – Canned paints under the pressure to create an aerosol when released.

Tag – symbol that represents the graffiti writer or vandal, not unlike a signature.

Throw-ups – 1 or 2 color bubble letter tags that are greater 2x2ft

Appendix F – Example Images

Tagging



Stickers/Slaps



Scars

Political



Political Murals



Hate





Gang:



Religious



Block Busters



Legal Street Art



Figure 22: Side of Café 360 on Bonnycastle Avenue, art by Noah Church



Figure 23: Behind Panera Bread (WHERE?), art by Noah Church



Church

