



Social Impact Analysis

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Social impact analysis is a method of assessing the social impacts of human actions from individual development projects to long term population growth. Any future development and population sets in motion a chain of events that affects the social environment. The demands of additional individuals must be met by various government and non-governmental social services. The practice of impact modeling is an attempt to quantify the stresses that population growth from development would place on various elements of the community such as health and social services, public safety, libraries, schools, and parks.

Although social impact models can be very complicated in nature and be used to ascertain the well-being of the community, this model is strictly limited to determining changes in service levels that will be needed to accommodate an increasing population in Elkhart County. This is an important element in a comprehensive community strategic planning process as it will give good estimations in how service agencies must adapt to the changing needs of the population. The social impact model used has the following components:

Population Projection – A cohort-component survival model was used to project the population into the future. This model takes into account births, deaths, migration, and fertility by age cohort to survive the population into the future. Although the model cannot take into account drastic changes to the environment of the county, such as natural disaster or a huge population increase due to major economic development, these models are considered fairly accurate for doing short to mid-range forecasts. 2000 is the base year for the forecasting and 2010 is the projected year used for the impact modeling.

Service Resources – These are objective measurements of the actual amount of resources that are available within the Elkhart County community for all of the measurement areas within the model. These resources can include the, number of instructors in schools, acreage of park lands, square footage of library space, or the number of beds in local hospitals. Current service resources serve as the base for which future resource needs are projected. Current service resources were determined by collecting data from a number of secondary sources such as Indiana Department of Health, Indiana Family and Social Services Administration, U.S. Census Bureau, as well as through primary methods by contacting local service agencies. Service resources used in the model include:

- School enrollment
- Certified school instructors
- Number of classrooms
- School building space
- Number of police, fire and EMS vehicles
- Number of police, fire and EMS personnel
- Library bookstock
- Library circulation
- Library building space and seating capacity
- Acreage of a park land
- Fractions of population that are disabled or mobility impaired
- Nursing home bed capacity
- Licensed child care facilities and capacity
- Hospital beds
- Number of medical and dental personnel

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Service Needs – As a population expands, additional demands are placed on local service agencies. The heart of the impact model is to determine that future demand by projecting into the future the size of various populations for those specific services. For example, as a population increases there will be additional need for more police officers and firefighters to be able to maintain quality service within the community. Future service needs are determined by using one of two methods, current service levels or planning standards. Current service levels are the actual level of service that the community is experiencing. For example, the community may currently have a service of 1.5 police officers per 1000 persons or 2.5 hospital beds per 1000 persons. Planning standards, on the other hand, are guidelines set by various professional organizations or government agencies that can be used as benchmarks for what constitutes an acceptable level of service. It should be noted, however, that often planning standards exceed actual service levels experienced in most communities. Therefore, this model, most often, will use current service levels for projecting future needs.

Population Change

According to the 2000 Census, Elkhart County showed a relatively high growth rate of 17.0 percent. This momentum is not expected to continue over the long term. Aging of the population and decline in birthrates have indicated stabilization and eventual decline in the county's growth rate. From 2000 – 2010 the population is expected to grow by 15.4 percent and projections show this slowing will continue through 2015.

When examining growth by age cohort, there is strong indication the population will continue to age as the childcare/pre-school population continues to decrease. At the same time in-migration

and entry of a larger present day young cohort into the school age and workforce populations will keep that section of the population stable for some time to come.

| POPULATION CHANGE | | | |
|---------------------------------|----------------|----------------|-------------|
| | 2000 | 2010 | % Change |
| Pre-School Age | 14,800 | 16,343 | 10.4 |
| Primary - Junior High Age | 29,738 | 33,028 | 11.1 |
| High School Age | 13,375 | 16,069 | 20.1 |
| Workforce Age | 105,037 | 122,905 | 17.0 |
| Elderly Age | 19,841 | 22,668 | 14.3 |
| TOTAL POPULATION | 182,791 | 211,013 | 15.4 |
| <i>Source: Hudson Institute</i> | | | |



Education

As the population is aging and births are expected to decrease over the next 15 years, the elementary population will grow 11.1 percent. The larger group of children in the current elementary school age cohorts will be moving into high school between now and 2010, resulting in a 20.1 percent change in the high school population. To maintain current teacher-student ratios of 17:1 at the elementary and middle school levels and 19:1 at the high school level, an additional 258 teachers will be needed by 2010. Although building sizes themselves are deemed adequate to accommodate future growth by using national planning standards, the number of classrooms must be increased by 251 to maintain current student to classroom ratios of 17.5 at the elementary and middle school level and 19.6 at the high school level.

| EDUCATION | | | | | | | | | |
|--------------------------------------|--------------------|---------------------------|----------|-------------------------------|---------------------|------------------------------|----------------------|----------------------------------|--------------------------------|
| | Current Enrollment | Projected Enrollment 2010 | % Change | Current Certified Instructors | Projected Need 2010 | Current Number of Classrooms | Projected Need 2010* | Current Building Space (sq. ft.) | Projected Need (sq. ft.) 2010* |
| Elementary/Junior High/Middle School | 24,441 | 27,145 | 11.1 | 1,409.6 | 1,566 | 1,393 | 1,044 | 3,834,864 | 3,393,145 |
| High School | 9,408 | 11,303 | 20.1 | 507.2 | 609 | 481 | 471 | 2,381,463 | 1,819,777 |

Source: Hudson Institute. Current service levels provided by local school district information. Planning standards provided by Council of Educational Facility Planners, International

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Public Safety

Due to large differences in the operation of local emergency services, national planning standards do not provide good benchmarks for establishing service levels. Therefore, current service levels were maintained into the future to estimate future demands. As growth within the county will be concentrated differently from one jurisdiction to another, individual departments will experience different growth requirements.

| PUBLIC SAFETY | | | | |
|---------------|----------------------------|-----------------------------|------------------------------|-------------------------------|
| | Current Number of Vehicles | Current Number of Personnel | Projected Vehicles Need 2010 | Projected Personnel Need 2010 |
| Police | 262 | 275 | 302 | 317 |
| Fire | 107 | 529 | 124 | 611 |
| EMS | 32 | 359 | 37 | 414 |

Source: Hudson Institute. Current service levels provided by local public safety service agencies

Libraries

Libraries within Elkhart County are not only experiencing the pressures of population growth now and into the future, but are also experiencing a shift, brought on by the internet revolution, in how information is stored and maintained. Although the use of books will not decrease in the near future, more and more libraries are seeing increased demand to provide electronic media services such as computer labs and internet access. Libraries are also focusing more attention on public events and gatherings. Although national planning standards are adequate for projecting future stack requirements, building space and seating capacity requirements are changing as more space is devoted to electronic capacity.

| LIBRARIES | | | | | | | | |
|-----------|-------------------|---------------|---------------------|----------------------------------|-----------------------|--------------------|--------------------------------|-------------------------------------|
| | Current Bookstock | Current Seats | Current Circulation | Current Building Space (sq. ft.) | Bookstock Needs 2010* | Seating Needs 2010 | Circulation Requirements 2010* | Building Space Needs 2010 (sq. ft.) |
| Libraries | 600,537 | 1,574 | 1,892,300 | 192,678 | 633,039 | 1,817 | 2,004,623 | 222,426 |

Source: Hudson Institute. Current service levels provided by local libraries. Planning standards from "Joseph L. Wheeler and Herbert Holdhor, Practical Administration of Public Libraries, New York: Harper, 1962."



Parks & Recreation

The Elkhart County parks plan calls for a minimum standard of 15 acres per 1000 population for park land set aside. This is a planning standard that is suggested by the National Parks and Recreation Association. Under current conditions Elkhart County has a deficit of 240 acres of park land to meet these planning standards. By 2010 Elkhart County will have to set aside 664 acres to meet standards.

| PARKS & RECREATION | | |
|--------------------|------------------|------------------------|
| | Current Parkland | Parkland Requirements* |
| Parkland | 2,501 | 2,110 |

Source: Hudson Institute. Current service levels provided by local parks departments. Planning standards provided by the National Parks and Recreation Association

Social Services

The county's population growth rate will continue to place demand on social services, particularly in the areas of elderly care and child care services. The county has only 132 day care facilities licensed to provide for a maximum of 2,556 youths. Based upon current estimates, there are 5,239 youths under five years of age requiring child care. This number is expected to increase to 5,785 by 2010.

| SOCIAL SERVICES | | | | |
|---|---|-------------------------------------|--|---|
| | Projected 2010 Elderly Population | Current Number of Nursing Home Beds | Nursing Home Bed Needs 2010 | |
| Elderly Care | 22,668 | 1,347 | 1,539 | |
| | Estimated 2000 Population | Projected 2010 Population | | |
| Fraction Disabled | 14,075 | 16,248 | | |
| Fraction Mobility Impaired | 4,021 | 4,642 | | |
| | Estimated 2000 Population in Need of Day Care | Estimated 2010 Day Care Need | Current Number of Facilities (Home and Center) | Current Licensed Capacity (Home and Center) |
| Pre-School Population | 5,239 | 5,785 | 132 | 2,556 |
| Elementary and Middle School/Junior High Population | 178 | 198 | | |
| TOTAL Population | 5,418 | 5,983 | | |

Source: Hudson Institute. Nursing Home data provided by the Indiana Family and Social Services Administration and Indiana Department of Health. Disabled and mobility impaired service levels derived from 1990 Census of the Population, U.S. Census Bureau. Day care facility data provided by the Indiana Family and Social Services Administration. Day care current services levels are derived from services standards from "Kristin Smith, Who's Minding the Kids? Child Care Arrangements. Spring 1997. Current Population Reports, P70-86. U.S. Census Bureau."

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Health Services

Increases in population, especially an aging population, will place further pressure on the demand for qualified health care personnel. There will be increased demand in all fields, although further pressure will be placed on the nursing profession which is struggling to meet present demands at a state and national level.

| HEALTH SERVICES | | | |
|------------------------------------|------------------------------|--------------------------------|-----------------|
| | Current Number of Beds | Beds Needed (service level) | Beds Needed* |
| General Hospital | 460 | 531 | 844 |
| Psychiatric Hospital | 40 | 46 | |
| | | | |
| | Current Personnel | Personnel Needs 2010 | |
| Medical Doctors | 206 | 238 | |
| Dental Hygienists/DDS/Oral Surgery | 132 | 152 | |
| Registered Nurse | 1,473 | 1,700 | |

Source: Hudson Institute. Health personnel data provided by Indiana Business Research Center, Indiana University. Hospital bed data provided by the Elkhart County Hospital Directory.