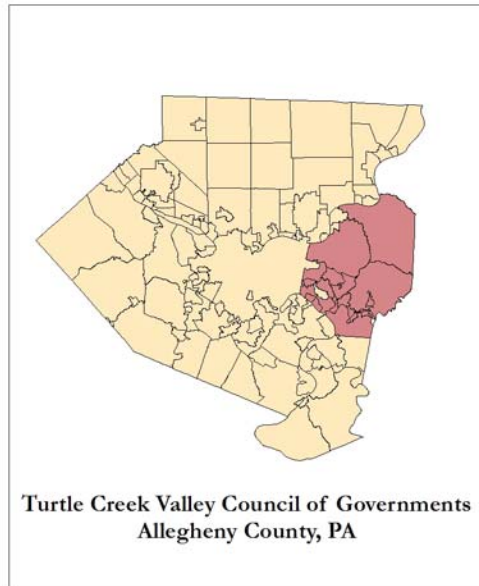


# Neighborhood and Community Indicator Systems

Strengthening the Turtle Creek Valley Council of Government communities  
through collaborative data systems



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December 8, 2008

*Pennsylvania Planning Association  
Student Project Award Winner, 2009*

## EXECUTIVE SUMMARY

This project is a collaborative effort designed to analyze ways in which the Pittsburgh Neighborhood and Community Information System (PNCIS) can be extended to the Turtle Creek Valley Council of Governments (TCVCOG). Neighborhood information systems are part of a movement to democratize data – that is to make data available to many different community stakeholders and is central of participatory planning. This report analyzes the ways these systems can be adopted by the technologically savvy and by those who are not.

This project is intended to provide a framework that can be extended to other levels of government. We used the TCVCOG as a case study and hope that our methods can be duplicated elsewhere.

We studied community indicator systems within the National Neighborhood Indicator Partnership, a consortium of neighborhood indicator systems from around the country and based at the Urban Institute in Washington, D.C. From this review, we identified important issues within a community such as education, housing, and economic development then collected data relevant to those issues. Along the way, we analyzed the communities we studied in the Turtle Creek Valley COG (TCVCOG) to gauge their ability to use the data and their technological capacity to work with the PNCIS.

Our most notable breakthroughs include:

- Identifying communities' obstacles in using PNCIS and making recommendations for increasing their capacity to do so.
- Exploring funding sources for these efforts, including grants and community partnerships, especially through the Pennsylvania Department of Community and Economic Development:
  - Local Municipal Resources and Development Program
  - Neighborhood Stabilization Program
  - Land Use Technical Assistance and Planning grant.
  - Main Street and Elm Street programs.
- Finding that nearly half of the communities we studied lacked the capacity to maintain records on computers and would not be able to dedicate enough trained personnel to use a desktop GIS program such as the PNCIS on an ongoing basis.

These findings strongly suggest that the TCVCOG, other COGs and groups of communities have a great opportunity to fill capacity and technological gaps by creating opportunities to access data and information through neighborhood information systems.

Overall, this project has begun to address a very important and timely issue—how can decision makers and other stakeholders access data in an efficient manner in order to become better equipped at addressing community needs.

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## CHAPTER I – INTRODUCTION

This project aims to assess the feasibility of extending the Pittsburgh Community and Neighborhood Information System (PNCIS) to the Turtle Creek Valley Council of Governments (TCVCOG). The PNCIS is an internet-based geographic information system (GIS) that allows users to query and map social, economic, and property-level data and indicators.

The system is a partner in the National Neighborhood Indicators Project (NNIP), a consortium of institutions representing over thirty US

*Democratization of data ensures that all stakeholders have access to data and the opportunity to be involved in the policy making process within their neighborhoods.*

cities that operate similar systems. The principle unifying these organizations is to democratize the accessibility of data – that is, providing data to communities and community groups to empower them to solve problems internally.

The PNCIS focuses primarily on the City of Pittsburgh, with some information available at the county level. Therefore, we were interested in assessing the opportunities, barriers, and feasibility of extending the PNCIS to areas outside of the City. This was accomplished through extensive research, formal and informal meetings with community and COG representatives, and data analysis. Additionally, we wished to use the lessons learned from this study to recommend policies aimed at implementing similar regional indicators systems throughout the Commonwealth of Pennsylvania.

Of course, none of this could be accomplished without the help of a number of individuals. First, the team would like to thank Professor Sabina Deitrick for her guidance throughout the research and writing process. We would like to thank Dr. David Miller for providing his expertise on the context of regionalism and COGs. The team would also like to thank Amanda Settelmeier, Executive Director of the TCVCOG, for meeting with the team and providing us access to community planners and leaders. Finally, we would like to thank the representatives of the twenty TCVCOG communities, who graciously answered our questions and provided constructive feedback.



The iconic Westinghouse Bridge, (WQED 2008)

## CHAPTER II -- THE DEMOCRATIZATION OF DATA

Democratization of data ensures that all stakeholders have access to data and the opportunity to be involved in the policy making process within their neighborhoods. Historically, data collected in the planning, health, and social service departments of local governments was utilized for policymaking decisions, but this data was not disseminated to community stakeholders and community residents.

However, local nonprofits, community organizations, churches, businesses, and community residents all have a stake in ensuring the success of development projects. Community stakeholders are attempting to overcome this disparity of information sharing, yet challenges remain. For many local stakeholders, limited technological and fiscal capacity inhibits their role in the planning process. To bridge the gap between community stakeholders' needs and access to neighborhood data, there has been a movement towards *democratizing data*.

### **The Democratization Movement**

The movement towards democratization of data has gained considerable momentum in the past decade and promises to play a prominent role in future community planning. This philosophy of providing data directly to citizens has inspired many communities to create neighborhood-level information systems (NNIP website, 2008). These systems provide local stakeholders with data to empower their active participation in community discussions and development.

The movement towards providing greater access to data at a local level has been fueled largely by technological advances (Sawicki & Craig, 1996). In recent years, these technological advances include:

- Improved access to computer technology;
- More user-friendly computer technology;
- Availability of desk top GIS; and
- Less costly computers and software.

These changes have allowed widespread understanding and use of information technology outside of professional urban planning circles, and they have enabled community groups to play a more prominent role in shaping local decisions on planning projects and neighborhood development.

### **Challenges to Democratizing Data**

Promoting greater access to data and empowering citizens continues to present challenges. Potential obstacles to democratizing data include:

- A lack of leadership within communities;

- Insufficient technology and technological skills; and
- Different financial and human resources.

Varying levels of technological access and abilities can widen disparities between lower and higher income communities (Sawicki & Craig, 1996). Citizens who already possess knowledge of applications, such as GIS, will be better prepared to present evidence in support of projects or requests for funding. As paper records are replaced by online data sources, citizens with limited access to computer technology will be further disadvantaged (Sawicki & Craig).

Many communities do not possess the financial or human resources to effectively collect and utilize data in support of their policy objectives. In such cases, communities may form networks to collect and distribute data at the neighborhood level that can be utilized by all stakeholders (Bruner & Pettine, 2007). To facilitate this effort, data providers have stepped in as intermediaries (Sawicki & Craig, 1996). These valuable data partners, often from academic or professional centers, can help community groups with inadequate resources utilize data to support their policy positions.

The democratization of data encompasses more than the creation and availability of a massive data base. Such efforts also require community input in selecting the data to be monitored. This ensures that the information collected has relevancy to the stakeholders and encourages an understanding of community priorities. Through greater collaboration between data providers and community members, planning decisions can be made at a local level with wider input, effectively serving to democratize data.

## **Collaborations**

Collaborations among government and community organizations are encouraged to limit the overlap of resources. Nonprofits, private businesses, and other community stakeholders all have an interest in the policy making process. Building the community's capacity to use information effectively through collaboration can enhance the community's development and future policy agenda tremendously (Bailey, 1997).

Collaborations can be formed by assessing the communities using an asset-based approach to identify the existing technological and informational strengths of the community (Bailey, 1997). From this assessment, collaborations can be formed to assist with the training and the dissemination of data to community organizations and stakeholders. The collaborating intermediaries can also provide training, offer technological assistance, and collect data on the progress of the democratization of data movement (Bailey, 1997).

## CHAPTER III -- LITERATURE REVIEW

Local and state governments, community organizations, and individuals can all benefit from the use of Geographic Information Systems (GIS). GIS allows data to be mapped and visualized in particular geographic areas. However, data scarcity and operational costs can limit the use of GIS.

This project will research how users can increase their access to information systems. The most relevant literature resources used for this project can be placed in one of four categories:

- |                     |                        |
|---------------------|------------------------|
| (1) Data collection | (3) Data analysis      |
| (2) Data management | (4) Data dissemination |

**Data collection** pertains to what data is being collected, how it is collected, why the data is relevant, who collects it, and how the data is recorded and stored. To begin the process of collecting data, Coulton (2008) provides an extensive table of indicators and data sources.

For our purposes, we reviewed census data because it has already been collected and can be used to analyze general populations. Census data provides a baseline of population density and location, allowing other indicators to be overlapped and analyzed more extensively. We also collected data from Pennsylvania state agencies and the county and local government levels.

**Data management** is important for GIS users to maintain and update data, while tracking relevant changes. Data management also relates to the GIS system's quality and ease by which users can operate it. Bailey (1997) discusses the need for capacity building within an organization so that they are prepared and trained to use GIS. Bailey (1997) also analyzes several phases of training involved: general public outreach, training on using information, and training on disseminating information to the public. The article reviews community capacity to set up and operate a system. Critical issues here include:

- Capacity to obtain information;
- Technological abilities of a community; and
- Current and future training needs.

Tatian (2000) created a handbook detailing methods for collecting, using, and disseminating local indicator data. Tatian (2000) describes how timeliness, geography, format and confidentiality affect how data can be used and managed. He also discusses how cost, technical aspects, time, and confidentiality can complicate the job of data management.

**Data analysis** is most effective when data indicators are relevant. Evaluating a system for efficiency is also crucial. Nedovic-Budic (1999) proposes an integrated evaluation framework that encompasses dimensions from several existing GIS evaluation frameworks, including

system quality, information quality, information use, user effects, individual effects, organizational effects, and societal effects. Within each dimension, she catalogs the evaluation criteria that could be used in an urban planning context.

Sawicki and Flynn (1996) present a comprehensive review of lessons learned from the initial NNIP members. We recommend that these be taken into consideration in the implementation of a neighborhood indicators system in the Pittsburgh region. They point to understanding how policy decisions are tied to geography. Here geographic scale must be precise, as this will influence the validity of local indicators. In order for indicators to be helpful measures of neighborhood status, they should be independent of other variables.

**Data dissemination** to multiple stakeholders—an issue of democratizing data --has raised debates over whether information is being effectively shared with marginalized groups. Sawicki and Craig (1996) considered the movement to bring data to the community level and ultimately found that more effort is needed to minimize the barriers in accessing data.

Elwood (2002) focuses on the use of GIS by neighborhood organizations and how to enable greater access to these data sources. She also points to the difficulties neighborhood groups can have using GIS data sources and fully understanding its application in addressing their community's needs. Implicit in this attempt to provide greater access to data is a needed understanding of the challenges communities face in using such technology to their advantage.

Sieber (2006) argues that GIS is a valuable tool that can be used by a wide range of individuals and groups to promote social change. She analyzes Public Participation Geographic Systems (PPGIS) according to how and by whom they were used, and then evaluates the possibilities for PPGIS in the future. She also examines the limitations placed on PPGIS users because of data accessibility and laws controlling availability. Whatever the debates, analysts agree on the importance of expanding access to GIS and neighborhood systems.

These four categories of literature are helpful in creating a framework from which to analyze our findings and give useful recommendations. We are using the Turtle Creek Valley COG to test these findings and suggest ways in which this example can be used as a model for other governments.



## CHAPTER IV -- METHODOLOGY

### Conceptual Research

We began the research process of extending the Pittsburgh Neighborhood and Community Information System (PNCIS) to the municipalities within the TCVCOG by first exploring concepts, theory, and templates within the field of community indicators system development.

We examined the features and functionality of the existing PNCIS and participated in an interactive training session. Each member studied core and supplemental indicator systems readings, and reported on key ideas and concepts. These readings featured critical concepts that are reflected in the project, including democratization of data, public participation, GIS potential, and indicator templates.

We studied community indicator systems within the National Neighborhood Indicators Partnership (NNIP). We critiqued these systems, discovering elements applicable to this project, as well as highlighting potential limitations. Useful topics included data accessibility, technological capacity, indicator applicability, and partnership and collaboration possibilities.

### Field Work

After our initial stage of research, we met with TCVCOG director Amanda Settelmeier, who introduced us to the purpose and scope of the COG. Ms. Settelmeier arranged for a tour of the TCVCOG municipalities where we met with officials from four local governments: Chalfant, Monroeville, Penn Hills and Edgewood. These communities represent a diverse cross-section of the TCVCOG and discussions with their officials proved to be an invaluable resource for our project team.

The case studies we reviewed include member cities of the National Neighborhood Indicators Partnership (NNIP):

- Baltimore's *Neighborhood Indicators Alliance*
- Chattanooga's *Community Council Research*
- Cleveland's *NEOCANDO*
- Hartford's *Harford Partners*
- New Orleans' *Greater New Orleans Community Data Center*
- Oakland's *Urban Strategies Council*
- Providence's *The Providence Plan*
- Sacramento's *Community Services Planning Council*
- Washington, DC's *NeighborhoodInfo DC*

Our discussions with political and administrative leaders focused on:

- Housing
- Development
- Local economy
- Infrastructure
- Code enforcement
- Zoning/planning
- Community capacity

## **Indicator Research and System Development**

Following the initial stages of research and field interaction, we identified the community indicators that would be most useful to analyze. Various sources were used to research the indicators; sources are identified throughout this document.

We compiled both qualitative and quantitative data from our research; quantitative data was often computed into ratio and rate formats for enhanced interpretation. For each indicator we sought to address difficulties in obtaining information, limitations of data, and technological capacity. GIS capabilities were demonstrated with the production of several maps representing key indicators spatially across the TCVCOG region.

## **Community and Project Evaluation**

The detailed evaluation of indicators was encapsulated by a broader discussion of indicator system theory and practice with regards to implementation in the TCVCOG. Theoretically, the idea of “democratization of data” provided a framework for this indicator system project. An evaluation of community capacity provided a detailed analysis of the disparate resources, expertise and technical capabilities of the diverse communities within the TCVCOG.

The combination of theoretical analysis and indicator system development led to the team’s conclusions and recommendations. The recommendations were developed to address existing TCVCOG deficiencies and provide insight into integration, collaboration and asset leveraging during the process of neighborhood indicator system implementation. Throughout the process, we were careful to consider the implications of our findings in both the TCVCOG and other regional entities throughout the Commonwealth.

## CHAPTER V -- TURTLE CREEK VALLEY COG

In order to analyze how the PNCIS system could be extended to county or state levels, we selected a group of municipalities that belong to the Turtle Creek Valley COG. The TCVOG was selected for its diversity and our ability to access municipal managers to discuss their needs. There are twenty municipalities in the TCVCOG, differing in size and capacity. The communities' vast differences make them a valuable case study for the expansion of the PCNIS.

### **History of the Turtle Creek Valley Council of Governments**

The Turtle Creek Valley COG was formed in 1971 among eleven municipalities serving a population of 200,000. The COG was created to provide the municipalities with opportunities to create more cost efficient services and to foster collaborative efforts among the municipalities. The TCVCOG has offered computers, grant writing services, equipment sharing, and many more opportunities since it was formed (Turtle Creek Valley COG Profile, 2001).

When the COG was formed, many of the municipalities were still thriving from the steel industry. However, once the steel mills closed, the communities' economies deteriorated. The COG's ability to act as an intermediary for the communities collaborative purchasing and service sharing was essential. Declining revenues have forced many of the municipalities to seek assistance from their COG (Turtle Creek Valley COG, 2001).

### **Community Profiles**

We analyzed the TCVCOG communities on the following dimensions of capacity:

- Technical Capacity
- Information Collection and Content
- Program Sustainability

#### ***Technical capacity***

*Operational Abilities:* The first aspect of technical capacity relates to the municipality's ability to operate an information system such as the PNCIS. We found that many of the communities lack the ability to collect data in a format suitable for computer applications. Communities such as Monroeville, Forest Hills, Edgewood, Churchill and Penn Hills can afford to employ planning, public works, and code enforcement departments that collect a vast amount of data. In contrast, impoverished communities such as Braddock, Rankin, and Pitcairn, are still collecting data on paper.

Without routine access to computers, basic database software, and internet capabilities, poorer communities lack the capacity to use a neighborhood indicators system. Consequently, these communities require a greater amount of training and investments (hardware and software) to enable any meaningful level of system use. The disparity that exists among these communities could be remedied by the TCVCOG maintaining an information extension of the PCNIS.

***Spatial Literacy:*** A second important aspect of a community’s technical capabilities is its spatial literacy (Laituri, 2003). Affluent communities with planning offices are likely to have staff trained in GIS. Penn Hills provides an excellent example of the very literate end of the spectrum. In addition to having a dedicated planning office, it also maintains an online GIS tool available to the public. Conversely, poor communities might lack resources to hire personnel with a basic understanding of cartography and spatial analysis.

***Analytic Abilities:*** A third aspect of a community’s technical capabilities is its data analytic capacity. In her analysis of community capacity, Bailey (2000) discovered that with a diverse group of users comes an expansive continuum of data analytic skills. At the very low end, communities and users might not understand the meaning of a particular indicator, or may not know how to use the indicator to affect policy. On the high end, communities might employ personnel with sophisticated data analytic skills and supportive data analysis software. Universities and other intermediaries can provide some additional capacity in this area. However, in circumstances where there is no intermediary, a COG or other regional governance body will need to fill this gap.

***Information content and collection***

Information content pertains to data availability and the richness of information a community or group collects. For communities with greater technical capacity such as Monroeville, it is likely that vast amounts of place-based data will be available. For smaller communities with limited resources, data will likely be unavailable or available only through third-party commercial vendors (Coulton, 2007). This is particularly true for health, public assistance, and housing assistance data, which require significant financial investments to obtain (Guernsey and Pettit, 2007). Paradoxically, communities that would benefit most from information systems are the communities that do not have sufficient resources to utilize them.

**Table 1. An Analysis of Technical and Information Capacity in the TCVCOG**

<b>Strong Technical Capacity/Information Content</b>			<b>Weak Technical Capacity/Information Content</b>		
Churchill	Edgewood	Forest Hills	Braddock	Chalfant	E. McKeesport
Monroeville	Plum	Rankin	E. Pittsburgh	Pitcairn	Turtle Creek
Swissvale	Penn Hills	Wilkins	N. Braddock	N. Versailles	Wall
Wilkinsburg	Wilmerding	Township			

**Sustainability**

Even with high levels of technical and analytic sophistication, the ability of communities and community groups to sustain access to a neighborhood indicators system is determined by two primary factors: funding and participation.

**Funding:** Both Laituri (2003) and Sawicki and Craig (1996) suggest that funding policies can dictate a program’s long-term sustainability and capacity. In the case of NNIP cities, data access costs are borne largely by partners such as universities and not-for-profit organizations. Without a long-term partner, communities and community groups must turn to alternatives such as fee-based services, donations, grants, or line item funding (Laituri, 2003). With constricting public funds, users must continuously find creative ways to generate revenue.

**Participation:** A second aspect of sustainability is the degree to which users take ownership in the success of the program. Community buy in can make or break a system’s prospect for longevity. As evidence, Ghose (2001) reported that leadership turnovers drastically undermined the research capacity, resources, and initiative of the community group. Widespread interest from municipal leaders and community groups in a regional context ensures that the program will remain relevant, even during tight financial times.

**Developing sustainable projects**

One case study, Neighborhood Knowledge California (NKCA), at the University of California, reveals how a grassroots project can provide a user-friendly approach to mapping systems.

The issues the case study addresses include: data acquisition; identifying stakeholders such as residents, agencies, politicians, and researchers; software development; project staff and coordinators; and funding from municipalities, foundations, and the federal government. These key components are vital to the prospects of longevity.

Long term maintenance can be problematic when dealing with many different stakeholders. The case study also provides information on the process by which community organizations reached out for funding and attracted users to the site. NKCA was able to overcome funding obstacles by establishing a fee-based funding source.

**Table 2. An Analysis of System Sustainability in the TCVCOG**

Strong Funding Sustainability		Weak Funding Sustainability		Unknown Funding Sustainability	
Edgewood Penn Hills TCVCOG	Monroeville Plum	Braddock E. McKeesport Rankin	Chalfant E. Pittsburgh Turtle Creek	Churchill N. Braddock Pitcairn Wall Wilkins Twp.	Forest Hills N. Versailles Swissvale Wilksburg Wilmerding

## CHAPTER VI -- AN OVERVIEW OF COMMUNITY INDICATORS

### Selected Indicators

Democratizing data through a neighborhood indicators system offers a glimpse of the community as a whole and allows stakeholders to view the community's needs and strengths. To highlight the vast potential that such a system provides, as well as the limits to collecting and analyzing the required data, we selected the following indicators for this report:

- Education
- Fiscal Health
- Economic Development
- Land Use
- Housing
- Health
- Crime and Public Safety
- Social Services
- Community Resources

Below, we discuss each of these indicator categories in detail.

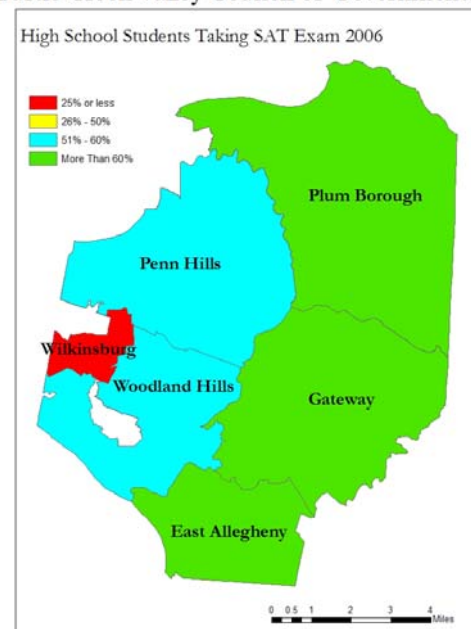
### Educational Indicators

Data on education is easy to obtain at the school and district levels because of the increased emphasis on educational reporting under the No Child Left Behind Act of 2001. Equally important, both the National Center for Education Statistics (NCES) and State educational agencies have created numbering systems which allow for a hierarchical view of schools; the numbering systems include a unique identifier for each district (AUN) and a unique identifier for each school (School ID). School and district data is typically grouped into state-level files, which can be downloaded from internet sites. COGs and communities can obtain their respective AUN and School IDs from [nces.ed.gov](http://nces.ed.gov). With this information, they can filter out data on school and districts outside of their scope.

One limitation of internet data, however, is that it does not report at a student-level. This might not be problematic for certain purposes, however, student-level data might be useful if a community or community group wishes to perform longitudinal studies of its residents or neighborhood-level analyses (Coulton, 2008).

Nevertheless, with contacts in school district offices and proper de-identification procedures, it might be possible to obtain student-level information, even within the constraints of the Family Educational Rights Privacy Act (FERPA).

Turtle Creek Valley Council of Governments



Educational indicators can be grouped into at least four categories, and can be obtained from schooldatadirect.org, nces.ed.gov, and pde.state.pa.us. Below, each category’s availability and particular issues are discussed.

### ***Enrollment and resources***

This category of indicators is useful for determining the appropriateness of staffing and funding and the degree to which the local tax base is capable of sufficiently funding operations.

### ***Measures of affluence***

This category of indicators provides a broad overview of the socioeconomic status of schools and the impact of this status on the future orientation on graduating high school seniors. More importantly, the affluence measures provide a convenient community-level proxy for the poverty rate, which is only reported at a community-level in the decennial Census.

### ***College entrance exam performance/participation***

Frequently, media and interest groups report SAT, ACT, and AP test scores to highlight the “quality” of high school seniors that districts and schools produce. However, these reports rarely account for the percentage of students taking these tests. As more students with varied abilities participate in these tests, average scores are naturally decreased. Thus, communities and COGs can use these indicators to gauge the overall performance and participation of college-bound high school seniors, which can lead to more accurate score interpretations.

### ***No Child Left Behind (NCLB) assessments and accountability***

At least one community interviewed in the TCVCOG pointed to NCLB state assessment performance as a relevant concern. This is not surprising. NCLB requires states to adopt rigorous content and performance standards and to test to those standards from 3<sup>rd</sup> to 11<sup>th</sup> grade. Performance on these state assessments, along with other metrics, determines whether a school or district has maintained Adequate Yearly Progress (AYP). High-stakes consequences, such as curriculum modifications and administration turnovers, can occur in a school that repeatedly fails to achieve AYP. Indicators pertaining to NCLB performance and AYP can help communities and COGs make strong cases for Federal, State, and non-profit assistance when necessary. For existing community groups, especially those with educational mandates, these indicators used in conjunction with GIS can help target service delivery gaps.

#### ***School Indicators***

*School Performance* School performance indicators are useful references that show need for social service programs in a neighborhood. In areas with school rankings below the national average, there will be greater need for social service programs. Some state and national websites provide these rankings, including: goodschoolspa.org and schoolmatters.com.

It is beneficial to monitor the rankings of schools on a regular basis. Using already available sources, such as these websites, eliminates the need to gather data and the costs associated with doing so.

*Free/Reduced Lunch Data* Free/Reduced Lunch data is another indicator available at the school level. This data reveals how many families fall below the poverty line and may therefore need other social services. This information can be obtained from schools and from the Department of Public Welfare.

## Fiscal Health Indicators

Governing bodies must be able to analyze fiscal indicators effectively so that the decisions they make create economically healthy communities. There are many fiscal indicators that reveal how competent a municipality's budgeting practices are. It is beneficial to map various trends so that decisions can become more cost effective and target specific problems.

Some valuable fiscal indicators to track include the following:

- Revenue per capita
- Real estate tax revenue and earned income tax trends
- Tax revenues as percent of total revenue
- Expenditures per capita
- Income

**Revenue per capita** is the amount of revenue collected in relation to a population.

Municipalities that collect high revenue per capita will be better equipped to provide more services. The types of services provided depend on the population and demographics within the municipality. Many services are standard, such as education, road repairs, and water and sewer maintenance. Other services will depend on the amount of revenue collected and the sources of the revenue. When revenues decrease over time, a major decline in service provision can be expected in these struggling municipalities.

**Tax revenues** include monies collected for property tax, earned income tax, and other taxes.

Tax revenues and the rates attached to the taxes will depend on the demographics of the community being served. Many of Allegheny County's communities have large populations of elderly homeowners, and thus high property tax rates will represent a greater burden for these community residents. Income taxes are generally less burdensome for communities with high elderly populations, but encumber communities trying to attract young professionals. Using GIS to map out population by age and tax revenues is a valuable tool in understanding municipalities' tax sources and setting appropriate tax rates.

**Tax revenues as a percent of total revenues** illustrate the proportion of revenues that are collected by taxes, with higher percentages showing a greater dependency on taxes. It is advantageous for a municipality to diversify their revenue sources to alleviate the burden faced by tax payers.

**Expenditures per capita** represents the amount of money spent on various services and the types of services provided by a community. Aging infrastructure is a concern in many of the municipalities in the Pittsburgh region and expenditures will need to increase over time to meet growing needs. It will be important to track local governments' expenditure trends to see how well they are able to meet the increasing need to improve infrastructure. Unfortunately many municipalities will be faced with greater expenditure needs than revenues will allow, and should seek out alternative funding sources.



**Income** levels for a given population illustrate the impact of tax policy on various groups by income level. A concentration of low income households demonstrates a need for social service programs. Income data can be obtained online through the US Census.

**Table 3. Fiscal Indicators for TCVCOG Municipalities**

Municipality	Total Revenues	Total Expenditures	Excess Deficit of Revenues over Expenditures	Revenue Per Capita	Expenditures Per Capita	Revenue per capita - Expenditures per Capita
Braddock Hills	1,496,301	1,356,257	140,044	749	679	70
Chalfant	491,311	478,945	12,366	565	551	14
Churchill	2,735,008	2,548,808	186,200	767	715	52
E. McKeesport	1,213,326	1,081,202	132,124	518	461	57
E. Pittsburgh	1,459,556	1,359,898	99,658	724	674	50
Edgewood	4,149,404	4,276,395	(126,991)	1,253	1,292	(39)
Forest Hills	6,943,618	7,111,982	(168,364)	1,016	1,041	(25)
Monroeville	25,545,147	33,501,398	(7,956,251)	870	1,141	(271)
N. Braddock	2,727,610	2,726,477	1,133	426	425	1
N. Versailles	5,051,589	5,227,921	(176,332)	454	470	(16)
Penn Hills	41,066,338	43,802,325	(2,735,987)	877	936	(59)
Pitcairn	3,997,421	3,749,420	248,001	1,084	1,016	68
Plum	10,886,927	10,893,507	(6,580)	404	404	0
Rankin	1,001,583	1,019,524	(17,941)	433	440	(7)
Swissvale	6,019,488	5,926,752	92,736	624	614	10
Tarentum	6,907,854	7,013,842	(105,988)	1,384	1,405	(21)
Turtle Creek	3,478,752	3,201,537	277,215	573	527	46
Versailles	845,923	891,813	(45,890)	491	517	(26)
Wilkins	5,490,898	5,465,689	25,209	794	790	4
Wilkinsburg	12,497,465	11,980,230	517,235	651	624	27
Wilmerding	1,277,544	1,279,496	(1,952)	596	597	(1)

Source: Pennsylvania Department of Community and Economic Development, 2006.

## Economic Development

The collection and interpretation of economic and business indicators is an important element within the indicator framework. Economic development is a major thrust of local governments, community development organizations, chambers of commerce and business associations. Economic growth is critical to the health of TCVCOG municipalities, and these communities form an interdependent economic web amongst themselves and the greater region.

Relevant economic indicators include:

- Labor Force
- Market Trends
- Commuting Methods
- Occupations and Industry
- Median Household Income
- Transit Usage
- Poverty

#### ***Resources***

Many municipal-level economic indicators are available from the U.S. Census Bureau through the American Factfinder tool on the [www.census.gov](http://www.census.gov) website.

The accuracy of this information is affected by the timeliness of the data collected by the decennial Census. The most recent data is from 2000.

Business indicators are more difficult to acquire. One potential source is the Chamber of Commerce. However, the TCVCOG communities are fragmented amongst several Chambers of Commerce, including: Greater Monroeville, Penn Hills, Wilkinsburg, Westmoreland and the Regional Chamber Alliance (serving many communities in southeastern Allegheny County).

Municipalities may have internal capacity for tracking business trends, though this may vary due to the diversity in size, business activity and technical capabilities. The Census Bureau features Business Patterns at the ZIP Code level. This tool features annual business data from 1998 through 2006, including:

- Number of Establishments
- Number of Employee
- First Quarter Payroll
- Annual Payroll
- Establishments by Size
- Establishments by Industry

#### ***Market Indicators***

Market indicators reveal how strength of a local economy. A weak or declining economy in a particular area demonstrates a need for assistance through social service providers. Some revealing market indicators can include:

- Housing sales and transactions
- Trends in housing prices
- Percentage of Owner-Occupied Housing
- Vacancy Rates — for retail and housing markets
- Consumer Expenditures
- Development Analysis— the number of new development projects, projects under construction, and planned developments.

Pennsylvania's Main Street and Elm Street initiatives are economic revitalization programs for older, historic communities focusing on downtowns and adjacent core areas. However, only Wilkinsburg is a current participant in the Main Street program and no TCVCOG communities are participating in the Elm Street program.

#### ***Median household income***

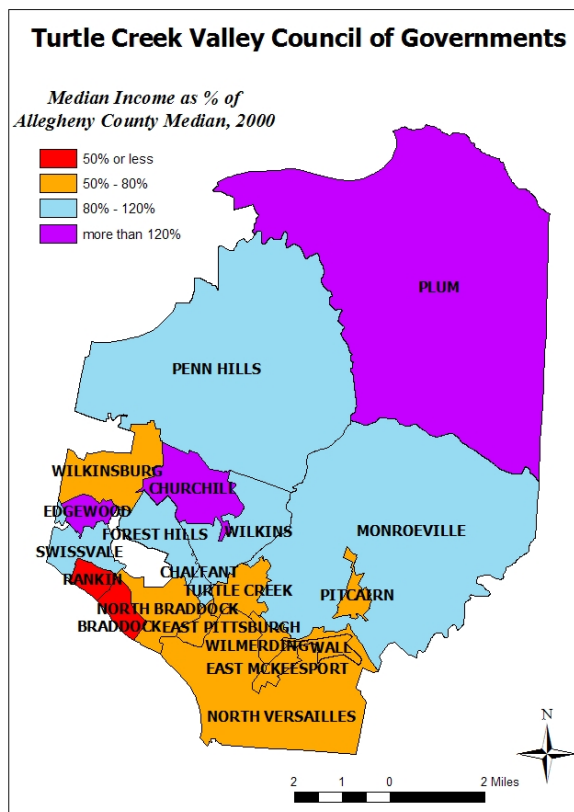
Median household income is one of the most widely used economic indicators for geographic areas. It finds the midpoint of household incomes in an area by dividing households into two equal parts – above and below the area median income. It is a better indicator than average household income because it is less affected by extreme values.

Median household income measures aggregate incomes of households, which is distinct from measures of personal income and family income (which is a specific type of household).

Household incomes often consist of the pooled earnings of two income earners. Examining growth in median household income over time is useful in determining trends in economic health and demographics of a local area.

However, there are limitations to median household income. Most notably, it does not account for disparities in household compositions amongst local areas. Municipalities with higher percentages of single-income households may appear less affluent. Changes in household composition over time may affect median income household trends over time.

Median household income data is available from the Census Bureau Factfinder application. The project team computed the ratio value comparisons with Allegheny County



median income.

### ***Workers by place of work/residence and employment concentration***

Employment Concentration is a measure of the numbers of workers in a municipality by both place of work and place of residence. The place of work population is divided by the place of residence population to compute the employment concentration ratio.

“Workers by place of work” numbers depict where employment is most heavily concentrated amongst the TCVCOG municipalities. Monroeville has the largest employment base among the TCVCOG municipalities and it is also one of the largest in population. A comparison with its “workers by place of residence” population results in an employment concentration ratio of 1.78, indicating that Monroeville has a much higher employment base than its large resident worker population. While Monroeville has the highest employment base, tiny Braddock has the highest employment concentration ratio at 3.83. Its small resident worker population is dwarfed by its employment base, which is heavily impacted by a UPMC hospital.

Most municipalities have employee ratios under 1.0, as the City of Pittsburgh is the county’s dominant employment base. However, the ratio is still useful in differentiating between “bedroom communities” with small employment bases (Chalfant, Pitcairn) and communities that have highly developed and robust employment sectors (Monroeville, Wilkins Township). While much of the TCVCOG sends workers elsewhere (especially to the City of Pittsburgh), the 19 municipalities still had a major employment base of 72,902 in year 2000.

Additionally, “workers by place of work” can be compared over time. Comparing data from Census 1990 and Census 2000 can indicate where job growth has been occurring across the TCVCOG.

**Table 4. Employment Concentrations in Allegheny County (2000)**

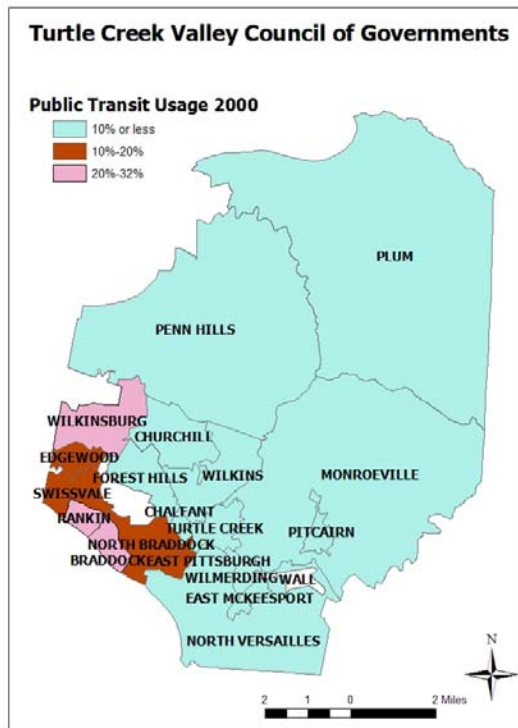
Muni.	Workers		Ratio†	Muni.	Workers		Ratio†
	By Place Of Work	By Residence			By Place Of Work	By Residence	
Braddock	3,041	795	3.83	Penn Hills	10,457	21,654	0.48
Chalfant	97	457	0.21	Pitcairn	338	1,662	0.2
Churchill	1,835	1,793	1.02	Plum	6,651	13,082	0.51
E. McKeesport	350	1,096	0.32	Rankin	314	669	0.47
E. Pittsburgh	621	871	0.71	Swissvale	2,467	4,768	0.52
Edgewood	1,377	1,975	0.70	Turtle Creek	1,496	2,793	0.54
Forest Hills	2,525	3,319	0.76	Wall	348	331	1.05
Monroeville	25,019	14,085	1.78	Wilkins Twp.	4,201	3,124	1.34
N. Braddock	1,324	2,478	0.53	Wilkesburg	5,706	8,215	0.69
N. Versailles	4,735	4,964	0.95	Wilmerding	860	918	0.94

† Ratio of workers by place of work to works by place of residence, based on 2000 Census

**Public transportation**

Public transportation is an important component in the functioning of local and regional economies. Major metropolitan economies are critically impacted by transit systems, and large shares of metropolitan workforces arrive to work via public transit systems. In Allegheny County, 10.5 percent of commuters used public transit in 2000, though transit use varies across the county and the TCVCOG (U.S. Census Bureau, 2000).

Port Authority Transit operates bus routes throughout the TCVCOG area, and a heavily used bus rapid transit (BRT) corridor reaches into Wilkesburg and Swissvale. Dense inner-ring suburbs like Wilkesburg, Edgewood, Swissvale and the Braddock area have very high rates of transit usage. This is probably due to their structural and population density, which is conducive to transit, as well as their proximity to the major urban employment nodes of Oakland and Downtown Pittsburgh. Some of these communities may have high rates of “households without a car,” which may be a cause or result of transit usage. Less dense outer-ring suburbs like Monroeville, North Versailles and Plum have relatively low rates of transit usage. Many of these areas were largely developed in the post-war era of automobile transportation



dominance, which makes transit less functional in these environments. They also exist in the peripheral area where employment is decentralized, placing greater importance on private automobile transportation. Some older, dense communities like Turtle Creek and Wilmerding have relatively low rates of transit usage, indicating that these communities may be poorly connected to major urban employment nodes.

**Business patterns**

The Census Bureau provides information on business patterns at the ZIP Code level. Unfortunately, zip codes are often not coterminous with municipalities. Many smaller municipalities may comprise a single zip code, while some larger municipalities may contain multiple zip codes. For example, ZIP code 15221 includes Wilkinsburg, Forest Hills and parts of Pittsburgh, Churchill and Wilkins Township. Penn Hills is divided amongst

two zip codes, each of which cross over into other municipalities. While this ZIP code level of analysis may be useful to the TCVCOG area, there may be confusion and uncertainty amongst individual municipalities due to the boundary discrepancies.

The Census Bureau utility provides information concerning the number of business establishments, number of employees, annual payroll and numbers of businesses by industry. This data provides an insight into business growth, employment growth and payroll growth within the TCVCOG. However, the boundary overlaps and discrepancies impact the applicability of the data.

**Land Use Data**

Land use ordinances control the development that occurs within communities. Planning departments ensure that communities grow and maintain their economic stability. Great disparities exist among municipalities concerning financial and technological resources for land use data collection. Collecting land use data can assist policy makers and community stakeholders in assessing community needs and targeting areas within the community that require redevelopment.

### ***Disparities in land use data collection: High capacity vs. low capacity***

***High Capacity:*** Affluent municipalities have extensive planning departments with code enforcement and zoning officers, zoning hearing boards, and active planning commissions. Municipalities with extensive staff are able to ensure their stakeholders have access to their ordinances through their municipal website. Organized land use data collection is more likely to attract future investments and development. Examples here from Table 1 above include: Penn Hills, Monroeville, and Edgewood.

***Low Capacity:*** Municipalities that lack economical and technological resources have difficulty monitoring the usage of land within their communities. Municipalities without adequate technological resources are at a disadvantage in that they have ordinances and permits on paper as opposed to computer databases. The paper copies are expensive and in order for residents to obtain a copy of the ordinances they have to pay a fee. Community stakeholders will find it difficult to access land use data, especially data that is up to date. Examples here from Table 1 include: Chalfant, North Versailles, and Turtle Creek.

Furthermore, municipalities that are incapable of investing in planning departments and technological resources have difficulty attracting economic developers to invest in their communities. The inability to efficiently track land use deters developers' interest in economic development projects within a community. This is an important place for an intermediary or TCVCOG to play a role.

### ***Zoning and code ordinances***

Zoning and code ordinances are regulations that are written and enforced by municipalities, which specify and regulate how each parcel of land can be used within a municipality. Many municipalities track and protect community resources by requiring residents to complete permits when buildings are scheduled for demolition and in order to rent property. Municipalities require permits to regulate and track the usage of land and to determine the developmental needs of the community.

Within the TCVCOG there are 11 communities that have their ordinances available online. In order to assist communities that lack technological and economic resources, many states have offered grants to communities that collaborate and create what is known as joint or multiple municipal plans.

### ***Multiple municipal plans***

Multiple municipal planning (MMP) occurs when two or more municipalities collaborate to write ordinances collectively, a beneficial move for municipalities that lack technological and economic resources. Within the TCVCOG, five communities have begun to engage in MMP.

However, many municipalities have been reluctant to collaborate and create multiple municipal plans. As these communities tend to be technologically deficient, collaborative efforts with more equipped communities would make promote data accessibility. Swissvale and Rankin,

which are economically and technologically deficient communities, have their ordinances available online -- collaborations with more equipped municipalities have made this possible.

**Table 5. Municipal Plans for Turtle Creek Valley Council of Government Communities, 2008**

Multi-Municipal Plans			Individual Plans		
Chalfant Rankin†	Edgewood† Swissvale†	Forest Hills	Braddock E. Pittsburgh N. Versailles Plum Wilkins Twp.	Churchill Monroeville Penn Hills Turtle Creek Wilkinsburg	E. McKeesport N. Braddock Pitcairn Wall Wilmerding

† Plan in progress

Communities need professional staffs that are capable of monitoring and tracking the usage of land use data within their boundaries. Communities that lack the capacity to properly access their land use data will lead to deteriorating infrastructure. Tracking land use data indicators using technological applications, such as GIS mapping, leads to more accurate, precise, and accessible data.

### ***Nonconformities***

Nonconformities in zoning are an indicator that a community has either aged or has not followed specific guidelines. Nonconformities that are indicative of aging are due to the fact that zoning ordinances were not prevalent until the 1960s. Many older homes were built before communities developed their ordinances. Other times zoning ordinances are simply non-existent because of limited community capacity.

Communities use data indicators such as age of home and average age of community residents to apply for federal grant money, such as the community development block grant (CDBG). In order to ensure that CDBG money is distributed fairly, the county requires the COG to act as an intermediary when the communities apply for CDBG money. Penn Hills has the largest population within the COG and is the only community that is not required to use the COG as an intermediary when applying for CDBG aid.

### **Housing Indicators**

Collecting housing indicator data allows COGs and community groups to monitor local conditions and can be used to compare communities over time and place (Coulton, 2008). In evaluating COG communities, housing indicators are a critical component in determining the quality of life within a community. An examination of community housing indicators is necessary for a better understanding of the challenges to local revitalization efforts.

### **Collecting housing indicators**

Data on housing indicators is readily available from the U.S. Census. Using this tool COGs and community groups can search for housing indicators by borough. Relevant indicators on housing units, age of the housing stock, occupancy tenure, rental and mortgage rates, and house values are available. The accuracy of this decennial reporting is dependent on the timeliness of the last report. While foreclosure and vacancy rates, property values, and gross rent prices can vary within a ten-year reporting cycle, the census is still a useful option for measuring neighborhood housing indicators.

#### **Housing Data Resources**

Comprehensive housing data is available through the Census Bureau, DataPlace, and HUD User. These websites allow for search by borough and present a variety of housing indicators. DataPlace consolidates data from the 1990 and 2000 Censuses, Home Mortgage Disclosure Act, Section 8 database, Consolidated Plan special tabulations, and the Internal Revenue Service tax returns, allowing users to easily access local indicators. DataPlace also enables users to easily compare their borough to others using charts and rankings.

Census Bureau: [www.census.gov/](http://www.census.gov/)

DataPlace: [www.dataplace.org](http://www.dataplace.org)

HUD User: [www.huduser.org](http://www.huduser.org)

### **Foreclosures**

The rise in foreclosure rates is currently a critical issue in assessing housing indicators to determine a community's wellbeing. High foreclosure rates not only affect the health of individual municipalities, but can have negative spillover effects for the entire TCVCOG. As houses are foreclosed upon, nearby homes depreciate in value and add to tax base losses. As more homeowners are foreclosed upon they will enter the rental market, effectively driving up rent prices and increasing demand for rental units.

#### **Common Housing Indicators:**

- Number of housing units
- Type of housing units
- Condition of housing units
- Tenure of housing units
- Property values
- Homeownership rate
- Vacancy rate
- Building permits
- Age of housing stock
- Foreclosure rate
- Public housing units

While the TCVCOG has not seen the dramatic spike in foreclosures experienced in other parts of the country, certain communities are suffering disproportionately high foreclosure rates. East Pittsburgh, Pitcairn, and Wilkinsburg have the highest foreclosure rates in the COG, with between 6.0 – 9.0% of single-family homes being foreclosed upon. The rise in foreclosure rates can pose a significant challenge to the stability of the TCVCOG and efforts should be made to closely monitor and mitigate the effects of foreclosures in the area.

### **Demolitions**

CDBG money can be used for demolishing vacant properties in aging neighborhoods and gentrifying the community. Many communities require permits and have a demolition committee that must approve the demolitions. Large numbers of demolitions occurring within communities can be an indicator of deteriorating business districts and decreases in property values, which in return can lead to a bleak future for the community.

Communities such as Monroeville and Penn Hills have high vacancy rates, but with their extensive planning departments and professional staffs they are able to plan for needed



demolitions. These communities can access and evaluate the vacant properties and determine which areas are appropriate for demolition and re-development.

**Table 6: Foreclosure in the TCVCOG Communities, Jan 2006 – Nov 2007**

Municipality	Foreclosures			Municipality	Foreclosures		
	Number	Per 1000 Households	As % Single Family Units		Number	Per 1000 Households	As % Single Family Units
Braddock	21	18.1	3.68	Penn Hills	606	31.3	3.91
Chalfant	7	19.7	2.31	Pitcairn	51	31.0	6.04
Churchill	23	15.1	1.59	Plum	140	13.8	1.74
E. McKeesport	30	32.1	7.48	Rankin	19	20.0	4.62
E. Pittsburgh	30	32.1	7.48	Swissvale	124	26.5	5.05
Edgewood	14	8.7	1.32	Turtle Creek	60	22.5	4.95
Forest Hills	34	11.5	1.40	Wall	7	21.6	3.63
Monroeville	162	13.3	1.89	Wilkins Twp.	49	15.1	2.19
N. Braddock	54	20.5	3.54	Wilkinsburg	227	25.2	6.23
N. Versailles	93	19.1	2.69	Wilmerding	17	17.4	3.78

***Difficulties in housing indicator data collection***

In gathering data on housing indicators, difficulty arises in obtaining data at the smallest available unit while still protecting confidentiality. To protect confidentiality, the Census Bureau uses statistical methods that introduce some uncertainty into data. This should be taken into consideration when examining data from small boroughs with small populations. The mobility of populations in certain boroughs should also be taken into consideration when examining housing indicators. High population turnover rates present problems for assessing housing trends and can affect neighborhood stability and revitalization.

Some housing indicators, such as updated information on code enforcement, can be more difficult to acquire. Depending on the capacity of the borough, information on code enforcements is available through the borough website or by contacting the local code enforcement or zoning departments.



Source: Pittsburgh Community Reinvestment Group, 2008.

**Creating Neighborhood Stabilization Programs**

HUD has designed a Neighborhood Stabilization Program (NSP) to assist communities that have large numbers of foreclosures. NSPs are designed to provide emergency assistance to state and local governments to acquire and redevelop foreclosed properties that might otherwise become sources of blight within their communities. HUD provides grants to every state and certain local communities to purchase foreclosed or abandoned homes and to rehabilitate,

resell, or redevelop these homes in order to stabilize neighborhoods and stem the decline of neighboring house values (HUD, 2008).

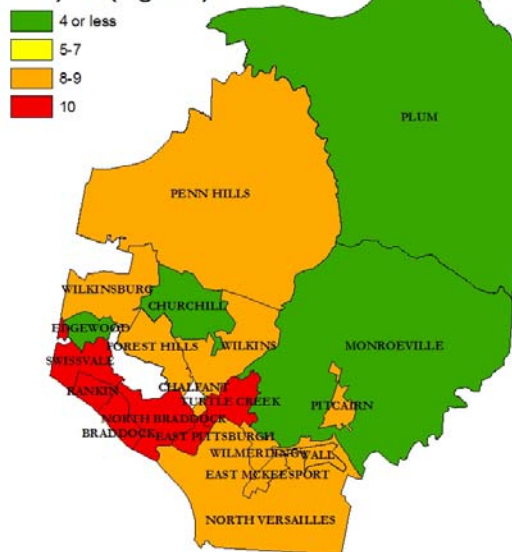
According to Susan Wachter of the University of Pennsylvania, housing foreclosures will decay the entire economy and create a negative cyclical downturn. Communities with high foreclosure risks, such as North Braddock and Turtle Creek, experience difficulty recruiting economic development which can further depress their recovery. These communities should begin to plan infrastructure building projects, such as liquidations, land banking, and other developmental programs.

NSP will benefit many of the communities within the TCVCOG, and the new legislation will create an additional role for the TCVCOG. NSP money is being distributed through the CDBG, and Allegheny County Department of Economic Development has designated the COG as the intermediary for all of the communities except Penn Hills.

In order to survive the economic crisis caused by foreclosures, the TCVCOG should plan extensively. The NSP money is a designed to jumpstart and prevent further deterioration. However, many of the communities have been deteriorating since the divestment of the steel mills in Southwestern Pennsylvania. Many of these less affluent communities lack the resources to plan and may rely on the COG for planning assistance.

### Turtle Creek Valley Council of Governments

Foreclosure Risk Score  
1 (lowest)- 10 (highest)



The Neighborhood Stabilization Program developed the scoring system for the ratings. For more information visit [www.hud.gov](http://www.hud.gov)



### Health and Vital Statistics Data

Health and vital statistics data can be a very accurate indicator for large COGs which cover a sizeable amount of land. Even though the Turtle Creek Valley COG is one of the smaller COGs, we can still benefit from analyzing the health and vital statistics. Major health and vital statistics data include:

- Births
- Deaths
- Cause of Death (by age group)
- Marriage

### Difficulties in health and vital statistics data collection

A major difficulty obtaining health and vital statistics data is a lack of up to date information. Data is collected directly through the Allegheny County Health Department, but the most

recent year available is 2000. Additionally, health data have remained less public over the years because of protection and privacy matters.

***Birth and death vital statistics***

Birth rates are collected by crude rate, which can be defined as the rate per 1,000 populations. Looking at rates rather than raw numbers is a more accurate indicator for making inferences about trends. As with birth statistics, death statistics are also measured by their crude rate, and can be broken down into categories, such as cancer, accident, and pneumonia.

***Infant mortality***

Infant mortality includes infant deaths for those under one year old per 1,000 live births. Infant mortality rates can also be broken down according to race to determine if racial and economic disparities are linked with higher rates. For the TCVCOG, infant mortality rates by municipality were too small to report. A table of infant mortality rates can be found in the appendix at the end of this report.

**Table 7. Crude Birth Rate Statistics for TCVCOG Communities, 1995 and 2000**

Municipality	Crude Birth Rate		Crude Birth Rate Teens		Municipality	Crude Birth Rate		Crude Birth Rate Teens	
	1995	2000	1995	2000		1995	2000	1995	2000
Braddock	16.3	16.5	16.1	27.1	Rankin	13.3	13.8	21.9	15.6
Chalfant	6.6	11.5	16.7	10.0	Swissvale	11.0	11.5	10.7	14.4
Churchill	10.5	14.0	-	-	Turtle Creek	10.8	9.7	11.8	5.1
E. McKeesport	11.6	12.8	-	10.0	N. Braddock	11.6	9.7	19.2	19.4
E. Pittsburgh	14.8	18.3	12.9	13.5	N. Versailles	11.0	9.4	8.5	9.5
Edgewood	16.5	10.0	-	-	Penn Hills	11.8	11.5	8.8	9.3
Forest Hills	10.0	10.0	-	-	Wall	11.4	12.4	22.2	-
Monroeville	10.5	9.1	5.6	3.7	Wilkins Twp.	8.1	9.8	3.4	1.5
Pitcairn	14.7	13.6	10.5	10.0	Wilkinsburg	17.0	14.1	19.8	18.9
Plum	12.1	11.2	3.8	2.7	Wilmerding	12.8	11.7	14.3	16.0

Communities with lower total birth rates can be explained in a few ways. These may be areas that are quite small and have a smaller population of younger child-bearing women.

Communities may monitor health indicators such as rates of teen pregnancy to determine the effectiveness of sexual health education. Table 7 illustrates that Braddock has experienced a notable increase in teen pregnancy between 1995 and 2000.

**Table 8. Cause of death, by most common illness/disease, Turtle Creek Valley Council of Government Municipalities, 1990 and 2000 (rate per 100,000)**

Municipality	Heart Disease		Cancer		Cerebrovascular disease	
	1990	2000	1990	2000	1990	2000
Braddock	555.3	412.1	341.7	446.4	42.7	68.7
Chalfant	417.1	344.8	729.9	698.7	208.6	-
Churchill	309.0	224.3	309.0	336.5	51.5	84.1
East McKeesport	522.8	554.8	261.4	426.8	37.3	128
East Pittsburgh	833.3	446.2	231.5	198.3	46.3	-
Edgewood	446.8	241.6	307.2	181.2	55.9	30.2
Forest Hills	368.1	322.1	272.7	292.8	95.4	73.2
Monroeville	346.3	378.2	222.8	272.6	85.7	85.2
North Braddock	540.1	592.8	426.4	327.6	113.7	62.4
North Versailles	430.8	386.5	308.9	386.5	32.5	44.9
Penn Hills	338.0	410.2	227.3	339.7	50.5	76.9
Pitcairn	367.0	352.4	171.3	352.4	-	-
Plum	203.1	248.7	148.4	174.5	31.2	48.3
Rankin	519.4	259.2	439.5	345.6	40.0	86.4
Swissvale	498.0	300.0	263.0	404.0	103.0	104.0
Turtle Creek	473.0	362.0	336.0	329.0	107.0	148.0
Wall	586.0	550.0	352.0	413.0	117.0	275.0
Wilkins Township	303.2	404.8	408.7	289.1	92.3	115.7
Wilkinsburg	479.1	323.0	365.3	255.3	61.7	88.6
Wilmerding	450.2	373.0	585.3	466.2	180.1	139.9

Source: Allegheny County Department of Public Health, various years.

The above data lists the most common illnesses that have lead to death within the TCVCOG in 1990 and 2000, with heart disease, cancer and cerebrovascular disease ranking highest. In particular we can see that East Pittsburgh experienced a large increase in heart disease as a leading cause of death.

### Crime and Public Safety Data

Every year the Pennsylvania State Police release the “Are you Aware?” reports for municipalities with populations over 1,000. This data must be released in accordance with the regulations of the Uniform Crime Report (UCR) developed by the FBI in the 1930s to insure equal reporting across law enforcement agencies.

These reports include data for the following categories:

- Violent Crimes
- Property-Related Crimes
- Drug and Alcohol Offenses

The state provides the rate of these categories per 100,000 people, but for our purposes we converted that rate to per 10,000 people since most of our communities are very small. We can still compare them to each other using these rates.

Within the COG communities there is a range of crime rates. Since the municipal borders are often ambiguous, crime affecting neighborhoods often spills into adjacent territories.

There are 17 local law enforcement agencies in the TCVCOG. All but Chalfant, Wall, and Wilmerding run their own police department. Chalfant, Wall, and Wilmerding contract the services of the Forest Hills Police Department.

The many police departments cooperate at varying levels. Often officers and departments communicate informally about events in their area, but each department operates independently. Increased cooperation between departments might lead to more effective use of funds and resources representing a savings for municipalities and better management of public safety issues.

**Table 9: Crime Rates by TCVCOG Municipality, 2007**

Municipality	Violent Crimes Per 10,000 People	Property Crimes Per 10,000 People	Total Crimes Per 10,000 People	Municipality	Violent Crimes Per 10,000 People	Property Crimes Per 10,000 People	Total Crimes Per 10,000 People
Braddock	0.0	0.0	0.0	Penn Hills	87.8	422.6	553.7
Chalfant	0.0	0.0	0.0	Pitcairn	0.0	0.0	0.0
Churchill	151.4	179.5	471.1	Plum	27.5	112.5	184.1
E. McKeesport	77.0	132.6	278.1	Rankin	207.3	393.1	777.5
E. Pittsburgh	29.7	59.5	183.4	Swissvale	173.0	387.4	664.0
Edgewood	39.3	975.5	1141.6	Turtle Creek	0.0	0.0	0.0
Forest Hills	30.7	137.6	231.3	Wall	0.0	0.0	0.0
Monroeville	68.1	307.0	439.5	Wilkins Twp.	24.6	305.0	406.2
N. Braddock	0.0	0.0	0.0	Wilkinsburg	150.6	405.8	692.9
N. Versailles	112.5	356.3	605.6	Wilmerding	0.0	0.0	0.0

†Violent crimes include homicide, assault, forcible rape, and robbery

†Property crimes include burglary, larceny, motor vehicle theft, and arson

## Social Services

There are numerous social service indicators that governments can analyze in order to monitor and evaluate the needs of their residents. Social Service indicators can typically be analyzed on two levels: (1) determining the need for social services and (2) measuring the use of social services. A more effective use of available data would be to combine both levels in order to learn about the extent of need and whether those needs are being met.

### ***Determining the need for social services***

The need for social services can be illustrated by various indicators. We have focused on two important indicators:

- ***Poverty Statistics:*** This indicator reveals the percentage of the population that falls at or below the federal poverty line.
- ***Distressed Community Indicators:*** A neighborhood that meets any of the criteria to be considered a distressed community demonstrates a significant need for social services. Specific criteria are outlined in the Pennsylvania Distressed Municipality Code, Act 24, Section 201.

Every year municipalities in the Commonwealth of Pennsylvania are required to file a financial report so that early warning signs for financial distress can be detected. Once a community has been deemed to be distressed, the community can begin to access emergency resources through Act 47. Some of the resources available to Act 47 communities include:

- Preferential Treatment for Grants
- Emergency, Low Interest Loans
- Assistance with Labor Agreements

### ***Measuring the use of social services***

Large social service providers may provide data on service being used. However, the availability and the levels at which one would like to analyze the data is not always accessible. Other times, the information may be confidential depending on the type of social service and the information being sought. The Pennsylvania Department of Public Welfare provides statistics on social service recipients—most data is only available at the state or county levels. A list of social service indicators is available in the Appendix.

### ***Community resources***

Tracking community resource data can be an effective tool for purposes such as marketing a community or connecting residents to resources. Below are some valuable community assets that improve the quality of life in a neighborhood.

- Arts & Culture
- Career/Workforce preparation
- Education/Academic Support
- Personal Development
- Recreation and Fitness
- Human Service
- Senior Citizen Centers

Information on the availability of these resources can be found in many ways. Online searches, community directories, telephone books, and national databases are just some of the ways to assess the assets of a community. The Mon Valley Providers Council provides an extensive list of community resources on their website at <http://www.hscc-mvpc.org>.

## CHAPTER VI – CONCLUSIONS AND RECOMMENDATIONS

### Conclusion

The extension of the Pittsburgh Community and Neighborhood Information System (PNCIS) to the Turtle Creek Valley Council of Governments (TCVCOG) serves several goals. These include:

- Democratization of data
- Facilitation of political/administrative and community stakeholder collaboration
- Enhancement of community technical and information capacity
- Development of indicator framework to aid community policy and development
- Strengthening communities through regional resources

An extension of the PNCIS would promote the concept of democratization of data by providing an information system accessible to community stakeholders. Such a system empowers citizens and community groups, promoting effective problem solving and collaboration on addressing relevant community indicators. The system is designed to measure community indicators in health, economics, housing, education and several other indicator groups; information critical to guiding community policy and development.

Indicators provide a summary of a community's strengths and weaknesses in a comparative framework, providing an impetus to address needs and seize upon assets. Knowing this information will allow COGs to determine which communities will add to the richness and depth of the system's data, and which communities may require additional investments to update internal information systems and data collection processes. Such analysis will allow COGs to target training and technical assistance. This assistance could be provided directly by the COG, or by a data intermediary such as a university or larger non-profit organization.

The TCVCOG represents a diverse collection of municipalities, and the existing disparity in technological and information capacity is a challenge. The team determined that community capacity is perhaps the most crucial factor mediating a COG's ability to implement a community information system. While capacity is complex, it can be broken down into three dimensions: information content, technical capabilities and sustainability.

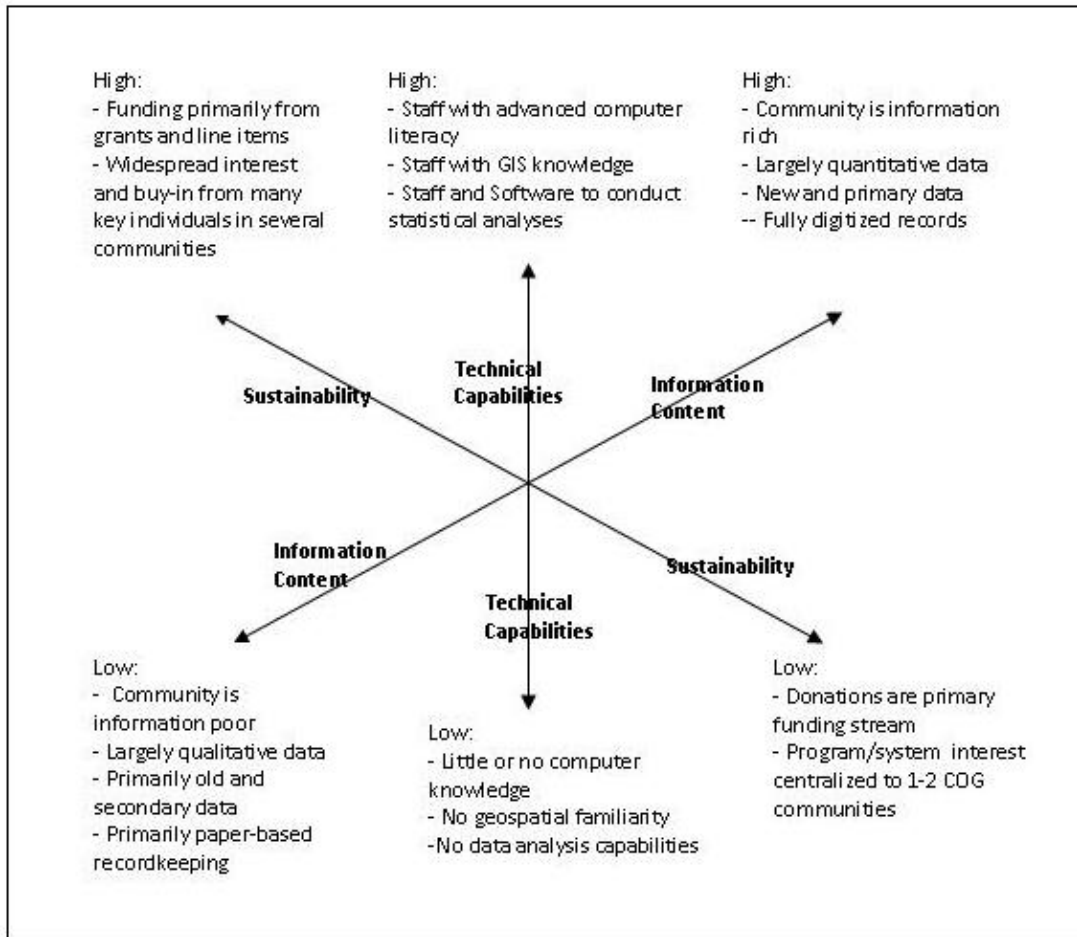
Many of the smaller, poorer TCVCOG municipalities lack sophisticated data collection capabilities, relevant information, modern technology, trained personnel, analytical and quantitative capabilities, and geospatial literacy. These attributes require sufficient and sustained investments in information technology. A TCVCOG system provides the opportunity to transcend these limitations, allowing disadvantaged communities to overcome capacity limitations and tap into a COG-wide system of high functionality.

Below is a framework for assessing differences in capacity among our TCVCOG communities. Information is aligned from High Capacity/Functioning to Low Functioning/Capacity along the

following indicators:

- Sustainability
- Technical capabilities
- Information Content

### Framework for Analyzing Community Capacity



**Information content:** Knowing this information will allow COGs to determine which communities will add to the richness and depth of the system’s data, and which communities might require additional investments to update internal information systems and data collection processes.

**Technical Capabilities:** Knowing this information will allow COGs to target training and technical assistance. This assistance could be provided directly by the COG, or if available, by a data intermediary such as a university or larger non-profit organization.

**Sustainability:** While it is certainly appropriate for a COG to rank each community along these



sustainability continua, these are also important considerations for the COG itself. For example, if funding is to be received through the COG, its funding mechanism becomes highly relevant. Similarly, COGs should determine if their leadership is the sole supporter of an indicators system, or if municipal and non-profit leaders share the vision. This could reveal the need for better marketing to COG communities.

## Recommendations

### To increase capacity:

- ***Have a larger government entity, such as a COG, perform a community capacity analysis prior to implementing a community indicators system.***

Because COGs and other regional government entities often represent communities with very heterogeneous planning, information and technological capabilities, an important first step when implementing a community indicators system is to determine which communities have the capacity to use the system meaningfully. As our study has demonstrated, three community capacity dimensions affect the widespread implementation of an indicators system. Assessing community capacity differences on these three dimensions need not be difficult or highly objective. We recommend Laituri's (2003) approach, which is to create continuums for each factor that makes up a dimension and subjectively place communities or communities groups on the continuum. Several of these continuums are taken directly from Laituri, while others were adapted from Ghose (2001) and TCVCOG observations.

- ***Consider alternative methods for providing communities and community groups access to the indicators system.***

Ideally, COGs would receive a wealth of information from each of its communities, combine it into an interactive map server freely accessible to communities and the public, and communities and community groups would all be able to access the website. Of course, capacity issues prevent this ideal situation. There may be occasions where communities in a COG maintain a sufficient amount of information to contribute meaningfully to an indicators system, but they are technologically limited. Likewise, many grassroots community groups might find the information stored in a system crucial, but they do not have the technological resources (internet connection, computers, etc.) or skilled personnel to use it. While obtaining State funding to bridge these capacity gaps is one avenue, these funds might not be sufficient.

Here, COGs or groups of communities and community groups can pool resources creatively to ensure access for all interested users. Many existing participatory GIS projects have provided access exclusively through universities and public libraries (Leitner, et al., 2002). While system access is limited to normal working hours, these arrangements can be cost effective, since the

information system is located on an internal library or university server. Another promising method for extending access to communities and community groups is through neighborhood GIS centers. Under this arrangement, communities pool together financial resources, supplemented by outside funds from non-profit organizations, to open a facility accessible to communities and groups alike. This arrangement improves on the accessibility issues associated with using public libraries and universities. As with the previous alternative, the system is maintained entirely on an internal server, although at a cost completely borne by the communities and groups.

#### **To form effective collaborations:**

- ***Coordinate efforts to mitigate foreclosures in the TCVCOG municipalities.***

The TCVCOG communities have varying foreclosure rates, with higher concentrations in East Pittsburgh, Pitcairn, and Wilkinsburg. The concentrations of high foreclosure rates in certain municipalities cause dramatic declines in housing values which can spillover into other areas, ultimately affecting the overall economic health of the TCVCOG. To address the negative effects of foreclosures, the TCVCOG should coordinate efforts to mitigate foreclosure rates across the region by addressing any gaps in the safety net to protect families facing eviction.

The TCVCOG should mirror efforts by the Metropolitan Washington Council of Governments (MWCOC) by providing a fund for nonprofits and families affected by foreclosures. The MWCOC sought funding from Freddie Mac, the private sector, and foundations to help provide a safety net for those facing foreclosures (Freddie Mac, 2008). The TCVCOG should make a similar effort to secure funding and mitigate foreclosures across its municipalities.

#### **To obtain funding:**

- ***Explore a variety of funding sources.***

Sources of funding for projects related to technology include:

1. *The Department of Community and Economic Development's (DCED) Local Municipal Resources & Development Program (LMRDP) Fund*

One State-level funding option that should be considered is the LMRDP grant program. These grants have no minimum or maximum amounts; they typically range from \$5,000-\$25,000. More importantly, they are well suited to a regional indicators system project that will be used for community and economic development.

A specific issue that must be addressed prior to grant submission is defining specific expected outcomes. A requirement of the grant is that the money be used to promote

community/economic development, improve community stability, enhance business/jobs, or enhance the overall quality of life of citizens. Therefore, for the purpose of this grant, the indicators system be used to target these areas. The COG must then work with its communities to determine the expected outcomes that will result from system use, and ensure that these outcomes map to DCED's list of eligible projects.

## *2. Neighborhood Stabilization Program (NSP)*

As authorized under recently enacted legislation, when dispersing the NSP funds the Commonwealth will give priority to applicants that will serve multiple municipalities and demonstrate effective collaboration. The Commonwealth will also give priority to applicants that address the priority needs area within their jurisdiction. Municipalities should plan to undertake joint land use planning and economic development activities (i.e. multiple- municipal planning, tax base sharing, and joint code enforcement officers).

According to recent figures the state of PA will receive \$59,631,318, which will be disbursed among five grantees within the state of PA. Allegheny County will receive 5,524,950 of NSP grant money to disperse among the municipalities, and Allegheny County disperses its grant money through the COGs. This empowers the COGs to act as an intermediary and promote collaborations through joint multi-municipal planning, because communities that have joint plans will receive priority points when applying for NSP grants. There are priority points giving to communities that are considered to have a higher estimated foreclosure risk score and through collaborations more affluent communities can benefit and have the ability to compete for NSP grant money.

## *3. The DCED Land Use Planning and Technical Assistance (LUTAP) Funds*

LUTAP funds provide technical grants available to municipalities in ACT 47. Within the Turtle Creek Valley COG there are currently four municipalities in ACT 47 (East Pittsburgh, Chalfant, Braddock, and Rankin). Increasing technology would increase the municipality's ability to plan and improve the municipality's ability to attract developers.

## *4. The DCED Elm Street Program*

The DCED Elm Street Program provides grants to address improve areas around central business districts. Currently none of the TCVCOG communities are participating in the Elm Street Program. Funding through this grant would help improve the commercial districts and surrounding residential neighborhoods that are a crucial to the health of communities.

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## APPENDIX I – A SELECTION OF COMMUNITY INDICATORS

### A Comparison of School Districts in the TCVCOG

The six school districts that are included in the TCVCOG exhibit some interesting differences in a number of indicators, including financial resources, No Child Left Behind performance, and measures of college interest and preparation. These indicators represent only a fraction of available indicators; however, they do highlight the usefulness of a community information system in the context of educational analysis.

The following table provides a broad overview of these indicators. Analysis of the table shows clearly that community affluence has a noticeable impact on educational outcomes. For example, community affluence can mediate the amount of school district financial autonomy. Districts with a strong tax base rely less on federal and state aid programs, while districts with weaker tax bases must continually apply for outside funds. This table also highlights how differences in affluence affect a school's ability to meet NCLB Adequate Yearly Progress (AYP) requirements, including PSSA performance, attendance rates, and graduation rates. Finally, the table shows that affluence can partially explain decisions about post-secondary education, such as participating in the SAT exam and college study planning.

**Table I.1: TCVCOG School District Indicators, (2005-2006 School Year)**

District	%District Revenue from Local Sources†	%Schools in District Meeting 2005-2006 AYP Requirements	%Graduates Planning to Attend College	%Participation in SAT College Entrance Exam
East Allegheny	58.6%	67.0%	77.0%	70.0%
Gateway	77.2%	75.0%	84.0%	74.0%
Penn Hills	58.5%	33.0%	70.0%	60.0%
Plum	62.5%	100.0%	88.0%	69.0%
Wilkinsburg	52.7%	40.0%	66.0%	22.0%
Woodland Hills	62.8%	33.0%	81.0%	58.0%

†Local revenue sources include municipal taxes, school taxes, interest, and fees

## A Comparison of Housing Indicators in the TCVCOG

**Table I.2: Housing Indicators in the TCVCOG, (2000)**

Municipality	Number of Units	Single Family Units as Percent of Total Housing Units	Vacancy Rate	Median Year Built
Braddock	1624	51.5%	28.5%	1931
Chalfant	449	72.8%	9.4%	1944
Churchill	1567	96.9%	3.1%	1956
E. McKeesport	1146	67.8%	13.2%	1940
E. Pittsburgh	1107	43.8%	12.0%	1939
Edgewood	1730	61.5%	5.3%	1939
Forest Hills	3203	81.3%	4.8%	1951
Monroeville	13159	66.9%	6.0%	1966
N. Braddock	3250	51.5%	28.5%	1939
N. Versailles	5222	60.5%	9.0%	1946
Penn Hills	20355	84.1%	4.2%	1957
Pitcairn	1901	52.5%	11.9%	1939
Plum	10624	78.1%	3.3%	1969
Rankin	1126	41.0%	11.0%	1942
Swissvale	5097	48.3%	8.2%	1939
Turtle Creek	2969	47.9%	8.5%	1941
Wall	363	70.0%	10.7%	1939
Wilkinsburg	10696	40.2%	14.6%	1947
Wilkins Twp.	3432	69.6%	5.7%	1957
Wilmerding	1199	32.8%	13.9%	1939

## Infant Mortality in the TCVCOG

**Table I.3: Infant Mortality Rates† in the TCVCOG (1995 and 2000)**

Municipality	Infant Mortality Rate, White		Infant Mortality Rate, Black	
	1995	2000	1995	2000
Braddock	-	-	18.9	-
Chalfant	-	100	-	-
Churchill	-	-	-	-
E. McKeesport	-	33.3	-	-
E. Pittsburgh	-	45.5	-	-
Edgewood	-	-	-	-
Forest Hills	-	15.6	-	-
Monroeville	7.5	4.9	-	-
N. Braddock	-	-	29.4	-
N. Versailles	9.6	13.9	43.5	35.7
Penn Hills	7.1	5.5	13.4	6.3
Pitcairn	18.2	-	-	-
Plum	3.3	7.1	-	-
Rankin	-	-	-	-
Swissvale	11.1	-	-	21.3
Turtle Creek	-	36.4	-	-
Wall	-	-	-	-
Wilkinsburg	11.9	-	39.8	19.5
Wilkins Twp.	-	-	-	-
Wilmerding	-	-	-	-

Source: Allegheny County Health Department

† Rates are per 1000 live birthed infant deaths. Caution should be taken when interpreting these figures. In small communities with low birth rates, one infant death can markedly increase the infant mortality rate.



## APPENDIX II – SOURCES OF INFORMATION ON SOCIAL SERVICES AND COMMUNITY RESOURCES PROVIDERS

**Table II.1: Sources of Information on Social Services and Community Resources Providers**

Social Services	Source	Community Resources and Participation	Source
Public Assistance	Pennsylvania Department of Public Welfare	Tax Exempt Organizations	Taxexemptworld.com
Subsidized Childcare	Child Care Information Services (CCIS)	Community Referral Services and Directories	Various Websites
Child Care Licenses	Pennsylvania Department of Human Services	Arts & Culture	Carnegie Library Directory
Child Welfare Records	Pennsylvania Department of Public Welfare: Child Welfare Services	Voter Records	Pennsylvania Department of State
Mental Health & Substance Abuse Services	Pennsylvania Department of Public Welfare: Mental Health & Substance Abuse Services	Public Transportation	Port Authority of Allegheny County
Faith Based Organization Services Internet		Automobile Registration & Licenses	Pennsylvania Department of Transportation
		Community Development Investments	Pennsylvania Department of Community and Economic Development
		Neighborhood Publications	Municipal Websites
		Recreation Centers	Allegheny County Recreation and Allegheny County Parks

## APPENDIX III – COMMON REVENUE AND EXPENDITURE CATEGORIES

**Table III.1: Revenue and Expenditure Categories Recorded by the Pennsylvania Department of Community and Economic Development**

REVENUES	EXPENDITURES
Real Estate Tax	General Government Expenditures
Earned Income Tax	Police
Realty Transfer Tax	Fire
EMST/Local Services Tax	UCC and Code Enforcement
Per Capita Tax	Health and Human Services
Occupational Tax	Public Works Highways and Streets
Business Gross Receipts	Sewer
Amusement Admissions	Water
Mechanical Devices Tax	Solid Waste
Other Intergovernmental : Federal, State and Local	Electric System
Sewer Revenue	Gas System
Water Revenue	Other Public Works Enterprises
Solid Waste Revenue	Culture and Recreation
Electric System Revenue	Libraries
Gas System Revenue	Community Development
Parking	Debt Service
Recreation and Culture	Other
Licenses and Permits	Unclassified Expenditures
Cable TV and Franchise Fees	Other Financing Uses
Fines and Forfeits	
Interest Rents and Royalties	
Contributions and Donations from Private Sectors	
Unclassified Operating Revenue	
Other Financing Sources	
Other Revenues	