

# Lake County General Health District

## Lake County Environmental Health Survey

2017-2018

Approved April 23, 2018



**Lake County  
General Health District**

**Public Health**  
Prevent. Promote. Protect.



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Lake County General Health District

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## 1. Executive Summary

The Lake County General Health District's (LCGHD) Environmental Health Department aimed to develop an understanding of the background of environmental health (EH) in Lake County. As such, a steering committee of three EH personnel chose to utilize the Protocol for Assessing Community Excellence in Environmental Health (PACE EH). Following the tasks described in PACE EH, the steering committee strategically assembled a team of local stakeholders to serve as the EH Assessment Team. This team served as a diverse representation of the Lake County community which included the following participants: officials from the City of Willoughby, Madison Township, North Perry, Perry Village, Leroy Township, a local environmental consultant firm, Ohio State University Extension Office, County Board of Developmental Disabilities, County Council on Aging, County Planning & Commercial Development, County GIS Department, County Utilities Department, County YMCA, County Farm Bureau, the Wickliffe Fire Department, and the Eastlake Fire Department.

Together, the EH Assessment Team determined the goals and objectives of the assessment and distributed a link to a comprehensive 66-item, 22-question survey administered by SurveyMonkey®, a web-based survey platform. Survey links were disseminated on the LCGHD website, and the agency's respective Facebook page. Additionally, the Environmental Health Department utilized a local radio show, Lake County senior centers, Meals on Wheels®, and both Lake County agencies and businesses, respectively, to promote survey completion. A total of 938 Lake County residents and/or workers completed the survey, which was active from November 14, 2017 to March 29, 2018.

Respondents were predominately female (69%), Caucasian (95%), between the ages of 45 and 64 years old (44%), had a Bachelor's or graduate degree (44%), and currently resided in households comprised of two members or less (59%), with an annual household income ranging between \$50,000 and \$99,999 (37%). The majority of respondents indicated that they lived and worked in Lake County (62%), with Mentor City and Painesville Township accounting for more than one-third of respondents' current residence (33%), while Mentor City and Painesville City accounted for more than one-third of current employment (32%).

Overall, more than half of respondents were aware of EH programs and services provided by the LCGHD (65%). A number of respondents indicated a need for recycling pickup centers (53%) and access to public transportation (52%), while indicating concerns regarding the presence of litter (81%), vacant properties (76%), flooding (74%), outdoor air quality (71%), the safety of walking and bike travel (69%), traffic noise (69%), environmental-related disease (61%), contaminated water sources (61%), odors (56%), secondhand smoke (55%), and animal and insect-based diseases (52%).

PACE EH was developed by the National Association of County & City Health Officials (NACCHO), with collaboration from the National Center for Environmental Health (NCEH) of the Centers for Disease Control and Prevention (CDC). This protocol has been utilized by many other institutions and proven success as a method for engaging communities to identify their EH concerns, act on their EH problems, and improve their health and quality of life (CDC, 2016). LCGHD and the EH Assessment Team used this process to answer important questions about the EH status in Lake County and determine community priorities for action.

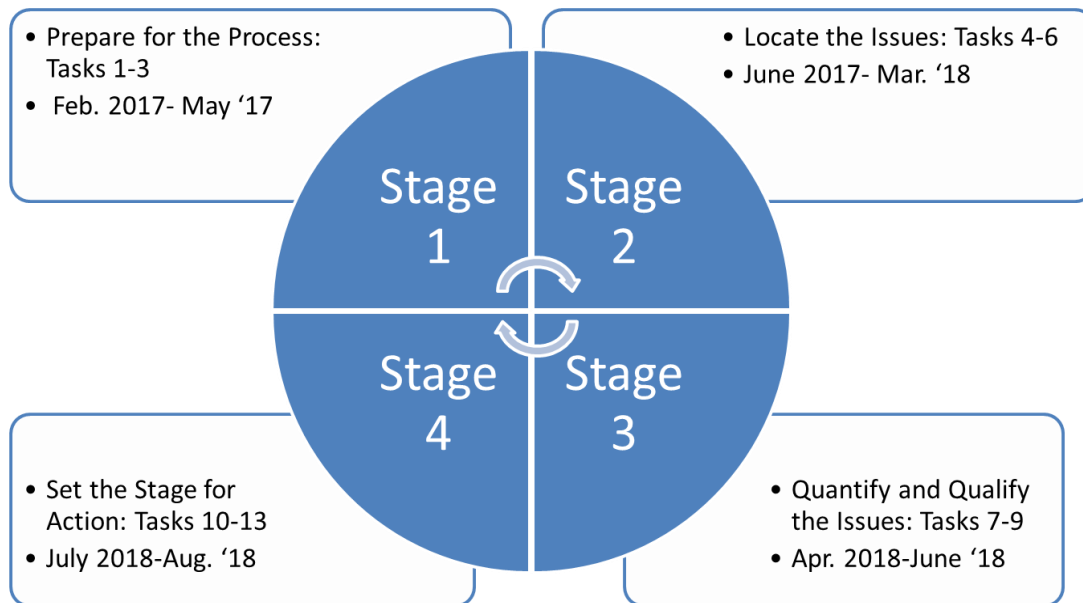
## **2. Introduction**

The Lake County General Health District (LCGHD) is a Public Health Accreditation Board (PHAB) accredited health department that provides comprehensive public health services to each of the 23 communities in Lake County, Ohio. Their mission is to work to prevent disease, promote health and protect the community. Their vision is to ensure the citizens of Lake County are able enjoy the continually improving health and quality of life; a healthy, happy, and productive workforce, which provides quality health services. The Environmental Health department of the LCGHD includes the following programs, services, and community outreach: sewage treatment systems, school environmental health assessments, recreation programs (public pools, bathing beaches, and campgrounds), mosquito control, animal bite reports, food safety, air pollution control, plumbing (including residential and commercial), private water systems, licensing tattoos/body piercing facilities, storm water outfall screenings, regulating solid wastes, and handling public health complaints.

LCGHD focuses on improving the health status of their local community, which is much more effective when done in collaboration with organizations and individuals in the community. To understand the local environmental health status within the county, LCGHD utilized the Protocol for Assessing Community Excellence in Environmental Health (PACE EH). This thirteen-step process guides local health officials to accurately identify EH issues at the community level; discover, collect, and analyze meaningful EH data; and identify populations at disproportionate risk of environmental exposure and adverse health outcomes. This assessment engages the local community in a series of tasks to investigate the relationships between what they value, how their local environment impacts their health, and what actions are necessary to live safer and healthier lives.

The PACE EH was chosen by LCGHD's Environmental Health department and the EH Assessment Team in order to develop a baseline for the county's environmental health status. The project began in February of 2017 and concluded in August of 2018. After gaining a deep understanding of EH in the county, the team prioritized

EH issues identified through the community survey. The selected issues were discussed by the team, and an action plan was developed to improve the EH status within the county.



**Figure 1.** Project Timeline for LCGHD PACE EH

### **3. Methods**

#### **Task 1.**

To begin the PACE EH in Lake County, LCGHD formed a steering committee which consisted of three environmental health personnel. For task 1, this committee evaluated the Lake County community’s ability to undertake the assessment. This included the resources, skills, and capacities; such as time, money, personnel, and technical expertise that were needed and available for the assessment. They also reviewed the quality of LCGHD’s relationship with the community, including the existence of effective working relationships with other agencies and organizations. Through support from the LCGHD Health Commissioner and the commitment of several staff member’s involvement on the EH Assessment Team, the steering committee concluded that Lake County was equipped with the necessary capacity to undertake a community environmental health assessment.

## **Task 2.**

As part of task 2 of the assessment, the Lake County community was defined and characterized. Lake County is located in the northeastern part of Ohio and consists of 23 municipalities; broken into 9 Cities, 5 Townships, and 9 Villages. It is the geographically smallest county in Ohio, encompassing only 228.2 square miles of land. However, it ranks 11th with a total population of 230,041, according to the 2012 Census data (State of Ohio, 2017). In order to characterize the community, it was important to understand the political, social, economic, and cultural systems within the area. This information was identified through the 2010 Census (US) Ohio County Profile of Lake County. It was determined that the population was made up primarily of Whites, African Americans, and Hispanic or Latinos. With this population, it was important to establish a representative group of committee members that would indicate the scope and target of the project. For this assessment, the target community was all of Lake County where local team members were recruited in order to involve as many different community assets, resources, institutions, and leaders as possible.

## **Task 3.**

Assembling a community environmental health assessment team was the goal of task 3. While forming the assessment team, the steering committee aimed to compile a group of individuals from a broad cross-section of the community that represented a diverse range of local economic interests, political structures, and organizational institutions. Possible collaborations with community leaders and organizations to join the team were determined and letters requesting their participation were distributed by mail. Individuals from the community were identified as part of the initial decision to perform the assessment, an informational and organizational meeting was held by the steering committee. In this meeting, a background of the PACE EH was provided and members were informed of their roles as part of the assessment team.

The expectations of team members, the governing and decision-making structures, and ground rules for the assessment were established as part of the first meeting of the assessment team. Team member's roles included advising, consulting with, and making recommendations to the steering committee with the hopes of equal representation and input of each member's own perspective. The team was governed by a chair that presided over all meetings, a vice-chair that presided in the absences of the chair, and a recording secretary that supervised and presented the minutes at each meeting. The governing structure was developed and each team member was entitled to one vote on each issue that submitted to the assessment team. Team members voted on the governing positions and decided the steering committee members would hold the officer positions.

## **LCGHD Environmental Health Assessment Team Members:**

Matt Armand - Lake County Utilities, Director of Administration

Jim Branch - Lake County GIS Department, Director

Tim Brown - Madison Township Administration.

Eric Cotton - Lake County Farm Bureau, President

Tom de Haas - Lake County OSU Extension Educator, Agriculture and Natural Resources

Bob Diak - Lake County YMCA, Chief Operations Officer

Jennifer Fabian - LCGHD Clerical Specialist III

Catherine Hewitt - LCGHD Health Education/MRC Coordinator

Haley Imler - Kent State University, MPH-EHS Student

Darryl Keller - City of Willoughby CBO

Ed Klco - North Perry Village, Mayor

Ashley Knight - Lake County Board of Developmental Disabilities, Director of Nursing

Dan Lark - LCGDH Environmental Health, Director

Chris Loxterman - LCGHD Environmental Health, Supervisor

Christine Margalis - LCGHD Quality Assurance & Special Projects Coordinator

Heather Neibecker - Lake County Board of Developmental Disabilities, Director of Nursing

Nancy Niehus - Lake County Council on Aging, Director

Marian Norman - Lake County Planning & Commercial Development, Program Manager

Jim Powers - Wickliffe Fire Department, Chief

David Radacy - Lake County Planning & Commercial Development, Director

Joan Sablar - HzW Environmental, Group Leader, Industrial Hygiene, Lead & Asbestos Services

Rich Van Pelt - Leroy Township Trustee

Margaret Warner - Lake County YMCA, Director of Membership Development

Ted Whittington - Eastlake Fire Department, Chief

#### **Task 4.**

Task 4 covered defining the goals, objectives, and scope of the assessment. The assessment team concluded that the scope of the assessment was: the LCGHD PACE EH will survey people that live and/or work within Lake County to identify environmental health areas of concern and develop an action plan for those items. The assessment explored environmental issues in Lake County concerning air quality, water quality, safety and health, the built environment, and quality of life.

The goal of the EH Assessment Team was to engage the community in an environmental assessment and to set goals for EH improvement, by using scientific information and community perceptions. This goal would be achieved through the following objectives: utilizing the PACE EH to involve community residents to identify the major environmental health concerns in Lake County, and to decide which issues should be priorities, through assembling available information, and proposing strategies for improving public health for all of Lake County. This process was also guided by a shared vision, which was to develop evidence-based and realistic solutions to environmental health concerns deemed important by Lake County residents, through a community-based process and a representative EH Assessment Team. A tentative timeline was developed and agreed upon by the team. This timeline was set to complete the assessment in 18 months and would give the team direction and motivation to complete the goals and objectives of the assessment (Figure 1).

#### **Task 5.**

A list of community-specific EH issues was generated in task 5. The intent behind the list of issues was to identify concerns that were most relevant to community members and to determine how prevalent or widespread these concerns were in the community. Different data-gathering methods were evaluated and selected based on an assessment of team member's past experiences along with methods that would encourage a high response rate and a variety of involvement from the community. The team chose to conduct an informal assessment of the community by developing a comprehensive 66-item, 22-question community input survey that was distributed online and, in some cases, on paper (Appendix A). We aimed to distribute to our older population through placing paper copies at local senior centers and sending copies to the county Meals on Wheels® participants. Paper surveys were also available at the health department. The survey was available online through a link on the LCGHD website, LCGHD's Facebook page, and sent to employees at different Lake County agencies through email. Advertising for the survey included an interview on a local radio station and placing ads in community newsletters. Social media was used through the LCGHD Facebook page and other county agency pages.

The survey development began through an EH issues priority survey that was completed by the assessment team. Each member contributed their top issue out of a range of various problems to create a preliminary list of



issues. A draft survey was developed from the preliminary list of environmental issues and reviewed with assessment team members. Feedback from the team resulted in condensing the list of issues to only ones that were actionable and most relevant in the community. A survey was drafted that covered local attitudes toward a list of 5 environmental health topics and 29-subtopics; including, water quality, air quality, safety & health, built environment, and quality of life; along with knowledge on environmental health programs and services provided by LCGHD, and some demographic information. The draft survey was edited from assessment team feedback and reviewed with the team a second time. From this, the survey was pilot tested with all Lake County General Health District employees. The results from the pilot test were used to improve the final version of the survey. A total of 938 Lake County residents and people employed in Lake County completed the survey, which was active from November 14, 2017 to March 29, 2018.

### **Task 6.**

As the team was distributing the survey and collecting responses, data gathering and background information efforts also took place. These efforts were a part of Task 6, which centered on analyzing the issues with a systems framework and understanding: 1) the relationship between these issues and health, environmental conditions, and quality of life; 2) the connections among the issues; and 3) the public health protection factors currently in place within the community that affect the status of these issues. This framework assisted in identifying and describing why people in the community cared about an issue, the linkages between issues of concern, relevant contributors, and possible opportunities for mediation. Mapping the issues in this manner assisted the team in ranking the issues and selecting issues to prioritize.

### **Task 7.**

Developing locally appropriate indicators were achieved through task 7 of the assessment. The team was challenged by this task as it is similar to task 9 in developing profiles. Based on the results from the survey, indicators were difficult to measure due to little changes in local conditions and community priorities. The community response to the survey highlighted issues that are difficult to measure and may be controversial based on an individual's perspective. Through the use of local indicators, the qualitative information gathered in task 6 was translated into both quantitative measures and indicators to be used in developing the issue profiles in task 9.

### **Task 8.**

During task 8, the standards against which the local status can be compared were chosen. The use of “what we know already” about the community and services provided was gathered in this task to be used as we continued the process. These standards, or benchmarks, provided a point of comparison for the community's environmental health status by determining what the indicators revealed about the relative status of the

community's environmental health. The team condensed several closely related issues and made them part of the same issues that are profiled in task 9.

#### **Task 9.**

Issue profiles were generated in task 9. Profiles were the technique to format gathered information into succinct narrative reports. **See Appendix C for the individual profiles**

#### **Task 10.**

The team used the profiles developed in task 9 to compare the issues according to the relative importance of each issue against all other EH issues identified by the community. This allowed the team to determine the criteria and method to rank the issues for task 10. Due to resource constraints, it is important to identify and limit the number of issues the assessment addressed through a community action plan. As such, the team prioritized the EH issues covered on the survey by items that garnered the largest response by those surveyed

#### **Task 11.**

Priorities for action were determined in task 11. Once the issues were ranked, the team discussed and voted on which of the high ranking issues were most important for action in the community.

#### **Task 12.**

Task 12 involved developing a community action plan. Accordingly, the team devised strategies to address the EH problems or ensured ongoing maintenance of the assets and combined the strategies for all priority issues into a community action plan to address the community's most pressing EH concerns. The assessment team underwent a strategic planning process for each issue considered high priority and developed goals and objectives; identified contributing factors, possible interventions and prevention activities, community assets, and potential barriers; and the potential for different cost-effective interventions or activities. Finally, the team determined different resources needed and potential partners, along with a timeframe and measures of success for the interventions as part of the community action plan.

#### **Task 13.**

Evaluating progress and planning for the future were the final steps in the PACE EH process. As part of this task, the assessment team developed a plan for ongoing evaluation, both of the progress achieved on the action plan and of the assessment process. The team also began preparations for ongoing community-based EH assessment activities. An agreement from the team defined the measure of 'success' for the assessment goals and of the process utilized, and noted lessons learned to improve future efforts on the project. Since the PACE EH is

structured to be a continuing process, this first project in the community provided valuable insights for improving action plans, assessments and community involvement for fostering health and environmental improvements in Lake County.

#### **4. Results**

The sample size of over 900 responses was chosen by using SurveyMonkey's sample size calculator. Using a 95% confidence level, a margin of error level of 4, and the 2016 population estimate from the U.S. Census; a response rate of 599 was determined to be significant (n.d.). Margin of error is used to predict if survey results reflect the views of the overall population, with smaller margins of error better predictors at a given confidence level (SurveyMonkey, n.d.). To increase confidence in the results, the team chose to increase the sample size from 600 to 900 (Appendix B).

Demographic questions were compared to U.S. Census data to understand if our sample was representative of the overall Lake County population (U.S. Census Bureau, n.d.; CDC, 2013; Census Reporter, 2016). Respondents were predominately female (69%), Caucasian (95%), between the ages of 45 and 64 years old (44%), had a Bachelor's or graduate degree (44%), and currently resided in households comprised of two members or less (59%), with an annual household income ranging between \$50,000 and \$99,999 (37%). These results were similar to census estimates: 51.10% were female, 92.60% were white alone, the median age was 43.7 and 18.90% were aged 65 or older, 24.53% had a Bachelor's degree, while 19.50% had a graduate degree, the average household consisted of 2.3 members, and the median annual income was \$58, 029 (in 2015 dollars). The majority of respondents indicated that they lived and worked in Lake County (62%), with Mentor City and Painesville Township accounting for more than one-third of respondents' current residence (33%), while Mentor City and Painesville City accounted for more than one-third of current employment (32%).

Overall, more than half of respondents were aware of EH programs and services provided by the LCGHD (65%). A number of respondents indicated a need for recycling pickup centers (53%) and access to public transportation (52%), while indicating concerns regarding the presence of litter (81%), vacant properties (76%), flooding (74%), outdoor air quality (71%), the safety of walking and bike travel (69%), traffic noise (69%), environmental-related disease (61%), contaminated water sources (61%), odors (56%), secondhand smoke (55%), and animal and insect-based diseases (52%).

## **5. Lessons Learned**

This was the first PACE EH project in Lake County. As such, the process was met with some expected challenges. LCGHD attempted to complete this project in an aggressive timeframe, so frustrations were encountered by the team. For instance, increased participation in assessment team meetings and on project tasks was necessary. Most of the background work was performed by the health department staff. Increased buy-in and participation by outside team members is needed to improve the process.

Conducting the survey in the fall and winter months limits the number of community event opportunities for people to attend and seek participation. Additionally, the holiday season might have impacted the response rate, as reduced meeting opportunities occurred within the team and participants were focused on other tasks. Future research might consider distributing the survey during the summer where events that draw a large and diverse segment of the population can be utilized. . A suggestion to improve the survey distribution and analysis is to have specific link for each segment of the population to track response rates and to send reminder emails to seek additional participation. For example, have a link for county businesses, county agencies, and the general public. This might also be advantageous to understand community segment knowledge of EH, and compare views of EH within the county.

Responses from the survey indicated that there was room for improvement in the survey design, including less general environmental issues and better description of topics. For instance, many people did not respond to statements regarding private water systems, ambient air monitoring, and environmental related diseases. A detailed description about the status of EH and specific EH issues in the county could be enhanced by asking participants to pick the degree which they agree or disagree with specific statements about EH issues in the county.

## **6. Conclusion**

Public health practice is evolving to include a more localized and collaborative approach for health promotion and protection. This is represented in the philosophy and methodology behind the PACE EH that guides local health officials through a series of 13 tasks to define, understand, and act upon local environmental health issues. A comprehensive list of EH issues was generated by the local community and used to develop community specific standards and indicators, draft issue profiles, rank concerns, and set priorities for action through this process. Supportive data and resources available to the community were also collected, which assisted in developing and fostering positive working relationships with community stakeholders. This assessment tool lead the Lake County community in identifying their own EH issues, and creating a strategic action plan to address identified issues. The PACE EH process has allowed LCGHD to strengthen the building of a healthy

Lake County through involving local stakeholders in identifying the best methods to prevent, promote, and protect the local environment and health.

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# Appendix

## Appendix A: Environmental Health Survey Instrument

### Lake County Environmental Health Survey

Lake County General Health District  
Environmental Health Assessment Team  
Public Input Survey

The Lake County General Health District would like to identify the major environmental health concerns of people that live and/or work in Lake County. Environmental Health is defined as the prevention or control of disease, injury, and disability related to the interactions between people and their environment. Your responses will help the health district to understand which issues are most important and need attention in Lake County.

Participants in this survey will respond to questions in the following questionnaire. The questions explore your attitudes toward environmental health issues and knowledge on environmental health programs and services in Lake County. A small amount of demographic information is requested. All responses are treated as confidential and voluntary. Your participation is expected to take about 10 minutes.

Contact information: If you have any questions or concerns about this research, please contact Dan Lark, EH Director (440) 360-2548; or Chris Lockman, EH Supervisor (440) 360-2551.

Thank you for participating in our survey. Your feedback is important.

## Appendix A: Environmental Health Survey Instrument (continued)

Lake County Environmental Health Survey

\* 1. Which of the following best describes you?

- I live and work in Lake County
- I live in Lake County, but I do not work in Lake County
- I do not live in Lake County, but I do work in Lake County

2



Appendix A: Environmental Health Survey Instrument (continued)

**Lake County Environmental Health Survey**

**\* 2. What City/Village/Township in Lake County do you live in?**

<input type="radio"/> Concord Township	<input type="radio"/> Madison Township	<input type="radio"/> Perry Village
<input type="radio"/> Eustalia City	<input type="radio"/> Madison Village	<input type="radio"/> Timberlake Village
<input type="radio"/> Fairport Harbor	<input type="radio"/> Mentor City	<input type="radio"/> White Hill Village
<input type="radio"/> Grand River Village	<input type="radio"/> Mentor on the Lake	<input type="radio"/> Wickliffe City
<input type="radio"/> Kirland City	<input type="radio"/> North Perry Village	<input type="radio"/> Willoughby City
<input type="radio"/> Kirland Hills Village	<input type="radio"/> Palmyra City	<input type="radio"/> Willoughby Hills City
<input type="radio"/> Lakeside Village	<input type="radio"/> Palmyra Township	<input type="radio"/> Willoughick City
<input type="radio"/> Leroy Township	<input type="radio"/> Perry Township	

**\* 3. What City/Village/Township in Lake County do you work in?**

<input type="radio"/> Concord Township	<input type="radio"/> Madison Township	<input type="radio"/> Perry Village
<input type="radio"/> Eustalia City	<input type="radio"/> Madison Village	<input type="radio"/> Timberlake Village
<input type="radio"/> Fairport Harbor	<input type="radio"/> Mentor City	<input type="radio"/> White Hill Village
<input type="radio"/> Grand River Village	<input type="radio"/> Mentor on the Lake	<input type="radio"/> Wickliffe City
<input type="radio"/> Kirland City	<input type="radio"/> North Perry Village	<input type="radio"/> Willoughby City
<input type="radio"/> Kirland Hills Village	<input type="radio"/> Palmyra City	<input type="radio"/> Willoughby Hills City
<input type="radio"/> Lakeside Village	<input type="radio"/> Palmyra Township	<input type="radio"/> Willoughick City
<input type="radio"/> Leroy Township	<input type="radio"/> Perry Township	<input type="radio"/> I do not work in Lake County

**\* 4. How long have you lived in Lake County?**

- Less than 1 year
- 1-4 years
- 5-9 years
- 10-19 years
- 20 or more years

Appendix A: Environmental Health Survey Instrument (continued)

\* 5. Do you own or rent your home?

- Own
- Rent
- Other

4

Appendix A: Environmental Health Survey Instrument (continued)

**Lake County Environmental Health Survey**

**6. What County do you live in?**

- Geauga
- Ashland
- Cuyahoga
- Other

**\*7. What City/Village/Township in Lake County do you work in?**

<input type="radio"/> Concord Township	<input type="radio"/> Madison Township	<input type="radio"/> Perry Village
<input type="radio"/> Euclid City	<input type="radio"/> Madison Village	<input type="radio"/> Timberlake Village
<input type="radio"/> Fairport Harbor	<input type="radio"/> Mentor City	<input type="radio"/> White Hill Village
<input type="radio"/> Grand River Village	<input type="radio"/> Mentor on the Lake	<input type="radio"/> Wickliffe City
<input type="radio"/> Kirland City	<input type="radio"/> North Perry Village	<input type="radio"/> Willoughby City
<input type="radio"/> Kirland Hills Village	<input type="radio"/> Painesville City	<input type="radio"/> Willoughby Hills City
<input type="radio"/> Lakeline Village	<input type="radio"/> Painesville Township	<input type="radio"/> Willoughick City
<input type="radio"/> Leroy Township	<input type="radio"/> Perry Township	

**8. How long have you worked in Lake County?**

- Less than 1 year
- 1-4 years
- 5-9 years
- 10-19 years
- 20 or more years

Appendix A: Environmental Health Survey Instrument (continued)

Lake County Environmental Health Survey						
9. How do you feel about the amount of the following in Lake County?						
	Far too little	Too little	About the right amount	Too much	Far too much	N/A
Recycling pick-up services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Green space/Open space (trees, parks, gardens, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Commercial development (building of shopping malls, stores, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Single family housing development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mult-unit housing development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of grocery stores and fresh foods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="text"/>					

Appendix A: Environmental Health Survey Instrument (continued)

Lake County Environmental Health Survey						
10. How much of a problem are the following for your health in Lake County?						
	Not at all a problem	Minor problem	Moderate problem	Somewhat serious problem	Extremely serious problem	NA
Dust in the air	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outdoor air quality (pollution from industries, cars, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Indoor air quality (mold, allergens, radon, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Open burning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Odors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental related disease (asthma, cancer, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Second-hand smoke	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flooding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to public transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safe travel by walking or biking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix A: Environmental Health Survey Instrument (continued)

Lake County Environmental Health Survey						
11. How much of a problem are the following for your health in Lake County?						
	Not at all a problem	Minor problem	Moderate problem	Somewhat serious problem	Extremely serious problem	NA
Exposure to toxic substances (lead, mercury, pesticides, radiation, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability and quality of recreational and play areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diseases from animals and insects (rabies, Zika, West Nile Virus, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Foodborne illness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Noise (highways, trains, construction)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chemical/Pollutants contaminating water sources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Run-down/leak on properties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traffic on roadways and public areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="text"/>					

Appendix A: Environmental Health Survey Instrument (continued)

Lake County Environmental Health Survey

12. For the issue(s) you identified as an extremely serious problem in Lake County, what actions would you like to see to address the issue(s)?

## Appendix A: Environmental Health Survey Instrument (continued)

Lake County Environmental Health Survey						
<b>13. Please rate how the following issues negatively affect the quality of your health as you live or work in Lake County.</b>						
	<b>Not at all</b>	<b>Slightly</b>	<b>Moderately</b>	<b>Very</b>	<b>Extremely</b>	<b>NA</b>
Public drinking water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Private drinking (well) water	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public sewer system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individual septic system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreational water (streams, rivers, lakes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify):	<input type="text"/>					



Appendix A: Environmental Health Survey Instrument (continued)

Lake County Environmental Health Survey		
Lake County General Health District Programs and Services		
<p>14. Are you aware of the following environmental health programs and services provided by the <u>Lake County General Health District</u>?</p>		
	Yes	No
Licensing and inspecting of food service operation and retail food establishments	<input type="radio"/>	<input type="radio"/>
Online food safety inspection reports	<input type="radio"/>	<input type="radio"/>
Home sewage treatment systems	<input type="radio"/>	<input type="radio"/>
Performing environmental health inspections at schools	<input type="radio"/>	<input type="radio"/>
Licensing and inspecting state recreational programs (campgrounds, swimming pools and hot tubs)	<input type="radio"/>	<input type="radio"/>
Public beach water sampling for daily beach water quality	<input type="radio"/>	<input type="radio"/>
Enforcing the Housing Code	<input type="radio"/>	<input type="radio"/>
Mosquito control spraying	<input type="radio"/>	<input type="radio"/>
Investigating animal bite incidents	<input type="radio"/>	<input type="radio"/>
Ambient (outdoor) air monitoring	<input type="radio"/>	<input type="radio"/>

Appendix A: Environmental Health Survey Instrument (continued)

Lake County Environmental Health Survey		
<b>15. Are you aware of the following environmental health programs and services provided by the Lake County General Health District?</b>		
	Yes	No
Routine monitoring of the Perry Nuclear Power Plant	<input type="radio"/>	<input type="radio"/>
Residential and Commercial plumbing plan approval/Plumbing permits	<input type="radio"/>	<input type="radio"/>
Enforce the Private Water System program	<input type="radio"/>	<input type="radio"/>
Licensing tattoo and body piercing facilities	<input type="radio"/>	<input type="radio"/>
Monitor neighborhood storm sewers	<input type="radio"/>	<input type="radio"/>
Regulation of solid waste (e.g.: household garbage, and other waste generated in a home or business)	<input type="radio"/>	<input type="radio"/>
Enforcement of the Ohio Workplace Smoke-free Law	<input type="radio"/>	<input type="radio"/>

## Appendix A: Environmental Health Survey Instrument (continued)

Lake County Environmental Health Survey
Demographic Information
<b>Please Provide the Following Optional Demographic Information:</b>
<b>16. What is your gender?</b>
<input type="radio"/> Male
<input type="radio"/> Female
<b>17. What is your race?</b>
<input type="radio"/> American Indian or Alaska Native
<input type="radio"/> Asian
<input type="radio"/> Black or African American
<input type="radio"/> Native Hawaiian or other Pacific Islander
<input type="radio"/> White
<input type="radio"/> Other
<input type="radio"/> Two or more races
<b>18. What is your Ethnicity?</b>
<input type="radio"/> Hispanic / Latin Origin
<input type="radio"/> Not of Hispanic / Latin Origin
<b>19. What is your age?</b>
<input type="radio"/> 17 or under
<input type="radio"/> 18-24
<input type="radio"/> 25-34
<input type="radio"/> 35-44
<input type="radio"/> 45-54
<input type="radio"/> 55-64
<input type="radio"/> 65 or over

Appendix A: Environmental Health Survey Instrument (continued)

20. What is your highest level of school you have completed or the highest degree you have received?

- Less than high school degree
- High school degree or equivalent (e.g., GED)
- Some college but no degree
- Associate degree
- Bachelor degree
- Graduate degree

21. What is your annual household income range?

- Less than \$10,000
- \$10,000-\$14,999
- \$15,000-\$24,999
- \$25,000-\$34,999
- \$35,000-\$49,999
- \$50,000-\$74,999
- \$75,000-\$99,999
- \$100,000-\$149,999
- \$150,000-\$199,999
- \$200,000 or more

22. How many people live in your home? Of these people, how many are under age 18?

Number of people in your home

Number of people under 18

Appendix A: Environmental Health Survey Instrument (continued)

<b>Lake County Environmental Health Survey</b>
<b>Thank You</b>
<b>Thank you for taking the time to complete this survey; Your input is most appreciated!</b>
<b>15</b>

## Appendix B: Environmental Health Survey Results

1. “Which of the following best describes you?”

<b>Table 1. Live and Work</b>		
	<b>N</b>	<b>Percentage (%)</b>
I live and work in Lake County.	581	<b>61.9</b>
I live in Lake County, but I do not work in Lake County.	278	<b>29.6</b>
I do not live in Lake County, but I do work in Lake County.	79	<b>8.4</b>
<b>Total</b>	<b>938</b>	<b>100</b>

## Appendix B: Environmental Health Survey Results (continued)

2. “What City/Village/Township in Lake County do you live in?”

<b>Table 2. Area of Residence</b>		
	<b>N</b>	<b>Percentage (%)</b>
Mentor City	168	<b>19.8</b>
Painesville Township	143	<b>16.9</b>
Concord Township	73	<b>8.6</b>
Painesville City	63	<b>7.4</b>
Wickliffe City	61	<b>7.2</b>
Willoughby City	61	<b>7.2</b>
Madison Township	49	<b>5.8</b>
Eastlake City	42	<b>5.0</b>
Willowick City	32	<b>3.8</b>
Fairport Harbor	28	<b>3.3</b>
Mentor on the Lake	27	<b>3.2</b>
Perry Township	26	<b>3.1</b>
Perry Village	15	<b>1.8</b>
Willoughby Hills City	15	<b>1.8</b>
Madison Village	14	<b>1.7</b>
Kirtland City	12	<b>1.4</b>
Leroy Township	7	<b>.8</b>
North Perry Village	6	<b>.7</b>
Timberlake Village	2	<b>.2</b>
Waite Hill Village	2	<b>.2</b>
Grand River Village	1	<b>.1</b>
Lakeline Village	1	<b>.1</b>
<b>Total</b>	<b>848</b>	<b>100</b>

## Appendix B: Environmental Health Survey Results (continued)

3. “What City/Village/Township in Lake County do you work in?”

<b>Table 3. Area of Employment</b>		
	<b>N</b>	<b>Percentage (%)</b>
I do not work in Lake County	295	<b>34.8</b>
Painesville City	169	<b>19.9</b>
Mentor City	130	<b>15.3</b>
Willoughby City	53	<b>6.3</b>
Painesville Township	52	<b>6.1</b>
Wickliffe City	24	<b>2.8</b>
Kirtland City	21	<b>2.5</b>
Madison Township	17	<b>2.0</b>
Concord Township	12	<b>1.4</b>
Eastlake City	14	<b>1.7</b>
Mentor on the Lake	13	<b>1.5</b>
Perry Village	10	<b>1.2</b>
Fairport Harbor	7	<b>.8</b>
Perry Township	6	<b>.7</b>
Willowick City	6	<b>.7</b>
Willoughby Hills City	5	<b>.6</b>
Madison Village	4	<b>.5</b>
North Perry Village	4	<b>.5</b>
Waite Hill Village	2	<b>.2</b>
Leroy Township	2	<b>.2</b>
Grand River Village	1	<b>.1</b>
Lakeline Village	1	<b>.1</b>
<b>Total</b>	<b>848</b>	<b>100</b>



## Appendix B: Environmental Health Survey Results (continued)

4. “How long have you lived in Lake County?”

<b>Table 4. Length of Lake County Residency</b>		
	<b>N</b>	<b>Percentage (%)</b>
20 or more years	630	<b>74.3</b>
10 to 19 years	118	<b>13.9</b>
5 to 9 years	47	<b>5.5</b>
1 to 4 years	37	<b>4.4</b>
Less than 1 year	16	<b>1.9</b>
<b>Total</b>	<b>848</b>	<b>100</b>

5. “Do you own or rent your home?”

<b>Table 5. Residence Type</b>		
	<b>N</b>	<b>Percentage (%)</b>
Own	729	<b>86.0</b>
Rent	94	<b>11.1</b>
Other	25	<b>2.9</b>
<b>Total</b>	<b>848</b>	<b>100</b>

6. “What County do you live in?”

<b>Table 6. County of Residence</b>		
	<b>N</b>	<b>Percentage (%)</b>
Cuyahoga	30	<b>40.0</b>
Geauga	21	<b>28.0</b>
Ashtabula	16	<b>21.3</b>
Other	8	<b>10.7</b>
<b>Total</b>	<b>75</b>	<b>100</b>

## Appendix B: Environmental Health Survey Results (continued)

7. “What City/Village/Township in Lake County do you work in?” (Duplicate)

8. “How long have you worked in Lake County?”

	<b>N</b>	<b>Percentage (%)</b>
20 or more years	27	<b>36.0</b>
10 to 19 years	20	<b>26.7</b>
1 to 4 years	15	<b>20.0</b>
5 to 9 years	9	<b>12.0</b>
Less than 1 year	4	<b>5.3</b>
<b>Total</b>	<b>75</b>	<b>100.0</b>

9a. “How do you feel about the amount of the following in Lake County?”

	<b>N</b>	<b>N/A (%)</b>	<b>Far too little (%)</b>	<b>Too little (%)</b>	<b>About the right amount (%)</b>	<b>Too much (%)</b>	<b>Far too much (%)</b>	<b>Total (%)</b>
Recycling pickup/centers	870	8.9%	20.5%	32.4%	37.7%	0.3%	0.2%	100%
Green space/open space	869	2.1	7.0	24.6	64	1.3	1	100
Commercial development	871	2.3	4.5	10.6	39.6	30.8	12.3	100
Single family housing	868	5.5	1.8	10.1	66	12.8	3.7	100
Multi-unit housing	862	7.7	1.9	8.9	49.8	23.2	8.6	100
Availability of grocery stores and fresh foods	880	1.5	8.3	30.6	58	1.5	0.2	100

## Appendix B: Environmental Health Survey Results (continued)

9b. “How do you feel about the amount of the following in Lake County?”

<b>Table 9b. Other Responses</b>		
	<b>N</b>	<b>Percentage (%)</b>
Increased grocery store availability	17	<b>41.5</b>
Access to organic/fresh foods	7	<b>17.1</b>
Affordable housing	3	<b>7.3</b>
Recycling availability	2	<b>4.9</b>
Vacant properties	2	<b>4.9</b>
Hunting	1	<b>2.4</b>
Overpopulated area	1	<b>2.4</b>
Community amenities	1	<b>2.4</b>
Yard waste facilities	1	<b>2.4</b>
Trains transporting hazardous material	1	<b>2.4</b>
Overall business decline	1	<b>2.4</b>
Availability of prescription drug disposal centers	1	<b>2.4</b>
Increased restaurant availability	1	<b>2.4</b>
Overdevelopment	1	<b>2.4</b>
Availability of parking	1	<b>2.4</b>
<b>Total</b>	<b>41</b>	<b>100</b>

## Appendix B: Environmental Health Survey Results (continued)

10-11. “How much of a problem are the following for your health in Lake County?”

<b>Table 10. Lake County Health Factors</b>								
	<b>N</b>	<b>N/A (%)</b>	<b>Not at all a problem (%)</b>	<b>Minor problem (%)</b>	<b>Moderate problem (%)</b>	<b>Somewhat serious problem (%)</b>	<b>Extremely serious problem (%)</b>	<b>Total (%)</b>
Dust in the air	846	2.6	36.6	32.4	20	5.8	2.6	100
Outdoor air quality	860	1.3	27.9	30.8	24	8.4	7.7	100
Indoor air quality	850	3.5	36.6	29.9	19.3	7.6	3.1	100
Open burning	852	7.5	54.5	24.4	8.9	3.1	1.6	100
Odors	844	4.1	39.7	32.2	11.8	4.7	7.3	100
Environmental related disease	845	7.5	31.2	25.1	18.9	10.9	6.4	100
Secondhand smoke	852	5.3	39.9	26.8	14.7	8.7	4.7	100
Flooding	847	3.8	22.1	27.9	25.9	14.5	5.9	100
Access to public transportation	855	10.4	37.7	23	15.8	9.9	3.2	100
Safe travel by walking or biking	854	3	28.3	26.6	23.3	12.4	6.3	100
Exposure to toxic substances	827	6.8	44.5	25.8	12.3	6.7	4	100
Availability and quality of recreational and play areas	835	2.8	57.4	23	12.2	3.8	0.8	100

**Appendix B: Environmental Health Survey Results (continued)**

<b>Table 10. Lake County Health Factors (continued)</b>								
	<b>N</b>	<b>N/A (%)</b>	<b>Not at all a problem (%)</b>	<b>Minor problem (%)</b>	<b>Moderate problem (%)</b>	<b>Somewhat serious problem (%)</b>	<b>Extremely serious problem (%)</b>	<b>Total (%)</b>
Diseases from animals and insects	839	4.5	43.6	32.3	11.4	3.8	2.3	100
Foodborne illness	830	6.9	52.3	27.6	9.4	2.5	1.3	100
Noise	836	2.5	28	37.2	19.7	8.7	3.8	100
Chemical/pollutants contaminating water sources	827	4.6	34.8	26.5	17.3	10.4	6.4	100
Rundown/vacant properties	834	1.7	21.9	34.1	24.1	12	6.2	100
Trash/litter on roadways and public areas	836	1.1	17.9	39.4	26.2	10.8	4.7	100

## Appendix B: Environmental Health Survey Results (continued)

11b. “How much of a problem are the following for your health in Lake County?”

<b>Table 11b. Other Responses</b>		
	<b>N</b>	<b>Percentage (%)</b>
Vacant properties	5	<b>16.1</b>
Trash/litter	5	<b>16.1</b>
Manufacturing facility/landfill pollution	5	<b>16.1</b>
Traffic route issues	3	<b>9.7</b>
Overdevelopment	2	<b>6.5</b>
Automotive emissions	2	<b>6.5</b>
Gas well emissions	2	<b>6.5</b>
Sanitary sewer backup	1	<b>3.2</b>
Eutrophication of lakes, rivers, and streams	1	<b>3.2</b>
Train and road noise	1	<b>3.2</b>
Access to wellness programs/facilities	1	<b>3.2</b>
Environmental cleanliness	1	<b>3.2</b>
Dilapidated rental properties	1	<b>3.2</b>
Mosquito control	1	<b>3.2</b>
<b>Total</b>	<b>31</b>	<b>100</b>

## Appendix B: Environmental Health Survey Results (continued)

12. “For the issue(s) that you identified as an extremely serious problem in Lake County; what actions would you like to see to address the issue(s)?”

<b>Table 12. Other Responses</b>		
	<b>N</b>	<b>Percentage (%)</b>
Manufacturing facility/landfill pollution	55	23.2
Trash/litter	24	10.1
Vacant properties	18	7.6
Flooding/storm sewer improvements	13	5.5
Need more sidewalks/bike paths	12	5.1
Environmental cleanliness	12	5.1
Public transportation	11	4.6
Recycling availability	10	4.2
Lack of greenspace	10	4.2
Train and road noise	9	3.8
Overdevelopment	8	3.4
Traffic route issues	6	2.5
Dilapidated rental properties	6	2.5
Building/housing upkeep	6	2.5
Community taskforce	5	2.1
Increased need for low income services	4	1.7
Smoke-free laws	3	1.3
Drug abuse	2	.8
Government insight	2	.8
Automotive emissions	2	.8
Gas well emissions	2	.8
Mosquito control	2	.8
Availability of public information	2	.8
Reduce mosquito spraying	1	.4
Shopping variety	1	.4
Exclusionary zoning	1	.4
County needs to publicly address issues	1	.4

**Appendix B: Environmental Health Survey Results** (continued)

<b>Table 12. Other Responses</b> (continued)	<b>N</b>	<b>Percentage (%)</b>
Yard waste facilities	1	.4
High taxes	1	.4
Pet nuisance	1	.4
Sanitary sewer backup	1	.4
Evacuation plans for gas well/train accident	1	.4
Studies as to why there is so much cancer in Lake County	1	.4
More police to help drug epidemic	1	.4
Better use of community service walkers	1	.4
Manufacturing facility noise	1	.4
<b>Total</b>	<b>237</b>	<b>100</b>



## Appendix B: Environmental Health Survey Results (continued)

13a. “Please rate how the following issues negatively affect the quality of your health as you live or work in Lake County”

	<b>N</b>	<b>N/A (%)</b>	<b>Not at all (%)</b>	<b>Slightly (%)</b>	<b>Moderately (%)</b>	<b>Very (%)</b>	<b>Extremely (%)</b>	<b>Total (%)</b>
Public drinking water	806	4.3	59.8	20.1	9.4	3	3.3	100
Private drinking water	798	41.4	42.9	8.6	3.8	1.8	1.6	100
Public sewer system	804	5.8	60.9	15.9	10.8	3.6	2.9	100
Individual septic system	792	36.9	43.9	9.6	5.7	1.9	2	100
Recreational water	799	4.3	48.4	21.9	15.9	6	3.5	100

13b. “Please rate how the following issues negatively affect the quality of your health as you live or work in Lake County”

	<b>N</b>	<b>Percentage (%)</b>
Drinking water quality	7	<b>38.9</b>
Environmental cleanliness	3	<b>16.7</b>
Flooding/storm sewer improvements	3	<b>16.7</b>
Manufacturing facility/landfill pollution	1	<b>5.6</b>
Eutrophication of lakes, rivers, and streams	1	<b>5.6</b>
Trash/litter	1	<b>5.6</b>
Gas well emissions	1	<b>5.6</b>
Mosquito control	1	<b>5.6</b>
<b>Total</b>	<b>18</b>	<b>100</b>

## Appendix B: Environmental Health Survey Results (continued)

14-15. “Are you aware of the following environmental health programs and services provided by the Lake County General Health District?”

<b>Table 14. Awareness of Environmental Services</b>				
	<b>N</b>	<b>Yes (%)</b>	<b>No (%)</b>	<b>Total (%)</b>
Mosquito control	791	<b>89.8</b>	10.2	100
Retail food licensing and inspection	806	<b>83.4</b>	16.6	100
Daily public beach water sampling	802	<b>83.4</b>	16.6	100
Perry Nuclear Plant monitoring	780	<b>75.6</b>	24.4	100
Animal bite investigations	786	<b>73.2</b>	26.8	100
Ohio Workplace Smoke-Free enforcement	785	<b>69.3</b>	30.7	100
Housing code enforcement	784	<b>67.6</b>	32.4	100
Solid waste regulation	782	<b>65</b>	35	100
School environmental health inspections	799	<b>64.3</b>	35.7	100
State recreational program licensing and inspection	799	<b>64.6</b>	35.4	100
Residential and commercial plumbing plan approval	782	<b>62.5</b>	37.5	100
Neighborhood storm sewer monitoring	782	<b>59.7</b>	40.3	100
Tattoo and body piercing facility licensing	782	<b>54.2</b>	45.8	100
Online food safety inspection reports	800	<b>51.3</b>	48.8	100
Ambient air monitoring	783	<b>47.5</b>	52.5	100
Home sewage treatment systems	797	<b>45.5</b>	54.5	100
Private water system program enforcement	776	<b>45.1</b>	54.9	100

## Appendix B: Environmental Health Survey Results (continued)

16. “What is your gender?”

<b>Table 16. Gender</b>		
	<b>N</b>	<b>Percentage (%)</b>
Female	553	<b>69.4</b>
Male	244	<b>30.6</b>
<b>Total</b>	<b>797</b>	<b>100</b>

17. “What is your race?”

<b>Table 17. Race</b>		
	<b>N</b>	<b>Percentage (%)</b>
White	754	<b>94.6</b>
Other	14	<b>1.8</b>
Black or African American	11	<b>1.4</b>
Two or more races	9	<b>1.1</b>
American Indian or Alaskan Native	7	<b>.9</b>
Asian	2	<b>.3</b>
<b>Total</b>	<b>797</b>	<b>100</b>

18. “What is your Ethnicity?”

<b>Table 18. Ethnicity</b>		
	<b>N</b>	<b>Percentage (%)</b>
Not of Hispanic / Latin Origin	713	<b>98.6</b>
Hispanic / Latin Origin	10	<b>1.4</b>
<b>Total</b>	<b>723</b>	<b>100</b>

## Appendix B: Environmental Health Survey Results (continued)

19. “What is your age?”

<b>Table 19. Age</b>		
	<b>N</b>	<b>Percentage (%)</b>
65 or over	256	<b>32.1</b>
55-64	176	<b>22.1</b>
45-54	172	<b>21.6</b>
35-44	123	<b>15.4</b>
25-34	64	<b>8.0</b>
18-24	6	<b>.8</b>
17 or under	1	<b>.1</b>
<b>Total</b>	<b>798</b>	<b>100</b>

20. “What is the highest level of school that you have completed or the highest degree that you have completed?”

<b>Table 20. Education</b>		
	<b>N</b>	<b>Percentage</b>
Some college but no degree	198	<b>24.9</b>
Bachelor degree	195	<b>24.5</b>
Graduate degree	156	<b>19.6</b>
High school degree or equivalent (e.g., GED)	140	<b>17.6</b>
Associate degree	90	<b>11.3</b>
Less than high school degree	17	<b>2.1</b>
<b>Total</b>	<b>796</b>	<b>100</b>

## Appendix B: Environmental Health Survey Results (continued)

21. “What is your annual household income range?”

	<b>N</b>	<b>Percentage</b>
\$100,000-\$149,999	150	<b>22.3</b>
\$75,000-\$99,999	126	<b>18.7</b>
\$50,000-\$74,999	123	<b>18.2</b>
\$35,000-\$49,999	64	<b>9.5</b>
\$25,000-\$34,999	60	<b>8.9</b>
\$15,000-\$24,999	44	<b>6.5</b>
\$10,000-\$14,999	34	<b>5.0</b>
\$150,000-\$199,999	29	<b>4.3</b>
\$200,000 or more	23	<b>3.4</b>
Less than \$10,000	21	<b>3.1</b>
<b>Total</b>	<b>674</b>	<b>100</b>

22a. “How many people live in your home?”

	<b>N</b>	<b>Percentage</b>
2.00	290	<b>37.9</b>
1.00	164	<b>21.4</b>
3.00	129	<b>16.9</b>
4.00	114	<b>14.9</b>
5.00	54	<b>7.1</b>
6.00	9	<b>1.2</b>
7.00	3	<b>.4</b>
.00	1	<b>.1</b>
31.00	1	<b>.1</b>
<b>Total</b>	<b>765</b>	<b>100</b>

## Appendix B: Environmental Health Survey Results (continued)

22b. "How many are under age of 18?"

<b>Table 22b.</b>		
<b>Number of Household Members Under 18 Years of Age</b>		
	<b>N</b>	<b>Percentage</b>
.00	407	<b>64.0</b>
1.00	92	<b>14.5</b>
2.00	95	<b>14.9</b>
3.00	35	<b>5.5</b>
4.00	6	<b>.9</b>
5.00	1	<b>.2</b>
<b>Total</b>	<b>636</b>	<b>100</b>

## Appendix C: Environmental Health Issue Profiles:

### Housing and Vacant Dwellings

The concern that there are too many vacant dwellings in Lake County as a problem was seen by 18% of the surveyed. Statistics show an increase in vacant dwellings over the last couple decades. The population in Lake County in 2017 was estimated to be 230,117 and the median age of the homes in the county is 1970 meaning half the homes are at more than 47 years old. The median value of homes in Lake County is \$149,300. Median rent for apartments and houses is \$844.00 per month. Occupied housing units are 93.7% with 73.8% owner occupied and 26.2% rental. Vacant units account for 6.5% of the total 101,885 housing units.

Compare these numbers to those of the census in 2000; we see an increase in the percentage of vacant homes. In 2000, only 3.5% of the housing units were vacant out of the total of 93,487 housing units. The percentage of renter occupied units has also increase over the 22.5% in 2000. The total population in Lake County in 2000 was listed as 227,511.

The reduction may show a community decline and a disinvestment in owning housing in Lake County. This would lead to more housing units not being taken care of and that many of the houses are reaching ages where new buyers may be disinterested. The economy is not only to blame for this. Abandoned properties can lead to an increase in crime, risk to health and welfare, lower property values, and burdens on the municipalities in which they are located. Not all vacant houses are run down or in poor shape. Many sit empty during foreclosure or are part of an estate.

Local officials, community organizations, and residents have increasingly worked for productive reuse of the vacant properties. They are trying to make these homes assets to the neighborhoods. Some are reimagining these areas into urban farms, community gardens, and health facilities. The Lake County Land Bank works with owners of vacant blighted properties and has them torn down. They then can be redeveloped or left for green space. The Health District enforces its housing codes based on complaints to maintain compliance in many dwelling units to prevent them from getting the point of blight. We also work with local government leaders to help remove abandoned run down homes when they become threats to health and safety. Even when a structure is condemned it still takes time and money before the problem is corrected.

Cities have adopted ordinances in efforts to minimize run down dwellings. The City of Painesville has a registration program for vacant dwellings and charges fees which increase the longer the dwelling is kept vacant. The city has also made parks out of several of the buildings that have been removed. Madison Twp. utilizes their fire department to determine if structures of vacant dwellings are safe and when they are not they begin the legal process to have the structure torn down.

Much work is still needed to lower the amount of vacant homes in Lake County. It will take a community effort to do this made up of investors, residents, and community government officials working to better these areas.

### **Works Cited and Additional Reading Articles:**

- US Census Bureau, Census 2000: Lake County Ohio.
- Ohio County Profile : <https://development.ohio.gov/files/research/C1044.pdf>
- Vacant and Abandoned Properties: Turning Liabilities into Assets :  
<https://www.huduser.gov/portal/periodicals/em/winter14/highlight1.html>



## Appendix C: Environmental Health Issue Profiles (continued)

### Recycling and Loose Litter

The top identified environmental issue that was obtained from the survey was the lack of recycling opportunities in the county for drop off or street side collections. We also chose to link loose litter on roadways and streets since the two items both involve solid waste being properly disposed of. Solid waste, defined by the Lake County general Health District, is any unwanted materials such as household garbage, metal, wood, paper, plastic, yard waste, Scrap tires and other miscellaneous waste generated in a home or business that is not regulated as another specific type of waste.

Currently only three communities offer drop off recycling (Concord Twp. Fairport Harbor, Leroy). Eleven communities offer curb side recycling that is built into their garbage removal subscriptions (Eastlake, Grand River, Kirtland City, Kirtland Hills, Lakeline, Mentor on the Lake, Painesville City, Timberlake, Waite Hill, Willoughby City, and Willoughby Hills). Eleven other communities have waste haulers that do offer subscriptions for curb side recycling (Concord, Leroy, Madison Twp., Madison Village, Mentor City, N. Perry Village, Painesville Twp., Perry Twp., Perry Village, Wickliffe, and Willowick). Only one community (Fairport Harbor) does not have curb side recycling services. Services are for residential houses and duplexes, condo associations, apartment complexes and commercial buildings all contract their own recycling if they choose to have it.

The belief that there isn't enough recycling opportunity may lie on the fact that none of these communities offer the service for free. The service is either built into the cost of garbage removal or is based on the homeowner choosing to pay for the extra service. The communities that have drop off locations only handle certain recycling such as paper, cardboard, or plastics and may only do one or two of these items. The Lake County Solid Waste Facility (landfill) at Blasé Nemeth Rd., Painesville Twp. plans on opening up free drop off of recyclables including (cardboard, glass, paper, metal, and aluminum) to residents of Lake County in the near future. This will still involve homeowners to have to travel to Painesville Twp. to recycle using the free bins at the landfill. The Solid Waste District also provides special collection days for scrap tires, household hazardous wastes, and computers and electronics. These special collections are held at the Lake County Fairgrounds in Painesville Twp. which is centrally located within Lake County and offer no cost and low cost opportunities for recycling these waste items to the county residents.

Loose litter/refuse is mainly due to people not properly disposing their trash at home or at work. A small amount of waste is caused by blowing out of garbage trucks hauling the waste and garbage being placed into receptacles without lids or covers. Community wide efforts between businesses and residents will be the solution

to the loose litter issue and encouraging everyone to do their part to ensure waste gets disposed of properly or is recycled.

**Works Cited and additional reading articles:**

- 2017 Lake County Solid Waste District Community Residential Recycling Programs provided by the Lake County Solid Waste District.
- Ohio County Profiles : <https://development.ohio.gov/files/research/C1044.pdf>

## Appendix C: Environmental Health Issue Profiles (continued)

### Availability of Grocery Stores and Fresh Food

Through the EH pace survey, Not enough availability of grocery stores and fresh food was the third most identified concern. Low access is defined by the USDA Economic Research Service as the Number of people in a county living more than 1 mile from a supermarket or large grocery store if in an urban area, or more than 10 miles from a supermarket or large grocery store if in a rural area (USDA Economic Research Service, 2017). To qualify as a “low-access community,” at least 500 people and/or at least 33 percent of the census tract's population must reside more than one mile from a supermarket or large grocery store (for rural census tracts, the distance is more than 10 miles) (Gallagher, 2010).

### What is the Health Implications?

Low access to grocery stores has been shown to have a negative effect on health and mortality (Andreyeva, Blumenthal, Schwartz, & Brownell, 2008). Populations that live in areas with limited access to healthful, unprocessed foods can have their diet, weight, and health negatively affected (Andreyeva, Blumenthal, Schwartz, & Brownell, 2008). Food deserts are defined as an area devoid of fresh fruit, vegetables and other healthful whole foods, usually in impoverished areas (Gallagher, 2010). The USDA definition for food desert does not contain a distance qualifier. Healthy food is usually not available due to a lack of grocery stores, farmers markets or other health food providers (Gallagher, 2010). Studies have shown that living in a food desert can increase negative health outcomes (Centers for Disease Control and Prevention, 2017).

### Is this a Problem in Lake County?

Based on data from the USDA website, the number of people in Lake County with low access to grocery stores is larger 50,000 (see map 3). This is the largest measurement grouping shown on the website. This potentially affects over 20% of the county residents. The survey respondents whose responses pushed availability of grocery stores resided in: Mentor, Wickliffe, Painesville Township and Willoughby.

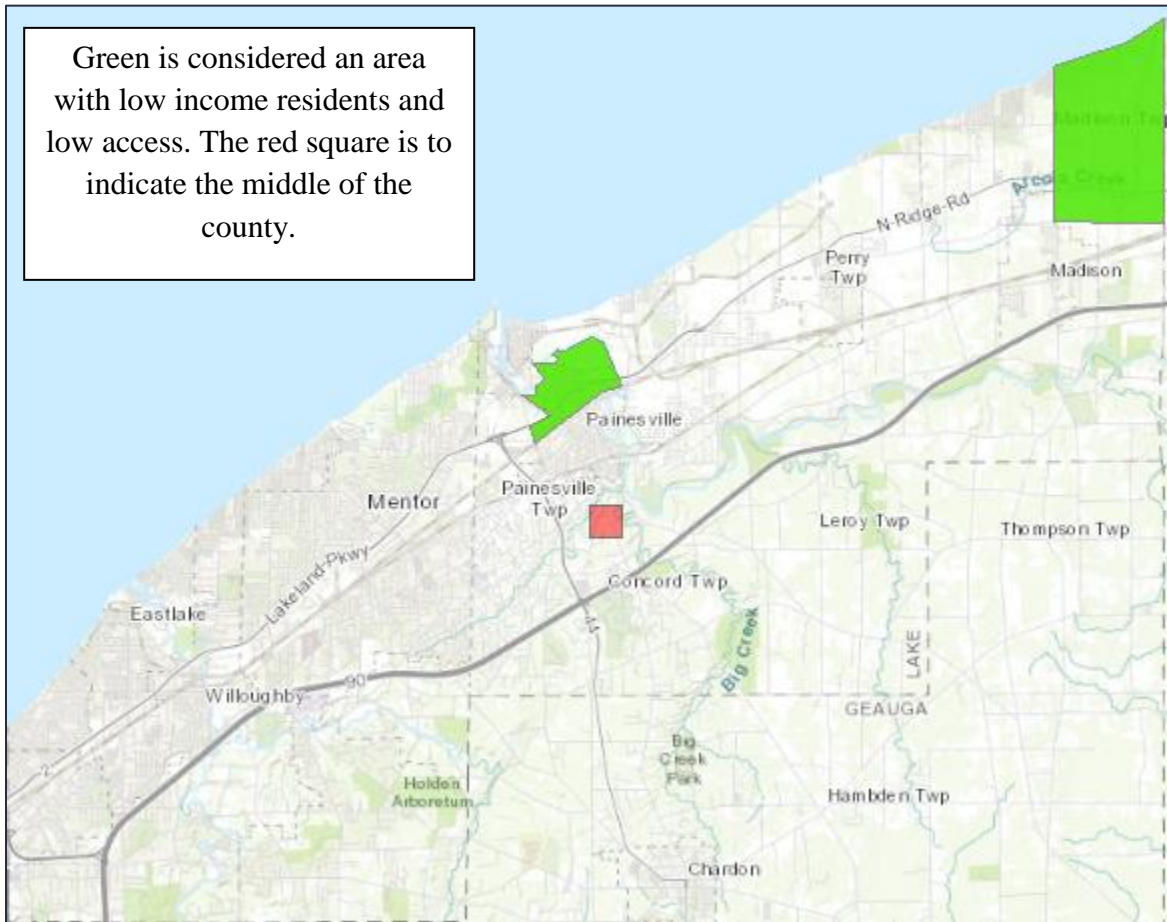
On the positive side, eighty five (85) percent of the zip codes in Lake County contain a grocery store or farmers market (Lake County General Health District, 2009). **Map 1** is generated from the USDA website and shows parts of the county with low access to food and also a low income area. This is followed by a list of food stores close to these areas. **Map 2** shows location of Low income census tracts where more than 100 housing units do not have a vehicle and are more than ½ mile from the nearest supermarket. This is important because the residents of these census blocks do not have the ability to get to a supermarket that is not within walking distance

or by public transportations. **Map 3** is generated from the LakeGis.org website and dots are placed at food source locations to give a visual reference for the Painesville and Madison.

While food options are available to the highlighted areas, without automobile transportation, the choices are limited and usually convenience type stores. Potential options are:

1. Food industry invests in a store.
2. Increase Laketran bus routes through areas. Laketran does have a bus route through the identified section of Painesville.
3. Look at area programs to support local agriculture. Ideas such as gardening for greenbacks in Cleveland.  
<http://www.rethinkcleveland.org/Cleveland/media/Cleveland/Photos%20Reese%20to%20Add/Gardening-for-Greenbacks-Program.pdf>
4. No action.
5. Share information with local city and township officials. To make some of these changes, zoning changes may be necessary.

**Map 1** Generated from the USDA website (United States Department of Agriculture, 2015).

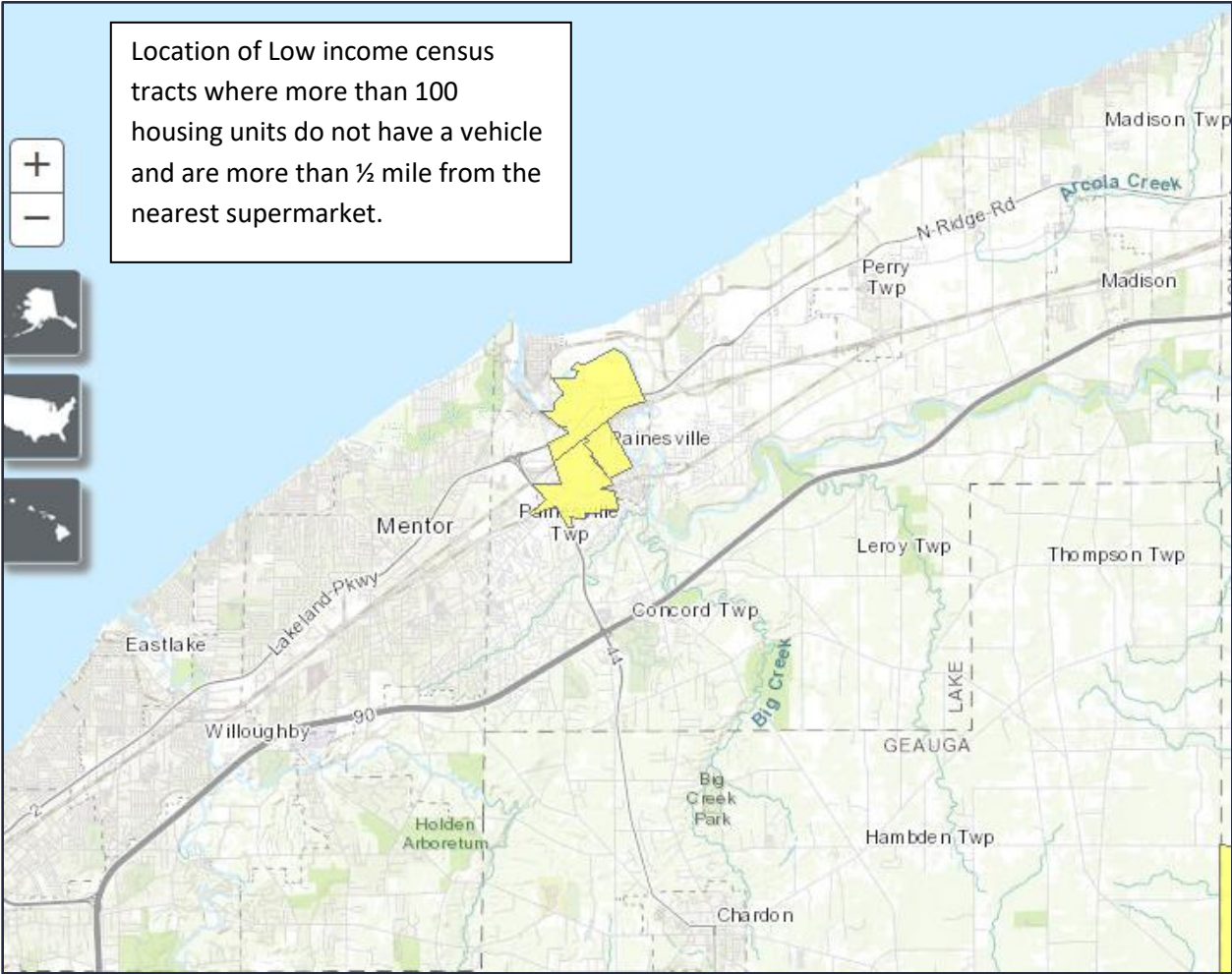


Food Providers close to the highlighted areas in **Map 1** include:

Facility Name	Address	City
Harvey's Fruit Market	701 East Street	Fairport Harbor
Redigo Food Mart. # 5	400 High Street	Fairport Harbor
Vasko's Supermarket	328 Seventh Street	Fairport Harbor
Aldi Madison #42	6521 North Ridge Road	Madison
Bendelewski & Sons Mkt.	6732 North Ridge Road E	Madison
Circle K #5693	5999 North Ridge Road	Madison
Convenient Food Mart #3-077	3119 Hubbard Road	Madison
Giant Eagle #4097	6556 North Ridge Road	Madison
Marc's	6576 North Ridge Road	Madison
Redigo Food Mart. #3	1976 Hubbard Road	Madison
Aldi #16	2045 Mentor Avenue	Painesville
Falcone's Convenient Mart	444 North State Street	Painesville
Giant Eagle #6377	1201 Mentor Avenue	Painesville
La Hispana	351 North State Street	Painesville

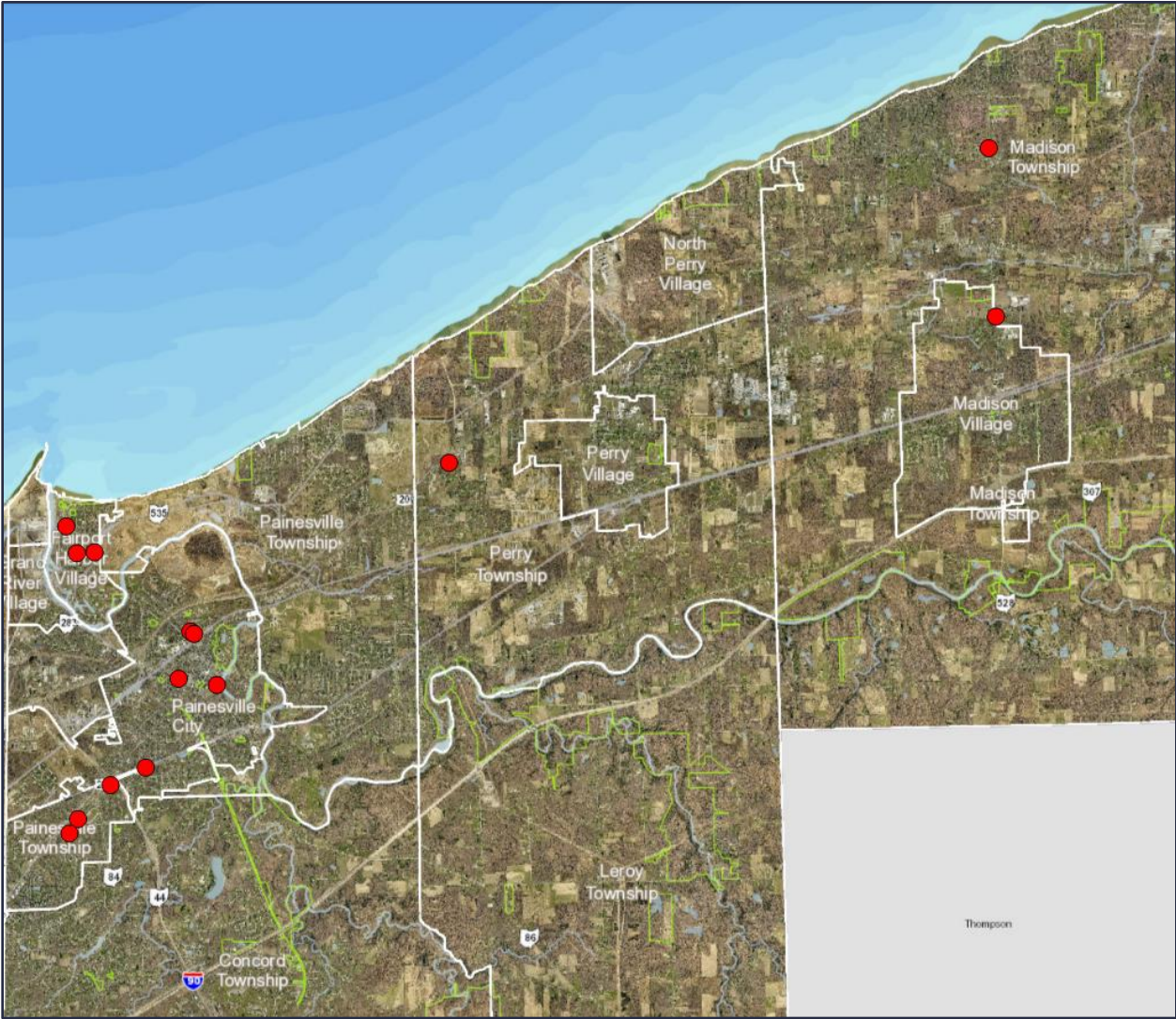
Mexican Food Specialists	170 East Washington Street	Painesville
Painesville Food Mart	1860 North Ridge Road	Painesville
Painesville Nutrition Site	270 East Main Street Suite 10	Painesville
Rideout's IGA	2736 North Ridge Road	Painesville
Save-A-Lot #5861/640	1475 Mentor Avenue	Painesville

Map 2 Generated from the USDA website (United States Department of Agriculture, 2015)



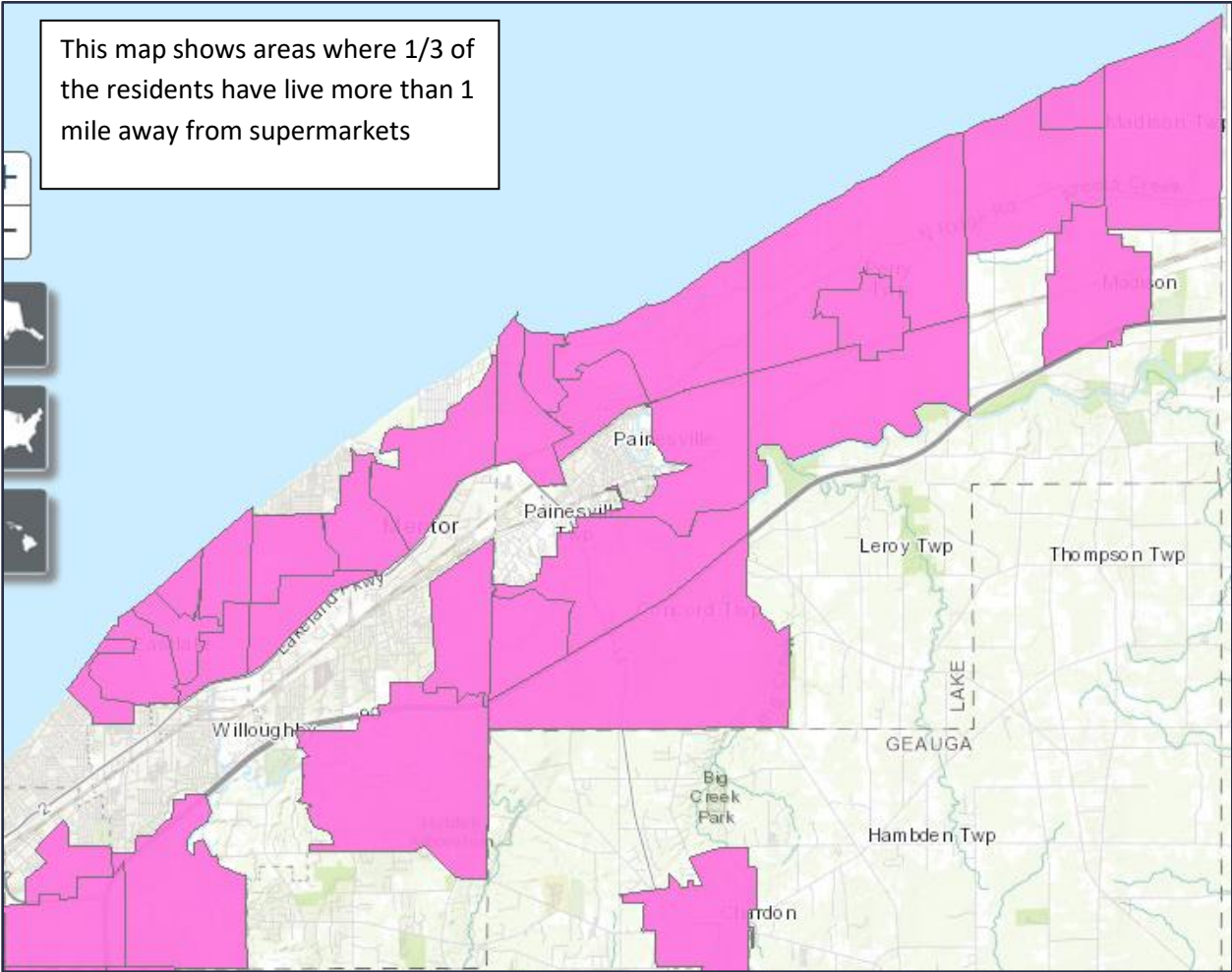


**Map 3** Locations of food sources close to identified areas.





Map 4 generated from the USDA website (United States Department of Agriculture, 2015)



## **Related Reading**

Low-Income and Low-Supermarket-Access Census Tracts, 2010-2015

<https://www.ers.usda.gov/webdocs/publications/82101/eib-165.pdf?v=0>

Location of Map making tool at USDA website

<https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/>

Summary of a Food Desert workshop, by the National Academy of Sciences

<https://www.ncbi.nlm.nih.gov/pubmed/25032337>

## **Works Cited**

Andreyeva, T., Blumenthal, D., Schwartz, M. L., & Brownell, K. (2008). Availability and Prices of Foods Across Stores and Neighborhoods: The Case of New Haven, Connecticut. *Health Affairs*, 1381-1388.

Centers for Disease Control and Prevention. (2017, September 15). *Food Desert*. Retrieved from CDC: <https://www.cdc.gov/healthcommunication/toolstemplates/entertainmented/tips/fooddesert.html>

Gallagher, M. (2010). *Nutrition Digest*. Retrieved from USDA defines Food Deserts: <http://americannutritionassociation.org/newsletter/usda-defines-food-deserts>

Lake County General Health District. (2009). *Public Health Assessment and Wellness*. Retrieved from Network of Care: <http://lake.oh.networkofcare.org/ph/indicator.aspx?id=48&c=15>

United States Department of Agriculture. (2015). *Economic Research Service*. Retrieved from USDA ERS: <https://www.ers.usda.gov/data-products/food-access-research-atlas/go-to-the-atlas/>

USDA Economic Research Service. (2017, September 18). *USDA Economic Research Service*. Retrieved from Food Atlas Environment: <https://www.ers.usda.gov/data-products/food-environment-atlas/go-to-the-atlas/>

## Appendix C: Environmental Health Issue Profiles (continued)

### Commercial Development

Too much commercial development was identified as a source of concern, mainly in Mentor, Willoughby and Concord. Development is usually controlled by zoning. There is various types of commercial development. The most common forms are retail, offices, traveling related commercial (Gas stations, hotels, restaurant, etc.). People will usually think of retail development as commercial development when they say there is too much development. Everything is perception when it comes to much development.

They may be thinking that there is too much development because there are vacant stores in different parts of the County and new development in other parts of the county. There are many factors on why retail is moving. Retail development usually follows roof tops (new home construction and population increase) before it starts. In Concord Township for example, the township has been developing residentially since the late 1970s. The old part of Concord is closer to Mentor and it supported those businesses. Now it has gone over to I-90 and SR 44 and Commercial Development has followed there.

Items that have a great influence on retail is population, median household income and age. Concord has growing populations, increasing median incomes and mid 40s median age. So businesses are attracted to Mentor because it is the largest city in Lake County, large traffic generator (Great Lakes Mall), access to large populations outside of the City (Willoughby, Eastlake, Painesville, Euclid, Cleveland, Etc.) The population density in eastern Lake County, Ashtabula and Geauga drops making those communities less attractive.

Willoughby has the downtown district that attracts development and growing population. Wickliffe, Eastlake, Willowick are mostly built out. Many of the buildings are older and have issues including possible hazardous materials such as lead and asbestos. The buildings may not have internet and the electric may not up to handling the new electric loads. The populations are also declining, median age is increasing and median income is declining. These communities have easy access to Mentor by freeway and Laketran. So the incentive is to develop in Mentor and not in the other communities.

Zoning has an influence on commercial development. Mentor had strip zoning enacted in the 1970s. This allowed Mentor Avenue to have commercial land, 500 feet on either side of street. This help create the Mentor we now know. Vine Street also has strip zoning, but parts of it are narrower than Mentor Avenue, so they are not as attractive.

Perception is also a factor with people stating that there is too much development. Traffic increases, making what use to be a short trip longer. Some people moved out to Mentor and Concord in the 1960s for the country living and now it is building out.

Retail also continues to change. In the 1950s a drug store had soda fountain, they sold candy and the Pharmacist made the drugs on site. Now a drug store is 20,000 square feet and sells everything. The internet will also continue to have effect on retail development. For example, it has had effect on book stores. Retail may evolve into something completely different then it is now.

## Appendix C: Environmental Health Issue Profiles (continued)

### Green Space

Insufficient green space is listed as a major concern among residents. The majority of these concerns come from residents of Mentor, Wickliffe, Painesville Township and Willoughby. Based on national standards discussed below of 6 - 10 acres of developed parkland per 1000 residents, Lake County meets this standard at 10.9 acres per resident.

### Standards

National and state park and recreation organizations and individual governmental agencies have established a varying range of definitions and standards including park type, size, access requirements, and site development guidelines. The standard derived from early studies of park acreages located within urban areas was the expression of acres of parkland per person. Over time, six to ten acres of developed parkland per 1,000 residents – mini-parks and tot lots, neighborhood parks, and community parks, not nature preserves, undeveloped parks, school grounds, private open space or school grounds – came to be the accepted standard recommended by the National Parks and Recreation Association. This ratio is used by a majority of communities in the United States.

According to national standards from the National Recreation and Park Association, <https://www.nrpa.org/publications-research/>, with a population of about 15,000 residents, there should be a minimum of 150 acres (61 hectares) of developed parkland. For a future population of 30,000, there should be at least 300 acres (121 hectares) of developed parkland.

Table Classification and minimum park area requirements

<i>Park type</i>	<i>Area/ 1000 residents</i>	<i>Size of park</i>	<i>Service radius</i>	<i>Notes</i>
<p><b>Mini park</b></p> <p>Designed to provide recreational opportunities for a small area in a neighborhood. Typically designed for young children, however in some cases it may be designed for aesthetic purposes.</p>	<p>1 ac (0.4 ha)</p>	<p>0.5 to 1 ac (0.2 to 0.4 ha)</p>	<p>0.25 to 0.5 mi (0.4 to 0.8 km)</p>	
<p><b>Neighborhood park</b></p> <p>Designed to serve recreational needs of children 6-15 years of age, as well as adults, pre-schoolers, and seniors. Typically includes family picnic areas, unlighted open turf areas for informal sports, and play equipment. Lighted athletic fields would not be included.</p>	<p>3 ac (1.2 ha)</p>	<p>4 to 12 ac (1.6 to 5.0 ha)</p>	<p>0.25 to 0.75 mi (0.4 to 1.2 km)</p>	
<p><b>Community park</b></p> <p>Designed to serve a wide variety of needs for youths and adults in both active and passive recreation. Facilities for sports fields (lighted when appropriate), open turf areas, playgrounds, picnic areas, and off-street parking. Should include restrooms and related facilities. May include a community center. Components of neighborhood parks and mini-parks should be included in the community park.</p>	<p>6 ac (2.5 ha)</p>	<p>20 to 50 ac (8 to 20 ha)</p>	<p>1 to 2 mi (1.6 to 3.2 km)</p>	
<p><b>Regional park</b></p> <p>Open space areas characterized by significant natural resources that provide passive recreation for nearby residents and the surrounding metropolitan area. Small portions of a regional park might be allocated to fulfill neighborhood park requirements.</p>	<p>15 ac (6 ha)</p>	<p>100 ac (40 ha)</p>	<p>Lake County, east Cuyahoga County</p>	
<p><b>Conservancy /open space area</b></p> <p>Land kept mostly in its natural state. Used to preserve natural areas such as riparian zones, bluffs, wetlands and other lands of recreational and scenic interest. May also include areas devoted to preservation of historic or cultural resources. Could include smaller portions of the area needed to satisfy local neighborhood recreational needs.</p>	<p>n/a</p>	<p>Sufficient to provide or preserve the resource</p>	<p>Northeast Ohio</p>	

Table Active recreation facility inventory and requirements

<i>Park/facility type</i>	<i>Target park/ facility size</i>	<i>Existing assets</i>	<i>Year 2000 minimum requirements</i>			
Neighborhood park (including acreage for mini-parks)	4-12 ac / 1.6-5.0 ha; 4 ac /1.6 ha:1,000 residents	0 ac 0 ha	60 ac 24 ha			
Community park	20-50 ac / 8-20 ha; 6 ac /3.4 ha:1,000 residents	37 ac 15 ha	90 ac 36 ha			
Tennis courts*	1:2,500 residents	0	6			
Basketball courts	1:5,000 residents	0	3			
Volleyball courts	1:20,000 residents	0	1			
Baseball diamond	1:5,000 residents	0	3			
Softball diamond	1:5,000 residents	0	3			
Soccer/football fields	1:5,000 residents	0	3			
Swimming pool	1:20,000 residents	0	1			
¼ mile running track	1:20,000 residents	0	1			
Handball/racquetball court*	1:20,000 residents	0	1			
Dog park	2-5 ac / 0.8-2.0 ac; 1:25,000 residents	0	1			

\* Ratio may be decreased due to the declining popularity of racquet sports.

\*\* Assumes population of 30,000 and no city annexation of residential areas.

## **Standards for new parks**

The standards can be used as the basis for siting new mini-parks, neighborhood parks and community parks.

- At least 50% of the perimeter of a neighborhood park, and at least 30% of the perimeter of a community park, must front on a public road. Exceptions could be made for large parks (more than 20 acres, or with more than 500 feet/150 meters of street frontage), and linear parks (rails-to-trails, lakefront corridors, riparian corridors, etc.).
- Except in trail, lakefront and riparian corridors, parks must not take the form of narrow strips.
- Convenient pedestrian and vehicular access to parks must be provided.
- Parks must not function as de facto backyards for adjacent residents.
- Parks must be welcoming, and have adequate safety features.
- Retention ponds, wetlands that stay saturated through half the year or more, areas under high tension power lines, traffic islands and medians, and entrance features cannot be used in meeting total park area requirements.
- Linking new parks to existing parks or other desirable land uses (schools, retail areas, cultural or institutional centers) will be encouraged.
- Parks must be improved with water, sanitary sewer (if available), storm sewer (if available) and electrical service. All utilities must be underground.



## Green Space Acres Per Person In Each Political Subdivision

	Acres in P.S.	Metroparks	Total Park Acreage		Does the P.S. meet acre requiremnt?	population
Leroy	1706	2171.42	3877.42	1.242	y	3122
Madison	1460	1891	3351	1.052	y	3184
Perry	885	753	1638	0.985	y	1663
Kirtland	4579	1061	5640	0.822	y	6859
North Perry	134	84	218	0.244	y	893
Concord	1237	1839	3076	0.188	y	16321
Kirtland Hills		46.14	46.14	0.071	y	646
Willoughby Hills	335	126	461	0.049	y	9485
Mentor	1200	93	1293	0.027	y	47159
Fairport Harbor	40	35.63	75.63	0.024	y	3109
Wickliffe	102.48	196	298.48	0.023	y	12750
Willoughby	185	197	382	0.017	y	22268
Painesville Twp		307	307	0.015	y	20399
Painesville	151	93	244	0.012	y	19563
Eastlake		122.93	122.93	0.007	n	18577
Mentor on the Lake	23	7	30	0.004	n	7443
Willowick	27.3	10	37.3	0.003	n	14171
Waite Hill		1	1	0.002	n	471
			21098.9			
Population	229000		10.853646			

(needs to be >.01 to meet recommended standard)

## **Is this a problem in Lake County?**

The areas that reported a concern of green space are Mentor, Wickliffe, Painesville Township and Willoughby. Some ideas of the perceived problem may be due to development occurring, lack of sidewalks, path or other way to access green space. According to calculations, Eastlake, Mentor on the Lake, Willowick and Waite Hill do not meet recommended green space areas. Some issues are is space available in the areas with insufficient space or cost of developing these areas.

## **Benefits of Parks**

According to the CDC, parks provide many health benefits. These benefits are:

- Increased physical activity- walkable access to appropriate sites motivates people to participate in physical activity and to do so more frequently;
- Improved mental health- parks can serve as a venue for stress reduction;
- Environmental benefits- parks can reduce air and water pollution, protect hazard areas (e.g., flood plains, unstable slopes) from inappropriate development, and mitigate urban heat islands;
- Community interaction- parks can provide meeting places for neighbors;
- Reduce injury- parks and trails can provide safe spaces for people to play and exercise, away from busy streets and commercial zones.

Below is a link to a report on the health benefits of parks for further reading.

[https://www.tpl.org/sites/default/files/cloud.tpl.org/pubs/benefits\\_HealthBenefitsReport.pdf](https://www.tpl.org/sites/default/files/cloud.tpl.org/pubs/benefits_HealthBenefitsReport.pdf)

## **Appendix D: Environmental Health Issue Action Plans**

### **Lake County Environmental Health Concern #1**

#### **Loose Litter and the Lack of Recycling**

##### **Reasons for Concern**

- Loose litter is unsightly and makes our roadways look bad.
- Loose litter can clog up the storm water drainage systems in place and cause flooding.
- Lack of recycling means more waste being placed in the landfill taking up valuable space.
- Survey respondents identified the lack of recycling opportunities as the number one area of concern.

##### **Current Situation in Lake County**

Loose litter can be seen typically on any of the counties freeways and roads. It only takes a small glance out your car window to see piles of cigarette butts at the stoplights on our off ramps and intersections. Litter is tossed out of vehicles, out of overfull garbage trucks, un-tarped hauling trucks, blown down streets due to improperly stored garbage in cans and dumpsters. The lack of recycling opportunities however is a bit misleading. In Lake County, every community offers recycling at the curb side except for Fairport Harbor. Eleven have it built into their waste collection service fees. Eleven other communities have waste haulers that offer the service for a fee. Three communities even have drop-off recycling, of which Fairport Harbor is included. (Lake County Solid Waste District, 2017-2018) By the end of 2018 the Lake County landfill will be a drop off location for plastics, paper, cartons, glass and metals. All of the drop-off sites are free to use by all Lake County residents. All of the curb side collections are for a fee either included or paid separately by the resident.

##### **Public Health Impact**

Whether loose litter or the lack of recycling has an impact on the public health in Lake County is hard to determine. Litter can attract vermin and pests. When it clogs storm drains it can cause flooding, some of which may be into people's homes. Flooded homes that are not cleaned up properly could cause mold to grow that can have effects on individuals. Litter can also pollute the water we drink since all of our waterways and storm drains discharge into Lake Erie.

Currently, Lake County only has one landfill. The more waste that is placed into it the shorter lifespan it will have. Under their current permit, the landfill has 25-35 more years to operate and place waste there. The more waste we can recycle, the longer the landfill will be open.

## **The Lake County Community's Role**

There are a number of actions that Lake County communities, residents and businesses can take to help reduce loose litter and increase recycling. These include:

- Promote free drop-off recycling at the Lake County Landfill on Blaise Nemeth Road in Painesville Twp.
- Educate public on proper storage and disposal of garbage and rubbish.
- Promote Ohio EPA programs that encourage and reward businesses to reduce paper waste.
- Promote and take part of Ohio Dept. of Transportations Adopt a Highway program and help clean up our State roads.
- Enforce and if necessary improve littering regulations.
- Make garbage hauling companies do their part to reduce waste from blowing out of hauling vehicles.
- Neighborhoods could get together to clean up their neighborhood.
- Take part in recycling opportunities held at the Lake County Fairgrounds by the Lake County Solid Waste District.
- Educate public and businesses on the effects of litter in the storm water system.
- Study the results of free drop-off sites versus curb-side collection.

## **Works Cited**

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## Lake County Environmental Health Concern #2

### Housing and Vacant Dwellings

#### Reasons for Concern

- Vacant homes lower values of neighboring homes. (huduser.gov, 2014)
- Vacant homes could be hazards if not secure. Vandalism, squatting and injuries from unsafe/unsecured dwellings.
- Detract from the neighborhoods look and perceived security and value.
- Increased crimes, drug sales and uses. (huduser.gov, 2014)

#### Current Situation in Lake County

Statistics show an increase in vacant dwellings over the last couple decades. The percent of vacant dwellings has grown from 3.5% in 2000 to over 6.5% in 2017. (U S Census Bureau, 2000). Lake County has also seen an increase in renter occupied dwelling units in this same time period. The increase in dwelling units in the county has risen by just under 9% (93,487 in 2000 to 101,885 in 2017). The median age of homes in the county is 1970 or 47 years old. (State of Ohio, 2017)

#### Public Health Impact

The Health District has not seen an increase in complaints concerning vacant homes causing nuisances over the years. Our office averages around 7.5 complaints each year that may involve a vacant home, dwelling unit or empty lot. In most cases the department handles them by enforcing either housing or nuisance codes. The increase in vacant units does pose a significant health problem if they are not maintained in good condition. Homes also need to be secured to prevent unauthorized persons from gaining entrance to them. Dilapidated houses pose safety risks and harborage of nuisance animals such as rats, cats, and raccoons. Unsecure vacant units also give harborage to squatters and drug use. They also pose safety risks for both police and fire departments when responding to these units.

#### The Lake County Community's Role

There are a number of actions that Lake County communities, residents and businesses can take to help reduce vacant dwellings. These include:

- Promote local municipality regulations to register vacant homes.

- Encourage programs to remove blighted properties and replace them with new homes, parks or other community related activities.
- Support land bank activities.
- Encourage reinvestment by incentives for people who fix or rebuild vacant homes.
- Promote programs that showcase neighborhoods that are on the upswing.
- Continue enforcing the Health Districts housing and nuisance complaint regulations.

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## **Lake County Environmental Health Concern #3**

### **Availability of Grocery Stores and Fresh Foods**

#### **Reasons for Concern**

- Third highest ranked concern among residents.
- Shown to have a negative effect on health and mortality. (Andreyeva, Blumenthal, Schwartz, & Brownell, 2008)
- Diet, weight, and health effects. (Andreyeva, Blumenthal, Schwartz, & Brownell, 2008)

#### **Current Situation in Lake County**

In Lake County 85% of the zip codes contain a grocery store or farmers market. The down side is that 20% of the county residents (50,000) have low access to grocery stores. The North Madison and Painesville areas are also lower income areas. These areas also are not in walking distance of a grocery store and lack the transportation as well. This severely reduces the choices for fresh foods.

#### **Public Health Impact**

Low access to grocery stores has been shown to have a negative effect on health and mortality (Andreyeva, Blumenthal, Schwartz, & Brownell, 2008). Populations that live in areas with limited access to healthful, unprocessed foods can have their diet, weight, and health negatively affected (Andreyeva, Blumenthal, Schwartz, & Brownell, 2008). Food deserts are defined as an area devoid of fresh fruit, vegetables and other healthful whole foods, usually in impoverished areas (Gallagher, 2010). The USDA definition for food desert does not contain a distance qualifier. Healthy food is usually not available due to a lack of grocery stores, farmers markets or other health food providers (Gallagher, 2010). Studies have shown that living in a food desert can increase negative health outcomes (Centers for Disease Control and Prevention, 2017).

#### **The Lake County Community's Role**

There are a number of actions that Lake County communities, residents and businesses can take to help increase availability of fresh foods and grocery stores. These include:

- Promote local municipalities to promote Farmers markets.
- Encourage programs to provide transportation to and from major grocery stores and farmers markets.
- Encourage investment in grocery stores closer to lower income areas.
- Encourage smaller local convenience type stores to carry more fresh foods.

- Promote programs that support making healthier choices when purchasing foods in lower income areas.

### **Works Cited**

Andreyeva, T., Blumenthal, D., Schwartz, M. L., & Brownell, K. (2008). Availability and Prices of Foods Across Stores and Neighborhoods: The Case of New Haven, Connecticut. *Health Affairs*, 1381-1388.

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## **Lake County Environmental Health Concern #4**

### **Too Little Green Space**

#### **Reasons for Concern**

- Mainly a concern by responding residents from Mentor, Willoughby, Wickliffe and Painesville.
- Eastlake, Mentor on the Lake, Willowick and Waite Hill do not meet recommended green space areas.
- If not enough areas, would cause a reduction in the health benefits attributed to green space.

#### **Current Situation in Lake County**

The areas that reported a concern of green space are Mentor, Wickliffe, Painesville Township and Willoughby. Some ideas of the perceived problem may be due to development occurring, lack of sidewalks, path or other way to access green space. According to calculations, Eastlake, Mentor on the Lake, Willowick and Waite Hill do not meet recommended green space areas. Some issues are is space available in the areas with insufficient space or cost of developing these areas.

#### **Public Health Impact**

Based on national standards, a suggested requirement of 6 - 10 acres of developed parkland per 1000 residents is encouraged. Lake County meets this standard at 10.9 acres per resident. (National recreation and Park Assoc., 2018) There may be no real health impact currently but could change over time.

#### **The Lake County Community's Role**

There are a number of actions that Lake County communities, residents and businesses can take to help promote green space development. These include:

- Promote health in all policies in the decision making for policy areas sand sectors.
- Encourage more green space development whenever possible. Smaller parks.
- Encourage the linking of parks together or other desirable land uses.
- Promote improving parks with water, sewer, storm sewer, and electrical when available.
- Parks improve environment by reducing air and water pollution and protect flood plains.

## **Lake County Environmental Health Concern #5**

### **Too Much Commercial Development**

#### **Reasons for Concern**

- Mainly a concern by responding residents from Mentor, Willoughby, and Concord.
- Older building may contain asbestos materials.

#### **Current Situation in Lake County**

Development is going on in pretty much every municipality in Lake County. Local zoning dictates the areas to be commercially developed. The possibility that there is a perception of too much may be influenced by the amount of vacant or available for rent units out there. Many areas are getting older though. This makes them less attractive to new businesses if there is lacking required IT or require asbestos cleanup. Some areas of the county are getting close to being built out like Eastlake, Wickliffe, and Willowick. Also the types of retail have changed over the last 20 years.

#### **Public Health Impact**

A low impact on public health in general. More development may cause slower traffic or changes in traffic patterns that could cause an increase in accidents and slower emergency response times. Increasing green space to counter may aid in health effects.

#### **The Lake County Community's Role**

There are a number of actions that Lake County communities, residents and businesses can take to help best utilize commercial development. These include:

- Promote health in all policies in the decision making for policy areas and sectors.
- Encourage more green space development whenever possible. Smaller parks.
- Incentives for local businesses to stay. Continue to promote new businesses to come.
- Encourage residents to shop local.

## Appendix E: Housing and Dwelling Unit Stakeholder Plan

The primary goal of the Lake County General Health District's housing code enforcement program is to ensure all Lake County residents have safe and healthy housing. The code enforcement process routinely handles complaints regarding conditions that need to be repaired or cleaned up. Two other conditions have emerged and were indicated in the survey results. These are: what do we do with dwellings we condemn and what should be done with blighted vacant homes in our communities?

The Health District is seeking ways to handle condemned and blighted homes. Many stakeholders are affected by these two problems. The goal is to form a committee with representatives from all the stakeholders to develop policies and procedures to handle the dwellings. The committee would include local building and zoning officials, Lake County Planning, City and Township managers, Lake County Prosecutor's office, Western Reserve Development Group, L.C. Fair Housing, City Block grant officials, Port Authority, Fire and Law Enforcement officials, and Health District staff.

Goals of the committee:

1. To develop measures to fill in the gaps where local rules and codes fall short
2. Seeks funds to pay for removal of blighted homes
3. Create policy to work together on condemned properties
4. Seek information on what our political subdivisions want from the Health District.
5. Discuss a county wide rental inspection program
6. Determine if sub committees need formed or who isn't a player
7. Determine extent of the program at the Health District

The time frame in conducting a meeting to form a committee will be January 2020. At that time the committee will schedule regular meeting to work on goals.

Internally at the Health District, we will form a group of staff members to review:

1. Current codes and policies and work with the L.C. Prosecutor to review our codes and seek recommendations. What works vs. what doesn't?
2. Track condemned homes and develop policy for dwellings that are long term
3. Compile numbers and cost associated with current program