

Healthy Infrastructure Plan



Otsego County, New York

Project by:
Initiative for Healthy Infrastructure (iHi)
University at Albany (SUNY)
Department of Geography and Planning

www.albany.edu/~ihi

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I. Introduction

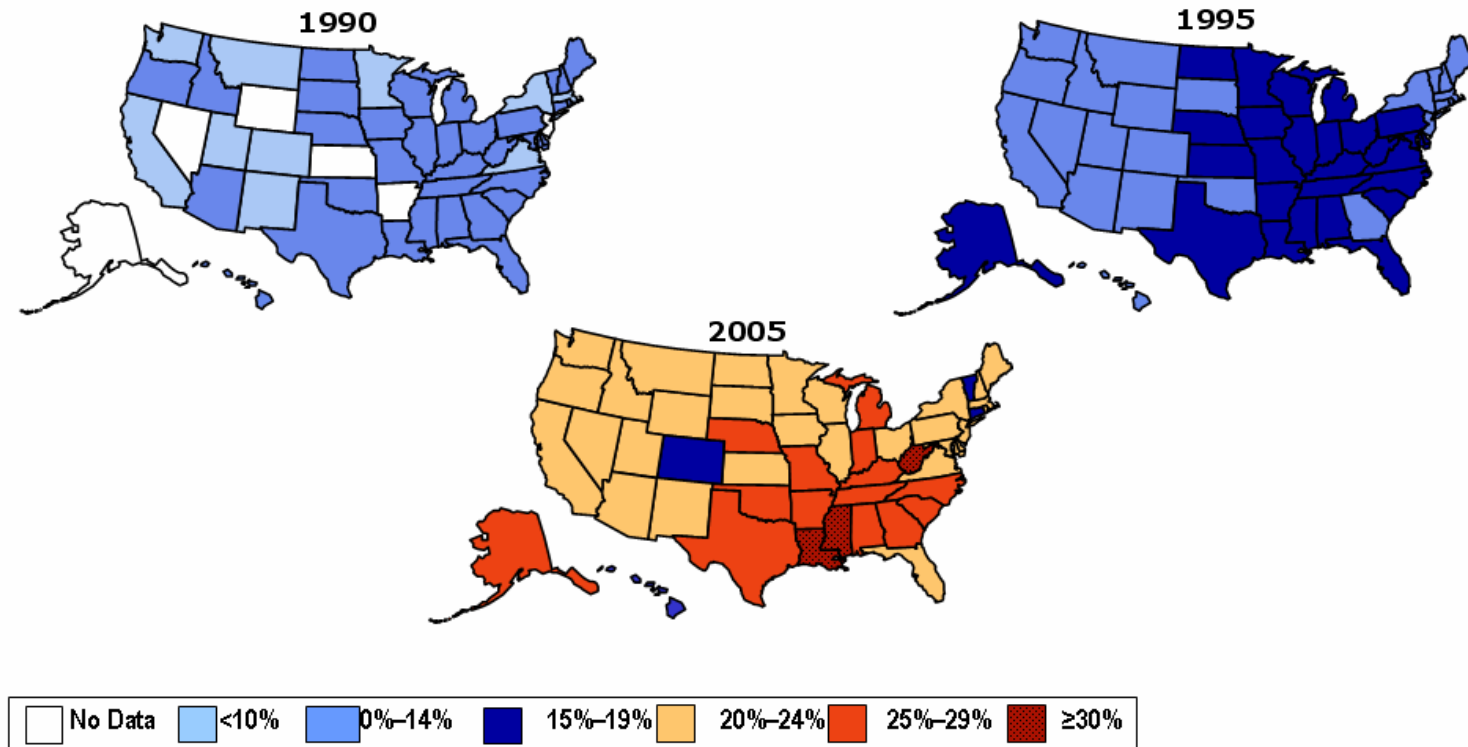
The *Initiative for Healthy Infrastructure* (iHi) project at *University at Albany* (SUNY) is designed to facilitate statewide efforts to create physical environments which fosters healthy active lifestyles. This undertaking includes a cross-disciplinary approach in addressing this issue through teaching, researching, developing policy, public outreach and planning. The primary motivation for this project is in resolving the contradiction between the need for increased physical activity and the deficit in walk-able community infrastructure. Expanding New York State's resource and research base in this area will encourage both more walk-able communities and a healthy population. This project is funded by the *Healthy Heart Program* in the *New York State Department of Health* and is supported by *The Research Foundation of The State University of New York*.

Since one of the goals of the *Healthy Heart Program* is to encourage walking as a routine activity, it is logical to connect this concept with planning, particularly in the development of sidewalks, streets and trails. Unfortunately, community 'health' is not currently considered a performance measure for public works infrastructure, so a new approach that brings together the issue of public health and planning communities is needed. There is increasing evidence that community supports for a heart healthy lifestyle can be effective in reducing the risk of Cardiovascular Disease (CVD). Numerous sources, including the Centers for Disease Control and Prevention, have advocated walking as a primary means of increasing routine physical activity.

The national obesity trend is illustrated in these graphics developed by the Centers for Disease Control and Prevention (CDC). *Source: www.cdc.gov.*

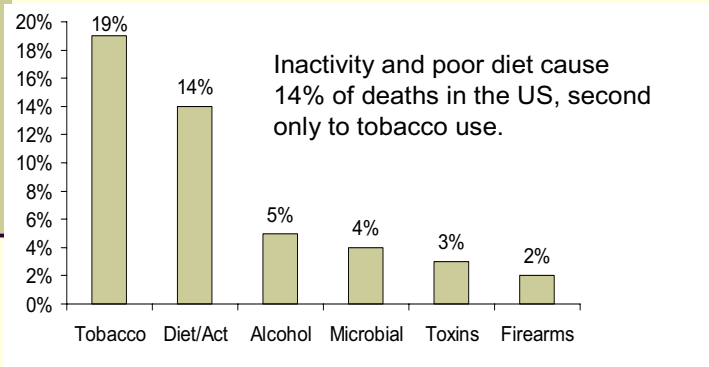
Obesity Trends* Among U.S. Adults BRFSS, 1990, 1995, 2005

(*BMI ≥ 30 , or about 30 lbs overweight for 5'4" person)

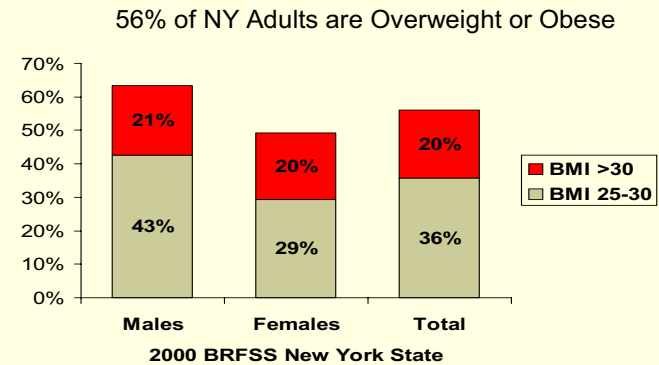


Cardiovascular disease (CVD) is the leading cause of death, disability and health care expenditures among New York State residents. In 1998, more than 70,000 New Yorkers died of cardiovascular disease, accounting for 45% of all deaths. According to data from the 2001 Behavioral Risk Factor Surveillance System, 56% of New Yorkers are insufficiently active (no activity or less than 20 minutes a day, or less than three times/week). At the same time, pedestrians and bicyclists accounted for more than 20% of New York State's traffic fatalities and injuries, 48% of hospitalizations and 59% of injury related hospitalization costs according to data from the Statewide Planning and Research Cooperative System (SPARCS) system. (Provided by the NYS Department of Health (DOH)) In order to encourage people to walk or bicycle more, it is critical to provide a safe infrastructure that supports an active lifestyle.

Underlying Causes of Death (US)

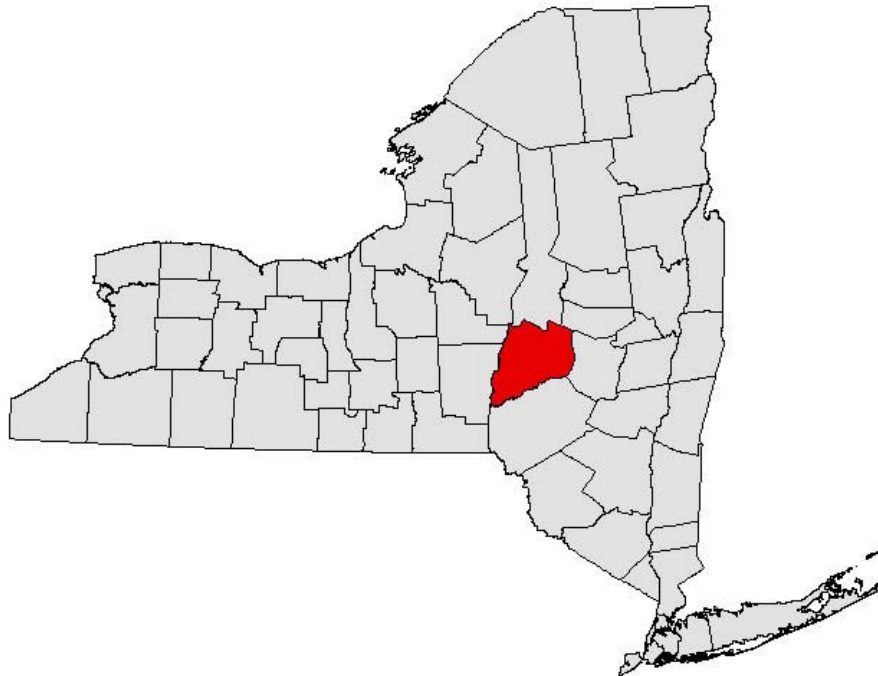


Overweight and Obesity Among NYS Adults (2001 BRFSS)



The data for the U.S. and New York State indicate that inactivity, poor diet and obesity are serious issues. Graphics provided by Deb Spicer, NYS Department of Health.

Otsego County
Prepared by iHi, 2007



The population of Otsego County is approximately 61,676 people. The County is located west of Albany, and the two largest communities are the City of Oneonta and the Village of Cooperstown. The median household income is \$34,243 (2003), with 12.6% of the population living below the poverty level. The county land area covers more than 1,000 square miles, with a population density of 61.5 people per square mile.

Please note: seasonal and or student population may skew these figures.

Source: US Census and Otsego County

II. Community Health Data

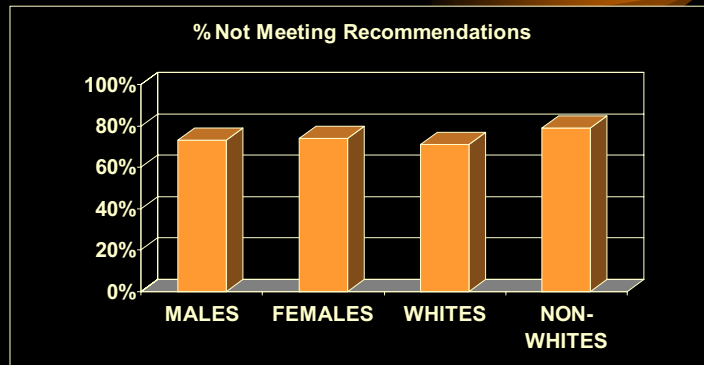
Otsego County is fortunate to have a detailed set of data for assessing public health. The New York State Behavioral Risk Factor Surveillance System (data) provides a general overview for statistical comparisons between state, national and county data. In addition, Otsego County is part of a unique Health Census project conducted by the Bassett Research Institute in Cooperstown. The following sections use available local and statewide health data to identify existing conditions and issues for Otsego County.

NYS BRFSS

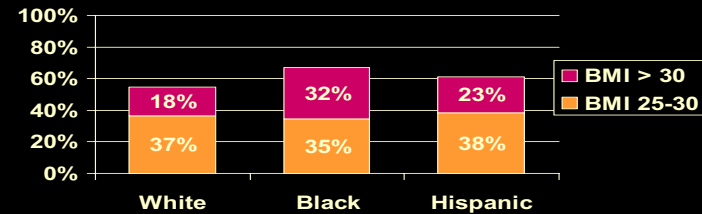
The national trends and data are reflected in the public health data provided by NYS DOH from the 2000 and 2001 BRFSS. The two charts below show levels of physical activity statewide and obesity prevalence in ethnic groups among NYS adults.

The data below indicates that more than 70% of New York State adults (1) do not meet recommended levels of physical activity and (2) that more than 50% of the State's adults are overweight or obese.

Physical Activity Among NYS Adults, (BRFSS 2000)

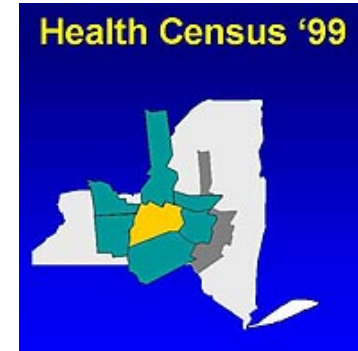


Obesity Among NYS Adults, By Ethnicity 2001, BRFSS

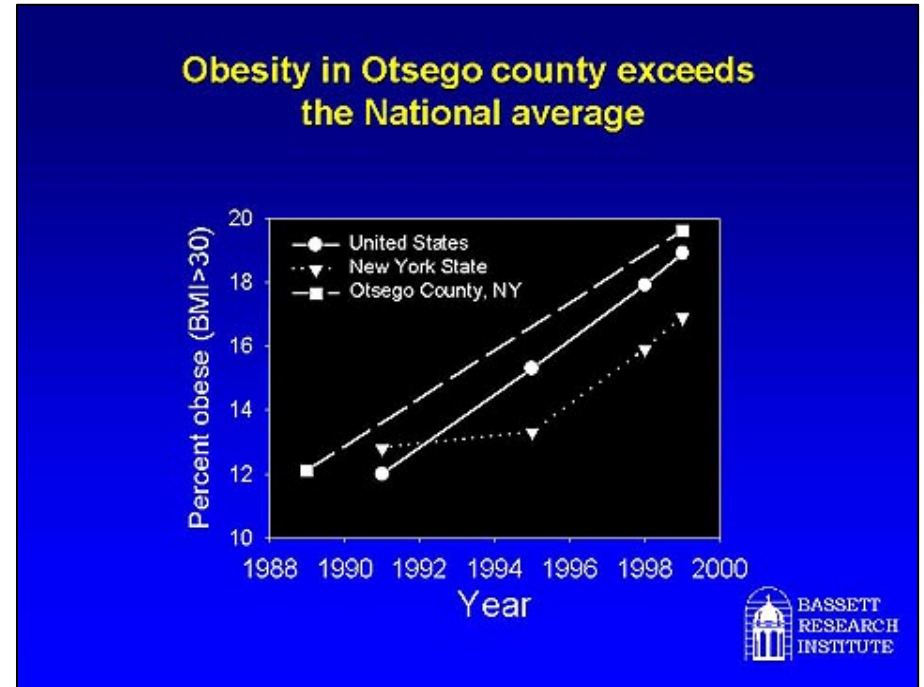
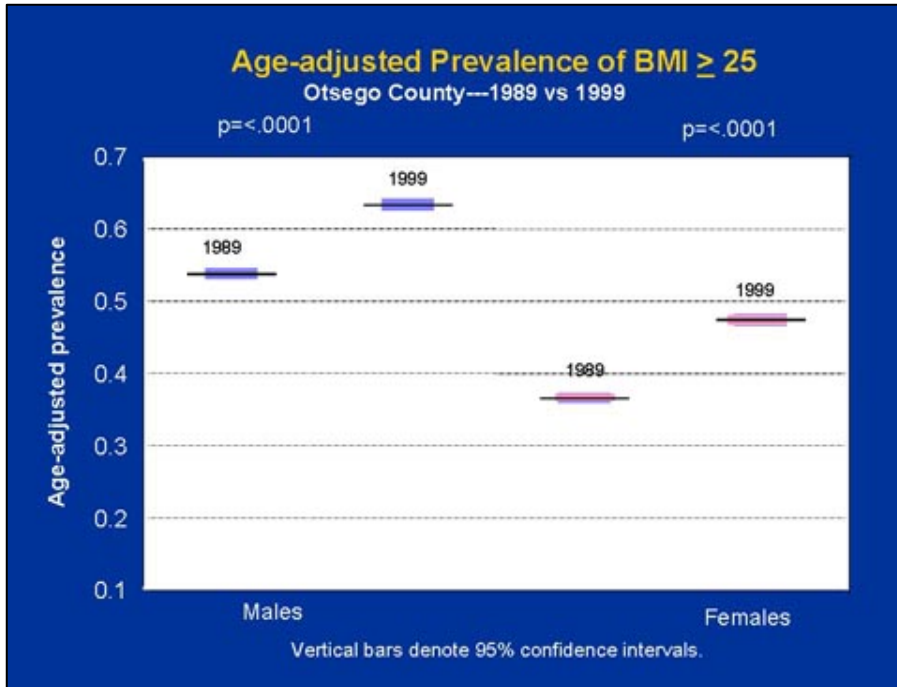


Otsego County Health Census

Otsego County was part of a thorough Health Census conducted in the late 1990s. This data was not collected for most other counties and was therefore not likely to be suitable for direct comparison between other counties. However, it provided a potential model for data collection and an excellent representation of risk factors and health conditions in Otsego County.



“The goals of "Health Census '99" were to perform a detailed study of chronic disease and health-related behaviors in our community...The Otsego County Health Census was a comprehensive survey that attempted to collect data from every household in the County. By a painstaking mail, telephone and door-to-door approach, we were eventually successful in collecting data from more than 14,000 homes, including more than 36,000 individuals. This represents almost an 80% response rate. The Otsego County Health Census followed up on a similar project performed in 1989. As a result, we have ten-year follow-up data on more than 15,000 individuals, who were represented in both studies.”



Source: www.bassett.org
 These data show that Otsego County exceeds that State and National Averages for body mass index (BMI) data, and that the trend towards obesity and overweight for County residents has continued over the past decade.

Mortality data for Otsego County

	Population (2000 data)	Total Deaths (per 100,000)	Total Deaths (rate)	Cerebrovascular Disease (#)	Cerebrovascular Disease (rate)	Diseases of the Heart (#)	Diseases of the Heart (rate)
NYS	18,976,457	157,425	829.6	7,935	41.8	57,924	305.2
Otsego	61,676	608	985.8	34	55.1	205	332.4

*heart disease is a major public health issue, with levels above the statewide level

Traffic Safety Data

Health and safety are related issues. The amount that people will walk or bicycle is affected by perceived and real concerns about traffic safety. In recent years, Otsego County has been subject to considerable development pressure. The built environment that has resulted from these pressures, often presents barriers to active living. In a report entitled, "Otsego County Traffic Safety Data", dated February 2004, the Institute for Traffic Safety and Research provides the following summary of Otsego County safety Statistics.

Please see the following page for complete traffic safety data.

**New York State Department of Motor Vehicles
Summary of Motor Vehicle Accidents**

2004 Otsego County

TABLE 1 Accident Summary Totals		
Category Totals	All Accidents	Police Reported
Total Accidents	900	444†
Fatal Accidents	7	7
Non-Fatal Personal Injury Accidents	483	419
Reportable Property Damage Accidents	410	18†
Vehicles	1,314	674
Drivers Involved	1,227	655
Vehicle Occupants	1,749	1,047
Special Accident Series		
Pedestrian/Motor Vehicle Accidents	20	18
Bicycle/Motor Vehicle Accidents	3	3
Motorcycle Accidents	27	25
Fatalities		
Persons Killed (1)	8	8
Drivers Killed	8	8
Passengers Killed	0	0
Pedestrians Killed	0	0
Bicyclists Killed	0	0
Other	0	0
Non-Fatal Injuries		
Persons Injured (1)	660	584
Drivers Injured	431	372
Passengers Injured	202	187
Pedestrians Injured	23	21
Bicyclists Injured	3	3
Other	1	1
† It is important to note that the data for 2004 are not strictly comparable to the data for 2001 and 2002. Changes in data collection and reporting that began during 2001 with respect to property damage crashes have reduced the total number of crashes, since the changes resulted in fewer property damage crashes being captured in the statewide Accident Information System (AIS) maintained by the NYS Department of Motor Vehicles.		
(1) Includes pedestrians, bicyclists and all other non-vehicle involved persons as well as vehicle occupants regardless of seating position.		

TABLE 2(P) Severity of Accident		
	Number	Percent
Total	444	100.0
Fatal (K) Accidents	7	1.6
Personal Injury Accidents		
Serious (A)	60	13.5
Moderate (B)	95	21.4
Minor (C)	243	54.7
Unknown Severity	21	4.7
Property Damage (O) Accidents	18	4.1

General Notes

- * Some of the tables are based upon information received from police and motorist reports of motor vehicle accidents. Others are based only on the police reports; these are indicated by a (P).
- * The Property Damage Accident reporting level is \$1,000 or more.
- * The term "vehicle" always excludes bicycles.
- * The term "driver" always excludes bicyclists.
- * Percentages may not total 100.0 due to rounding.

III. Infrastructure Diagnosis

For the purposes of this study, the medical term ‘diagnosis’ is applied to the county’s public works infrastructure to investigate possible connections between the built environment and public health. The ‘patient’ in this case is Otsego County, and the diagnosis looks at whether current levels of physical activity are related to the provision of built environment features such as rural roadways with paved shoulders, trails, parks and other facilities that encourage a physically active lifestyle. Note that at the county level this is a very general analysis, and precision and scope are limited to an overview of existing conditions. Additional investigations will be necessary to supplement this study with more detailed observation and data at the community and neighborhood level.

U.S Census Transportation Data

While limited in its ability to capture all travel by walking and bicycling (it focuses only on trips to work, not travel for shopping, school, or leisure), the U.S. Census Transportation data is a useful source of county level data. From 1990-2000, the census shows that walking and bicycling in Otsego County DECLINED.

Please see CTPP data on following page





CENSUS TRANSPORTATION PLANNING PACKAGE (CTPP 2000)

Table 1. Profile of Selected 1990 and 2000 Characteristics

Geographic Area: Otsego County, New York

Subject	1990 Census		Census 2000		Change 1990 to 2000	
	Number	Percent	Number	Percent	Number	Percent
POPULATION						
Total population	60,517	100.0	61,676	100.0	1,159	1.9
In households	55,612	91.9	56,648	91.8	1,036	1.9
In group quarters	4,905	8.1	5,028	8.2	123	2.5
HOUSEHOLD SIZE						
Total households	21,701	100.0	23,279	100.0	1,578	7.3
1-person household	5,370	24.7	6,273	26.9	903	16.8
2-person household	7,449	34.3	8,449	36.3	1,000	13.4
3-person household	3,431	15.8	3,600	15.5	169	4.9
4-person household	3,261	15.0	3,043	13.1	-218	-6.7
5-or-more-person household	2,190	10.1	1,914	8.2	-276	-12.6
Mean number of persons per household	2.56	(X)	2.43	(X)	-0.13	(X)
VEHICLES AVAILABLE¹						
Total households	21,701	100.0	23,279	100.0	1,578	7.3
No vehicle available	1,795	8.3	1,735	7.5	-60	-3.3
1 vehicle available	7,838	36.1	8,403	36.1	565	7.2
2 vehicles available	8,350	38.5	9,580	41.2	1,230	14.7
3 vehicles available	2,752	12.7	2,767	11.9	15	0.5
4 vehicles available	712	3.3	635	2.7	-77	-10.8
5 or more vehicles available	254	1.2	159	0.7	-95	-37.4
Mean vehicles per household	1.71	(X)	1.69	(X)	-0.02	(X)
WORKERS BY SEX¹						
Workers 16 years and over	26,393	100.0	26,975	100.0	582	2.2
Male	13,645	51.7	13,930	51.6	285	2.1
Female	12,748	48.3	13,045	48.4	297	2.3
MEANS OF TRANSPORTATION TO WORK						
Workers 16 years and over	26,393	100.0	26,975	100.0	582	2.2
Drove alone	17,670	66.9	19,748	73.2	2,078	11.8
Carpooled	3,768	14.3	3,377	12.5	-391	-10.4
Public transportation (including taxicab)	337	1.3	368	1.4	31	9.2
Bicycle or walked	2,803	10.6	1,867	6.9	-936	-33.4
Motorcycle or other means	150	0.6	148	0.5	-2	-1.3
Worked at home	1,665	6.3	1,467	5.4	-198	-11.9
TRAVEL TIME TO WORK						
Workers who did not work at home	24,728	100.0	25,508	100.0	780	3.2
Less than 5 minutes	2,271	9.2	1,961	7.7	-310	-13.7
5 to 9 minutes	4,400	17.8	4,088	16.0	-312	-7.1
10 to 14 minutes	4,581	18.5	4,455	17.5	-126	-2.8
15 to 19 minutes	3,624	14.7	3,660	14.3	36	1.0
20 to 29 minutes	4,234	17.1	4,639	18.2	405	9.6
30 to 44 minutes	3,616	14.6	3,926	15.4	310	8.6
45 or more minutes	2,002	8.1	2,779	10.9	777	38.8
Mean travel time to work (minutes)	18.6	(X)	22.4	(X)	3.8	(X)
TIME LEAVING HOME TO GO TO WORK						
Workers who did not work at home	24,728	100.0	25,508	100.0	780	3.2
5:00 a.m. to 6:59 a.m.	5,429	22.0	5,693	22.3	264	4.9
7:00 a.m. to 7:59 a.m.	7,587	30.7	8,348	32.7	761	10.0
8:00 a.m. to 8:59 a.m.	4,901	19.8	4,257	16.7	-644	-13.1
9:00 a.m. to 9:59 a.m.	1,501	6.1	1,352	5.3	-149	-9.9
10:00 a.m. to 11:59 a.m.	916	3.7	966	3.8	50	5.5
12:00 p.m. to 11:59 p.m.	3,789	15.3	3,989	15.6	200	5.3
12:00 a.m. to 4:59 a.m.	605	2.4	903	3.5	298	49.3

¹ See the entry for this item in the Technical Notes in the root directory or state subdirectories (filename: tech_notes.txt).
 (X) Not applicable.
 Source: U.S. Census Bureau. Census of Population and Housing, 1990 and 2000 long-form (sample) data.

Spatial Analysis using Geographic Information Systems

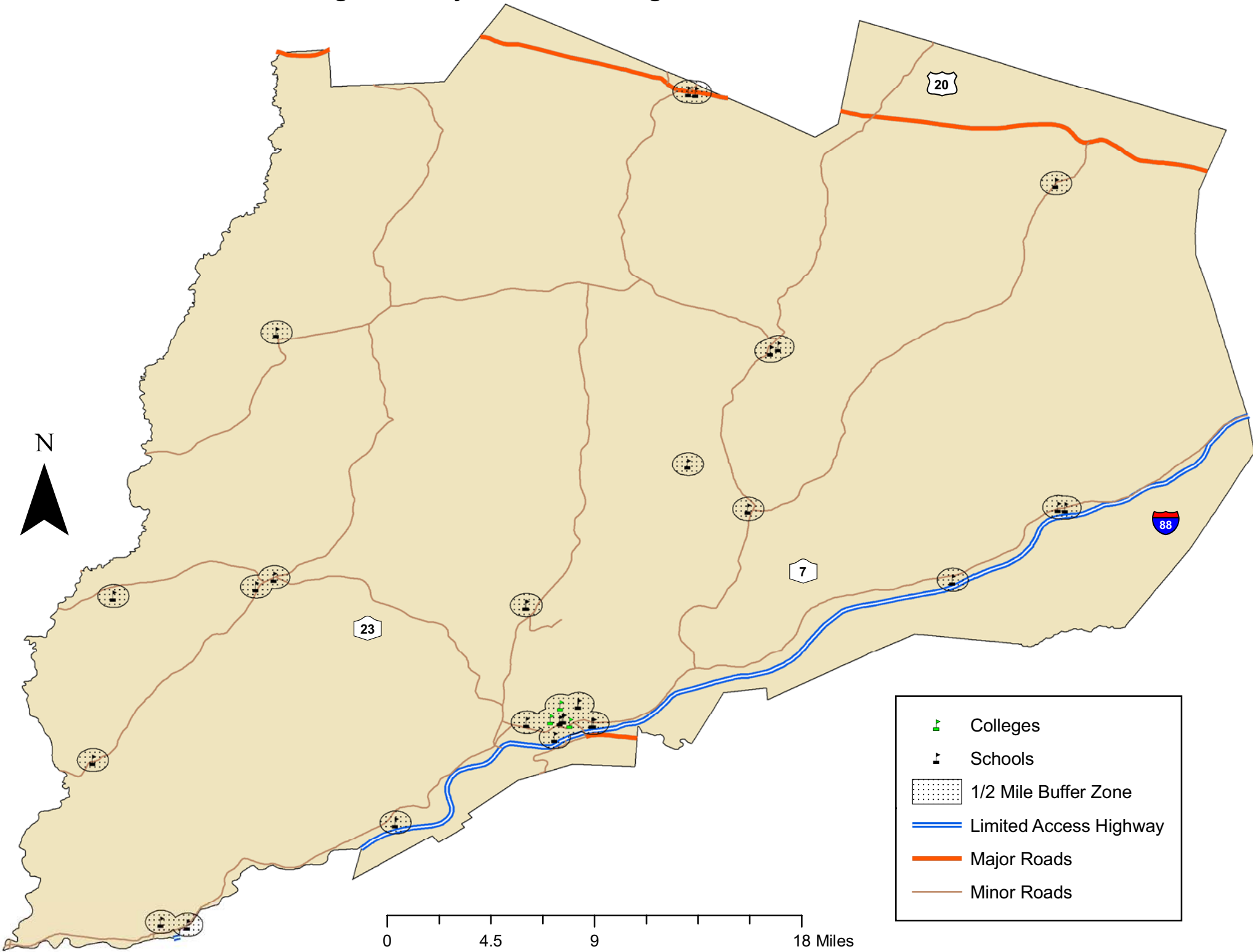
Through the use of census data and geocoded locations for specific spatial attributes, it is possible to identify key features within the county. For the purposes of this phase of IHI's project, Healthcare and Education facilities were identified as types of community destinations which can help describe the potential for walking to routine destinations as part of an active lifestyle. The potential of a resident walking to a destination can be identified as accessible within a .5 mile radius. This is the equivalent of approximately a 10 minute walk at an average pace of 3 miles per hour. Note that this distance is also a relatively short bicycle ride – approximately a 3 minute ride at a 10 mile per hour pace. The purpose of this diagnostic tool is not to specifically identify which individuals within the county walk or bicycle, but rather to provide a broad perspective on whether it is possible to walk or bike to certain key features within the area.

Education

Access to schools is a part of the daily travel routine for Otsego County families. Nationally, the trend in the past several decades has been away from children walking or bicycling to school, and towards children being bused and driven to school. The data showing the lack of physical fitness in children (as well as faculty, staff and college students) is related to this change in daily routine. As a result, investigating the potential for schools to be a destination within walking distance of the local population can be an important step towards encouraging a more active lifestyle.

Please see Education map on following page.

Areas in Otsego County within Walking Distance of Education Facilities

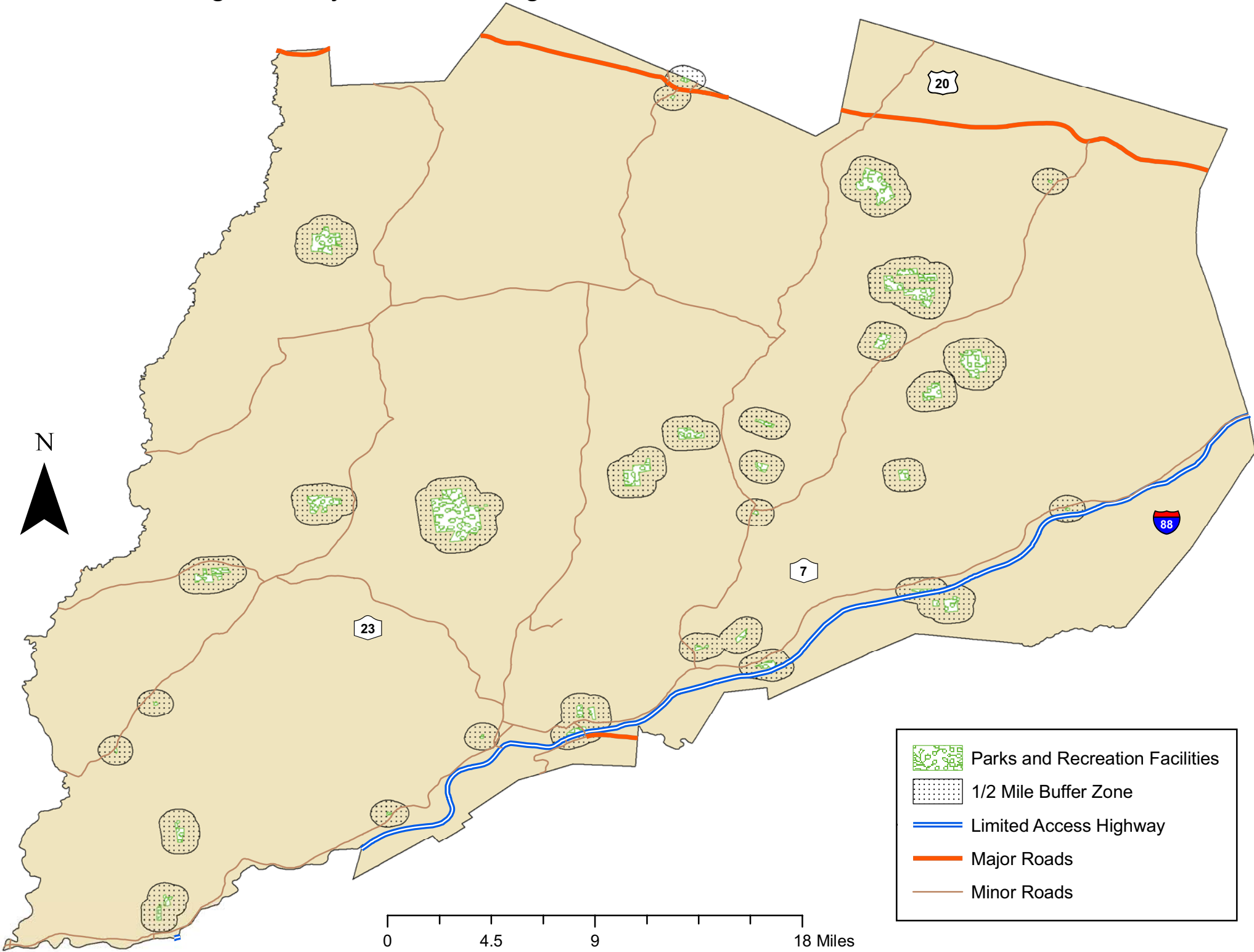


Parks

Parks and Recreation Facilities provide locations intended for physical activity, sports and other leisure time activities. Walking, hiking and bicycling are primary activities at these locations, yet in a rural setting, it is important to determine if people are able to walk or bike to parks and recreation, or if they are limited to driving a car to reach these destinations. Otsego County is fortunate to have a significant amount of parks and public lands focused along lakeshores, rivers, and in local communities.

Please see Parks map on following page.

Areas in Otsego County within Walking Distance of Parks and Recreation Facilities

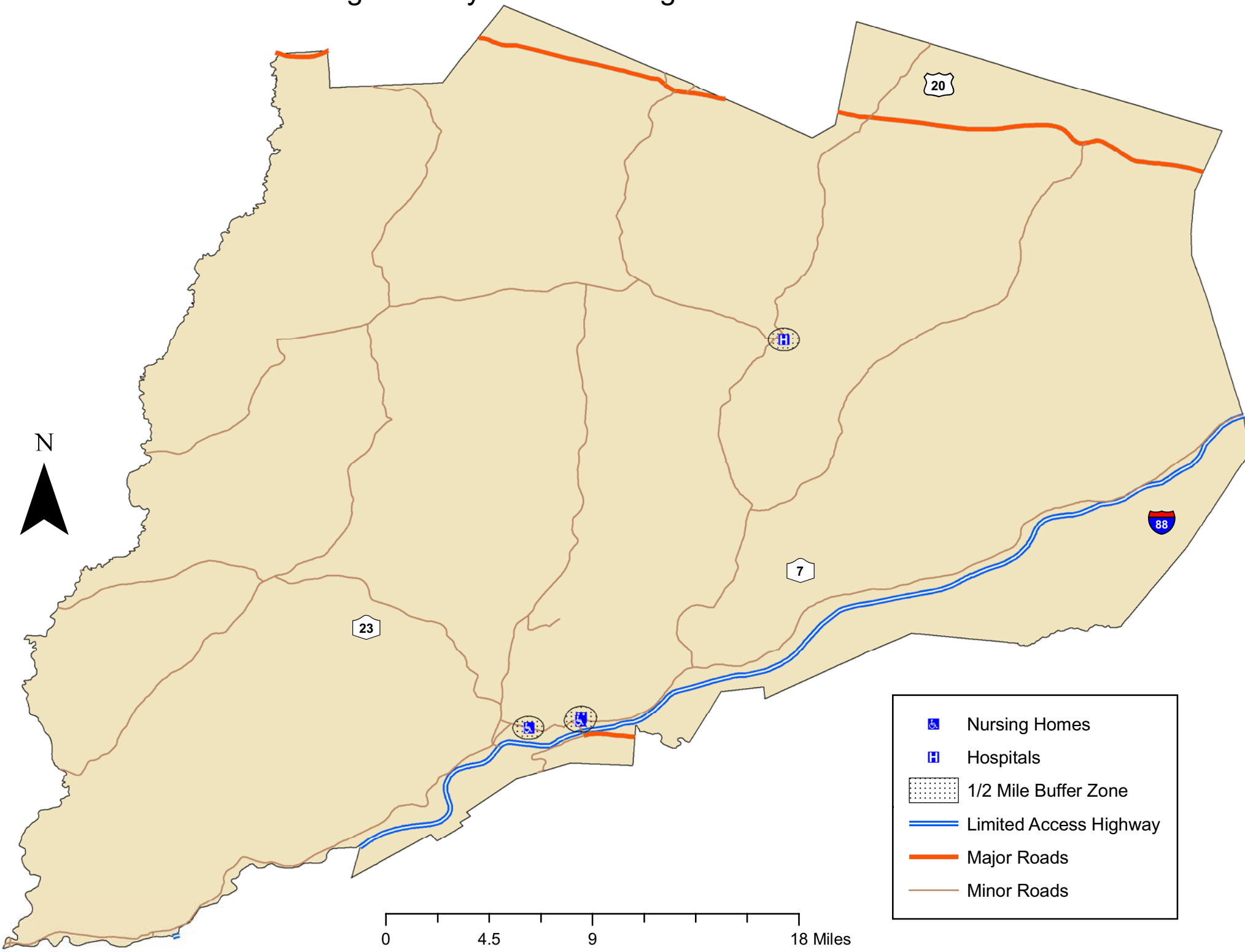


Health Institutions

Just as schools and parks can provide walk-able community destinations, health institutions can play a similar role in being a place that encourages physical activity and fitness by being a role model as a destination. This is often not the case with large hospitals and medical centers, and there are many examples of hospitals being surrounded by large parking lots without appropriate consideration for how walking and bicycling relate to public health and the medical institution's role in creating a healthy neighborhood environment. For the purpose of this analysis, healthcare institutions were identified and geocoded, and the same walking distance buffer was applied for the .5-mile radius around the facility.







Please see Health Institutions map on following page.

Areas in Otsego County within Walking Distance of Medical Facilities



N

0 4.5 9 18 Miles

-  Nursing Homes
-  Hospitals
-  1/2 Mile Buffer Zone
-  Limited Access Highway
-  Major Roads
-  Minor Roads

Transportation Infrastructure (following page)

For many people, local streets and roads define access to jobs, education, healthcare and recreation. Unfortunately however, data is not currently available to determine the percentage of all these roads that include paved shoulders, sidewalks, bike lanes or trails. An investigation of NYSDOT sufficiency file data indicated that paved shoulders and sidewalks are not systematically included in the State's pavement management and information systems.

The available data table for the Otsego County highway system is provided on the following page.

OTSEGO COUNTY REGION 9 COUNTY 4

MINOR CIVIL DIVISION		GEO- CODE	URBAN AREA CODE	POP. 2000	TOTAL STATE TOURING ROUTE MILEAGE	CENTERLINE HIGHWAY MILEAGE BY JURISDICTION						
TYPE	Name of Town, Village or City					TOWN VILLAGE or CITY	COUNTY	TOTAL LOCAL	D.O.T. OWNED	OTHER STATE	TOTAL STATE & LOCAL	
TOWNS	Burlington	0102		1,090	15.2	66.4	11.0	77.4	15.2	0.0	92.6	
	Butternuts	0106		1,420	7.0	66.3	27.5	93.8	7.0	0.0	100.8	
	Cherry Valley	0156		670	11.0	44.4	19.0	63.4	11.0	0.0	74.4	
	Decatur	0222		410	0.0	30.2	12.7	42.9	0.0	0.0	42.9	
	Edmeston	0256		1,820	5.4	54.6	24.9	79.5	5.4	0.0	84.9	
	Exeter	0278		950	5.4	30.0	20.4	50.4	5.4	0.0	55.8	
	Hartwick	0381		2,200	11.5	57.6	24.5	82.1	11.5	0.0	93.5	
	Laurens	0451		2,130	13.0	51.6	20.5	72.1	13.0	0.0	85.1	
	Maryland	0517		1,920	22.2	61.6	15.0	76.6	23.0	0.0	99.6	
	Middlefield	0528		1,230	12.0	74.3	36.7	111.0	12.0	0.0	123.0	
	Milford	0532		2,430	14.3	58.8	19.1	77.9	14.9	0.0	92.8	
	Morris	0552		1,280	16.3	49.3	14.4	63.8	16.3	0.0	80.1	
	New Lisbon	0578		1,120	7.0	67.9	22.5	90.4	7.0	0.0	97.4	
	Oneonta	0610	052P	4,990	21.4	41.8	13.5	55.3	21.8	1.6	78.7	
	Otego	0625		2,130	11.7	38.7	27.3	66.0	12.1	0.0	78.1	
	Otsego	0627		2,890	19.7	76.7	18.9	95.6	19.7	0.0	115.3	
	Pittsfield	0668		1,300	4.6	45.5	22.0	67.5	4.6	0.0	72.1	
	Plainfield	0671		990	6.6	34.9	17.1	52.0	6.6	0.0	58.7	
	Richfield	0708		1,170	11.5	36.1	15.8	51.8	11.5	0.0	63.3	
	Roseboom	0723		680	11.4	36.1	9.3	45.4	11.4	0.0	56.9	
	Springfield	0796		1,350	13.8	46.8	24.3	71.1	13.8	0.0	84.9	
	Unadilla	0845		3,420	9.6	59.3	24.1	83.4	9.6	0.0	92.9	
	Westford	0893		780	0.0	49.0	17.4	66.4	0.0	0.0	66.4	
	Worcester	0926		2,210	19.7	67.9	15.8	83.7	20.0	0.0	103.7	
	SUBTOTAL				40,580	270.2	1245.6	473.7	1719.3	272.9	1.6	1993.8
	VILLAGES	Cherry Valley	1096		590	1.0	2.7	0.3	3.1	1.0	0.0	4.1
		Cooperstown	1112		2,030	2.4	13.4	0.0	13.4	0.7	0.0	14.1
		Gilbertsville	1193		380	0.8	2.5	1.6	4.2	0.8	0.0	5.0
		Laurens	1264		280	0.0	0.4	0.9	1.3	0.0	0.0	1.3
		Milford	1310		510	1.1	1.3	0.0	1.3	1.1	0.0	2.4
Morris		1324		590	2.0	3.5	0.4	3.9	2.0	0.0	5.8	
Otego		1369		1,050	1.5	4.5	0.3	4.8	1.6	0.0	6.3	
Richfield Springs		1421		1,260	2.0	7.2	0.0	7.2	2.0	0.0	9.2	
Unadilla		1496		1,130	2.1	7.3	0.0	7.3	2.3	0.0	9.6	
SUBTOTAL					7,820	12.9	42.8	3.6	46.4	11.5	0.0	57.8
CITY	Oneonta	2041	052	13,290	8.0	41.1	0.2	41.3	5.8	2.6	49.6	
SUBTOTAL				13,290	8.0	41.1	0.2	41.3	5.8	2.6	49.6	
COUNTY TOTAL		----	----	61,690	291.1	1329.5	477.5	1806.9	290.1	4.2	2101.3	

Infrastructure Investment Analysis

Healthcare is a significant budget expenditure and cost for New York State and local communities. The direct and indirect costs due to medical care, workers compensation claims, and lost time related to injuries is illustrated below in a graphic provided by NYSDOH.

Specifically, in Otsego County, physical inactivity costs over \$68 Million per year. This includes over \$10 Million in medical care costs, over \$185,000 in workers compensation costs, and over \$57 million in lost productivity. Broken down, it costs each resident of Otsego County around \$1,400 per year. It is estimated that a 5% increase in Physical activity would save tax-payers over \$3 million each year.

Slide Source (bullets 1 & 2): Chenoweth, "Physical Inactivity in NYS, An Economic Cost Analysis", 1999
Slide Source (bullet 3): Pratt, M. "Higher Direct Medical Costs Associated with Physical Inactivity", The Physician and Sports Medicine, October, 2000. This study used data from the 1987 National Medical Expenditures Survey.

Cost of Physical Inactivity in NYS

- Inactivity costs NYS **\$3 billion** a year
- A 5% increase in physical activity rates in adults would save NY **\$180 million** a year.
- Inactive adults have **\$330** more per year in direct medical costs than active adults (in 1987 dollars).

IV. Initiatives for Otsego County

“WE-GO” Cooperstown Walking Program

Cooperstown is home to the “Walking Example Group,” also known as WE-GO.

WE-GO, began in spring of 2002 – a grass roots organization to promote walking and a more active lifestyle. It has sponsored monthly events that have celebrated walking and encouraged citizens to be more active by providing pedometers, walking logs and contests as well as a series of narrated walking tours. The group has about 200 members and is currently engaged in a walking competition with Cooperstown’s sister city of Windsor, Nova Scotia.

“The Walking Example Group (WE-GO) is a non-profit organization committed to enhancing, improving and extending the substance and quality of peoples' lives in Cooperstown and beyond, by encouraging and rewarding healthy life choices. WE is dedicated to the simple idea that everyday physical activity, especially consistent daily walking, results in markedly improved physical and mental health. The results can be a notably healthier, more energetic and more socially interactive population, a respected and economically bolstered farming community, and a reinvigorated Main Street.”

Source: www.stridewithpride.org.

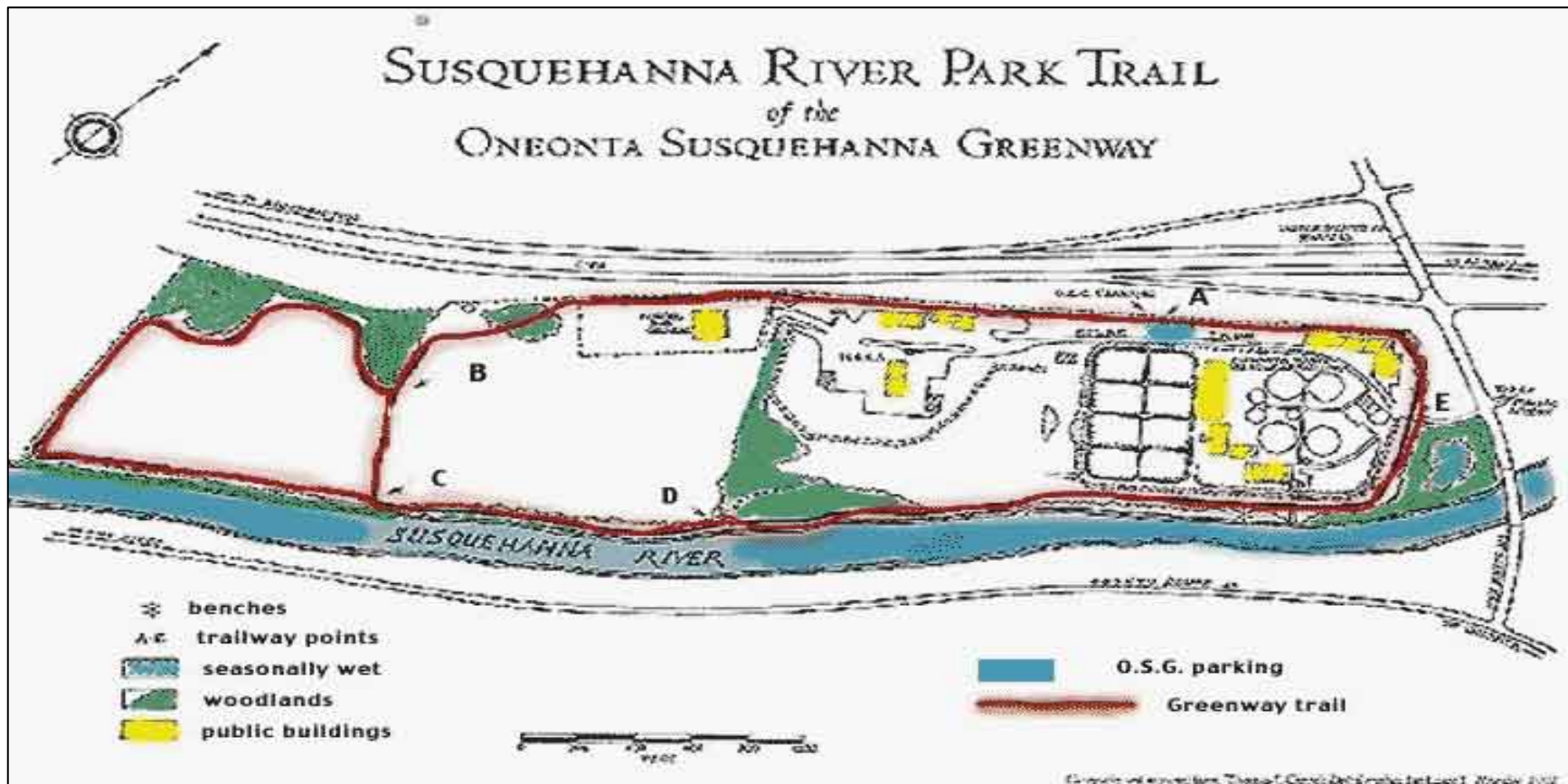


Susquehanna River Greenway

"The Oneonta Susquehanna Greenway (also called the OSG) is a proposed bicycle and pedestrian trail which will follow the Susquehanna River for approximately six miles in the city and town of Oneonta, New York. It will run from the Susquehanna River Park in the West End of Oneonta, through the city of Oneonta, and out to Fortin Park in the East End of Oneonta.

There are many recreational possibilities for the Oneonta Susquehanna Greenway. During the warmer months, people will be able to walk, jog, bicycle and rollerblade along the river. During the winter months, cross country skiers and snowshoers can enjoy the stillness of the winter river." Currently over two miles of the greenway are open for use.

Source: <http://oneontagreenway.org/ogreenway/>



Main Street Projects

Main Street in Oneonta is a great example of high quality urban design, traffic calming and pedestrian facilities. Local businesses, community leaders and government have joined forces over the years to create an economically successful Main Street – a significant challenge in the Upstate New York economy. A recent addition is the new Town Square built on Main Street as part of the development of a new downtown hotel on a former vacant lot in the center of town.



Cooperstown Inter-modal Project

- \$14 million ISTE A grant
- 5-year Project Timeline

In order for this project to be truly inter-modal in nature, it must include links to all forms for transit, **including a walking and bicycling path** linking sections of the town.

V. Community Infrastructure Prescriptions

The information gathered for this project can help in informing Otsego County and local communities about the issues and potential solutions related to physical activity, cardiovascular fitness, and the built environment. Data in the previous sections (see NYS BRFSS data) have indicated that Otsego County residents are at risk for heart disease, that physical activity is declining, and that transportation and health care costs represent a significant amount of local public expenditures. In order to translate these facts into action, it is first necessary to understand the current recommendations of the health profession in terms of change in individual behavior. Currently the Surgeon General of the United States is recommending that adults have 30 minutes of moderate physical activity on most, if not all days of the week and that children have at least 60 minutes of physical activity on most days, if not all days of the week. In many cases, this amount of physical activity can be achieved while walking to work, school, or for recreation within a local community – if these destinations are accessible in terms of pedestrian facilities. At the same time, research is beginning to show that for many people, leisure time physical activity frequently involves walking, and that roads, streets and sidewalks are important facilities for this purpose.

While it is not certain that there is a direct cause and effect relationship between providing sidewalks, paved shoulders, trails and bicycle facilities and specific improvements in the conditions of cardiovascular disease, there is sufficient evidence to indicate that Otsego County would benefit from infrastructure improvements that encourage a more active lifestyle. **The following sections identify several possible policy and funding opportunities for Otsego County.**

Policy Suggestions

Safe Routes to School

There is a growing national and international movement towards encouraging children to walk and bicycle to school. Schools are a logical focal point for creating safe, healthy, physically active communities. While current conditions indicate the majority of children are being bused and driven to school, changes in the physical environment (including sidewalks, crossings and traffic calming of school zones) can be combined with encouragement programs to facilitate a return to safe routes to school in Otsego County. Please see the iHi NY Safe Routes to School document on our website here: <http://www.albany.edu/~ihi/2briefing.pdf>.

Complete Streets

Benefits of *Complete Streets* range from improved safety conditions for pedestrians and bicyclists to less congested roadways. Numerous communities across the country have already adopted such policies. A proposed *Complete Streets* policy for Otsego County can be found here: <http://www.completestreets.org/index.html>.

Local Sidewalk Program / Winter Maintenance

It is common practice in Upstate New York communities for adjacent property owners to be responsible for construction and maintenance of sidewalks. While this limits a municipality's maintenance cost and shifts the existing or perceived liability to the adjacent landowner, it also creates discontinuous and often nonexistent pedestrian facilities. While there may not be a single, one size fits all solution to these issues, there are a number of excellent best practices which could be facilitated at the county level. Examples include mapping the existing sidewalk systems and identifying missing links. Sidewalk construction could be facilitated into group discount purchases in order to ease the cost burden on property owners. Winter maintenance could be enhanced through economic opportunity programs, providing jobs for the unemployed or youth seeking to enter the workforce.

Land Use and Walkability

As a 'home rule' state, New York does not have regional land use planning for rural counties, and as a result, most land use decisions are made at the local municipal level. With a dispersed rural population, the creation of compact development centers in villages and hamlets would support walking, especially if combined with locating public facilities such as post offices, libraries and local government offices within town centers. In order to encourage people to walk as part of their daily routing, it is important to group destinations and activities within walking distance of businesses and residences to the greatest extent possible.

Road Shoulder Guidelines

Many of the County's highways are low volume two lane roads. In most cases where there are few motor vehicles and traffic speeds are kept slow, these are already good places to walk or bicycle. On roads with higher traffic volumes and speeds, providing paved shoulders can be a significant benefit to motorists, bicyclists and pedestrians. A consistent policy for providing paved shoulders as a typical roadway feature could be implemented by NYSDOT, the County and municipal agencies. The document on the following page, developed in Oregon, provides an excellent rationale for these facilities.

Paved Shoulders

Reasons for Highway Shoulders

Prepared by Michael Ronkin, Bicycle and Pedestrian Program Manager & Members of the Preliminary Design Unit Oregon Department of Transportation

Before the 1971 "Bike Bill" was passed, and the terms "shoulder bikeways" or "bike lanes" were commonly used, the Oregon Highway Division advocated (1) building paved shoulders when constructing roads and (2) adding paved shoulders to existing roads. These were often referred to as "safety shoulders." There are good reasons for this term.

The following reasons are what AASHTO has to say about the benefits of shoulders in three important areas: safety, capacity and maintenance. Most of these benefits apply to both shoulders on rural highways and to marked, on-street bike lanes on urban roadways. See other side for other benefits specific to urban areas.

Safety - highways with paved shoulders have lower accident rates, as paved shoulders:

- Provide space to make evasive maneuvers;
- Accommodate driver error;
- Add a recovery area to regain control of a vehicle, as well as lateral clearance to roadside objects such as guardrail, signs and poles (highways require a "clear zone," and paved shoulders give the best recoverable surface);
- Provide space for disabled vehicles to stop or drive slowly;
- Provide increased sight distance for through vehicles and for vehicles entering the roadway (rural: in cut sections or brushy areas; urban: in areas with many sight obstructions);
- Contribute to driving ease and reduced driver strain;
- Reduce passing conflicts between motor vehicles and bicyclists and pedestrians;
- Make the crossing pedestrian more visible to motorists; and
- Provide for storm water discharge farther from the travel lanes, reducing hydroplaning, splash and spray to following vehicles, pedestrians and bicyclists.

Capacity - highways with paved shoulders can carry more traffic, as paved shoulders:

- Provide more intersection and safe stopping sight distance;
- Allow for easier exiting from travel lanes to side streets and roads (also a safety benefit);
- Provide greater effective turning radius for trucks;
- Provide space for off-tracking of truck's rear wheels in curved sections;
- Provide space for disabled vehicles, mail delivery and bus stops; and
- Provide space for bicyclists to ride at their own pace;

Maintenance - highways with paved shoulders are easier to maintain, as paved shoulders:

- Provide structural support to the pavement;
- Discharge water further from the travel lanes, reducing the undermining of the base and subgrade;
- Provide space for maintenance operations and snow storage;
- Provide space for portable maintenance signs;
- Facilitate painting of fog lines.



VI. Funding Options

Bicycle and Pedestrian Improvements can be made possible in Otsego County with funding through multiple avenues. There are numerous funding sources, including federal grant programs such as the Transportation Improvements Program or Congestion Mitigation Air Quality Improvement Program. Both the New York Bicycling Coalition and Parks and Trails New York (PTNY) have excellent information regarding funding.

New York Bicycling Coalition: <http://www.nybc.net/programs/funding.shtml>

Parks and Trails New York: <http://www.ptny.org/index.shtml>

There may also be state, local and private money available too. In addition, see the iHi website for more information on funding sources.

Conclusion

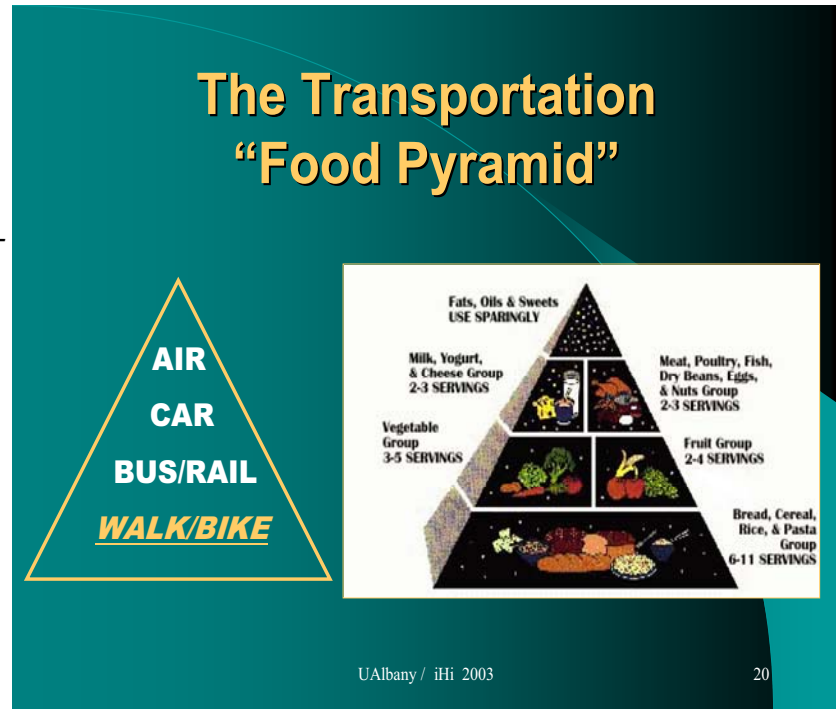
This report is part of our efforts to develop an approach for identifying connections between public health, transportation infrastructure and community decision-making. With that caveat in mind, the following discussion can provide some useful concepts both for Otsego County and for the future development of the iHi program. One way of summarizing the data collected for this document is to connect the physical activity and transportation needs of Otsego County with an image common to promoting healthy lifestyles – the food pyramid. While people may disagree on the exact proportions of carbohydrates and protein in a healthy diet, the concept of the food pyramid is that the most resource intensive food group – meat – should be eaten in moderation, and that the food group which can be produced with the least amount of energy and the greatest return to the population – grains – should form the basis of a healthy diet. The same principle can be applied to transportation. If we used the forms of transportation that consume the greatest amount of resources (petroleum), we would place automobiles and air travel at the top of the pyramid and attempt to conserve our use of these costly forms of travel. Walking and bicycling would form the foundation of a pyramid that is based on the principals of a healthy transportation diet.

Do you know how much your local school district spends on student transportation?

Many districts allocate more funding on transportation than on physical activity programming! See the NYS Comptroller's Report and select school districts: http://www.osc.state.ny.us/localgov/datanstat/findata/index_choice.htm

The 'Transportation Food Pyramid' (Olson, 2003) shows the relationship between a healthy diet and a healthy use of transportation resources.

Please Note: The USDA now has a tool online so individuals can customize their own pyramids. Go to: <http://www.mypyramid.gov/>



Additional Important Links

Otsego County Health Department: <http://www.otsegocounty.com/health%20dept/index.htm>

Otsego County Planning Department: <http://www.otsegocounty.com/planning/>

NYS DOH: <http://www.health.state.ny.us/>



For additional information, please contact:

Initiative for Healthy Infrastructure – iHi
State University of New York at Albany
Department of Geography and Planning
www.albany.edu/gp/ihi



Healthy Infrastructure Action Plan / Survey

Thank you for being part of our efforts to connect public health, infrastructure and your community. We'd appreciate it if you would spend a few moments providing us with your opinion on this project.

County Name:

1. On a 1 to 10 scale, with '10' being the best score, is this document useful for your community? (please circle your response)

No 1 2 3 4 5 6 7 8 9 10 Yes

2. On the same 1-10 scale, are you more aware of the connection between public health and infrastructure now that you have read this document? (please circle your response)

No 1 2 3 4 5 6 7 8 9 10 Yes

3. Will you personally become and advocate for healthy infrastructure in your community as a result of this plan? (please check one)

Yes No Not Sure

4. What plans, programs or projects should be added to the plan?

.....
.....
.....

5. What actions will your community implement as a result of this plan? (check all that apply)

- Formal adoption of the plan by elected officials
- Increased funding for healthy infrastructure projects
- Formation of a healthy infrastructure task force
- Safe Routes to Schools Program
- New Policy to Include Pedestrian and Bicyclist Facilities



Healthy Infrastructure Action Plan / Survey

County Name:

6. Completion of a specific project.

Project name:

7. Other. Please describe:

.....
.....
.....
.....

Would you like to receive more information about iHi?
Please provide us with your contact information:

Name.....

Organization.....

Address.....

Phone.....

Fax.....

Email.....

Please send your response to:
University at Albany - iHi
1400 Washington Avenue, AS 218
Albany, New York 12222