

# SYRACUSE, NEBRASKA

**Comprehensive Development Plan**

**Adopted: 2001**

**Amended: Ordinance Number 966, March 11, 2015**



---

# SYRACUSE, NEBRASKA

## COMPREHENSIVE DEVELOPMENT PLAN 2001 PROJECT PARTNERS

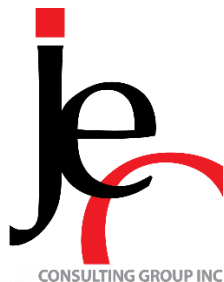
### **CITY OF SYRACUSE MUNICIPAL OFFICERS**

MAYOR:	RAYMOND UMBARGER
COUNCIL MEMBERS:	DEAN STEINKUHLER
	DAVID JULIFS
	BILL COPLEY
	RON ZEIGER
CLERK:	PEGGY HOBSCHEIDT
TREASURER:	ROLAND JOHNSON
ATTORNEY:	JERRY STILMOCK
UTILITY SUPERINTENDENT:	GARRY CARMAN
CHIEF OF POLICE:	JERRY RAILSBACK
FIRE CHIEF:	BRUCE NEEMAN
RESCUE SQUAD CHIEF:	SUSAN EISENHAUER
SEWAGE PLANT OPERATOR:	CHRIS WHITEHEAD
STREET COMMISSIONER:	GARRY CARMAN
PARK & RECREATION:	LYNN WILHELM
ENGINEER:	JEO CONSULTING GROUP, INC.

### **PLANNING COMMISSION**

RON APEL, CHAIRPERSON	TOM KESLAR
LYLE BREHM	HAROLD ZAHN
MERLIN HILL	JAN ZIEGLER
SUE ZIEGLER, SECRETARY	

### **PLANNING CONSULTANTS**



---

# SYRACUSE, NEBRASKA

## 2015 UPDATE PARTNERS

### **CITY OF SYRACUSE MUNICIPAL OFFICERS**

MAYOR:	TOMAS 'KC' ORTIZ
COUNCIL MEMBERS:	DEB DETTMER
	KRISTY HENKE
	ALAN BRITTON
	ORVAL GIGSTAD
CLERK:	PEGGY HOBSCHEIDT
DEPUTY CLERK:	KELLY FARMER
TREASURER:	PEGGY KUSER, CPA
ATTORNEY:	JERRY STILMOCK
PUBLIC WORKS SUPERINTENDENT:	GARRY CARMAN
UTILITY PERSONNEL:	MITCHELL STUBBENDICK
	DEREK HARMS
	JEFF VOGT
FIRE CHIEF:	BRUCE NEEMANN
RESCUE SQUAD CHIEF:	TIM WILSON
PARK & RECREATION:	SHAYNA MURRELL
	TODD AKSAMIT
ENGINEER:	JEO CONSULTING GROUP, INC.

### **PLANNING COMMISSION**

JENNIFER PANKO-RAHE	CHARLIE MCWILLIAMS
CAROLYN GIGSTAD	TONY STARZEC
PAT CHANEY	ANDY BRACE
RON APEL	

### **PLANNING CONSULTANT**



---

# SYRACUSE, NEBRASKA

## COMPREHENSIVE PLAN, 2015 UPDATE

### TABLE OF CONTENTS

INTRODUCTION .....	1
COMMUNITY ASSESSMENT .....	6
HOUSING PROFILE .....	13
ECONOMIC PROFILE .....	18
FISCAL PROFILE .....	25
COMMUNITY FACILITIES .....	30
RECREATIONAL FACILITIES .....	32
EDUCATIONAL FACILITIES .....	33
FIRE AND POLICE PROTECTION .....	35
HISTORICAL SITES .....	36
TRANSPORTATION FACILITIES .....	37
COMMUNICATION FACILITIES .....	37
UTILITIES .....	38
HEALTH FACILITIES .....	42
ENERGY ELEMENT .....	44
ENVIRONMENTAL AND NATURAL RESOURCES .....	60
GOALS, ISSUES, AND POLICIES .....	83
EXISTING LAND USE .....	96
LAND USE PLAN .....	103
TRANSPORTATION PLAN .....	113
PLAN IMPLEMENTATION .....	121

---

# SYRACUSE, NEBRASKA

## COMPREHENSIVE PLAN, 2015 UPDATE

### LIST OF TABLES

TABLE 1: POPULATION TRENDS, OTOE COUNTY & COMMUNITIES, 1970 TO 2010.....	7
TABLE 2: MIGRATION ANALYSIS, SYRACUSE, 1980 TO 2010.....	8
TABLE 3: AGE-SEX CHARACTERISTICS, SYRACUSE, 2000 TO 2010.....	9
TABLE 4: COMMUNITY HOUSING TRENDS, SYRACUSE, 2000 AND 2010.....	15
TABLE 5: TENURE OF HOUSEHOLD BY SELECTED HOUSING CHARACTERISTICS.....	16
TABLE 6: SELECTED HOUSING CONDITIONS – SYRACUSE, 2000, 2010.....	17
TABLE 7: PROJECTED HOUSING NEEDS, SYRACUSE.....	18
TABLE 8: HOUSEHOLD INCOME, SYRACUSE, 2000-2012.....	19
TABLE 9: HOUSEHOLD INCOME BY AGE.....	19
TABLE 10: SPECIFIED OWNER AND RENTER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME....	20
TABLE 11: OWNER AND REENTER COSTS BY AGE OF HOUSEHOLDER AS A PERCENTAGE OF HOUSEHOLD INCOME....	21
TABLE 12: EMPLOYMENT BY INDUSTRY, SYRACUSE, 2012.....	21
TABLE 13: COMMUTER POPULATION, SYRACUSE, 2000 TO 2010.....	22
TABLE 14: TRAVEL TIME TO WORK, SYRACUSE, 1980 TO 2010.....	23
TABLE 15: BASIC/NON-BASIC EMPLOYMENT, SYRACUSE, 2010.....	24
TABLE 16: REGIONAL AND STATE LABOR FORCE COMPARISONS, SYRACUSE 2010.....	25
TABLE 17: NET TAXABLE SALES AND SALES TAX, SYRACUSE, 2003-2013.....	26
TABLE 18: ASSESSED VALUATIONS AND TAX LEVIES, SYRACUSE, 1995 TO 2000.....	28
TABLE 19: SYRACUSE ENERGY CONSUMPTION IN KWH BY SECTOR.....	50
TABLE 20: PRIME CROP LAND SOILS WITHIN SYRACUSE, NEBRASKA.....	68
TABLE 21: ENVIRONMENTAL HAZARDS FOR VARIOUS LAND USES, SYRACUSE.....	71
TABLE 22: EXISTING LAND USE, SYRACUSE, 2000.....	97
TABLE 23: LAND USE COMPARISONS, SYRACUSE, 2000.....	98
TABLE 24: PROJECTED LAND USE REQUIREMENTS (ACRES), SYRACUSE, 2000.....	101

### LIST OF FIGURES

FIGURE 1: POPULATION TRENDS AND PROJECTIONS, SYRACUSE, 1900 TO 2030.....	13
FIGURE 2: AGE OF EXISTING HOUSING STOCK, SYRACUSE, 2010.....	14
FIGURE 3: FISCAL TRENDS, 1995 TO 1999, SYRACUSE.....	29
FIGURE 4: NET METERING.....	46
FIGURE 5: COMMUNITIES SERVED BY OPPD.....	47
FIGURE 6: OPPD ENERGY RESOURCES.....	48
FIGURE 7: SYRACUSE ENERGY CONSUMPTION IN KWH FROM 1998-2011.....	49
FIGURE 8: WIND CAPACITY ADDITIONS PER YEAR, NEBRASKA.....	52
FIGURE 9: ESTIMATED ANNUAL AVERAGE WIND POWER DENSITY, SYRACUSE AND NEBRASKA.....	53
FIGURE 10: ANNUAL GLOBAL SOLAR RADIATION AND LATITUDE TILT.....	55
FIGURE 11: WYMORE SOIL ASSOCIATION.....	63
FIGURE 12: GENERAL SOILS MAP.....	64
FIGURE 13: PAWNEE-MORRILL-SHELBY SOIL ASSOCIATION.....	65
FIGURE 14: ZOOK-NODAWAY-JUDSON SOIL ASSOCIATION.....	67
FIGURE 15: PRIME FARMLAND.....	69
FIGURE 16: DWELLINGS WITH BASEMENTS.....	72
FIGURE 17: SEPTIC TANK ABSORPTION FIELD.....	73
FIGURE 18: SEWAGE LAGOON.....	74
FIGURE 19: COMMERCIAL/INDUSTRIAL STRUCTURES.....	75
FIGURE 20: TOPOGRAPHY OF OTOE COUNTY.....	77
FIGURE 21: FLOOD HAZARD AREAS.....	78
FIGURE 22: EXISTING LAND USE MAP.....	100
FIGURE 23: FUTURE LAND USE PLAN MAP AND TRANSPORTATION CLASSIFICATION.....	110

---

# INTRODUCTION

---

## **INTRODUCTION**

### **LOCATION**

Syracuse is located within Otoe County in southeastern Nebraska. The city is centrally located in Otoe County at the intersection of Nebraska Highway 2 and Nebraska Highway 50.

### **CLIMATE**

The climate in Syracuse and Otoe County is not unlike most of southeastern Nebraska. Winters in Syracuse are cold with the predominate precipitation being snow. The average temperature in winter is 26 degrees with the average daily minimum temperature is 15 degrees. The average seasonal snowfall is 25 inches.

Spring and summer are generally hot with the precipitation being rain. The average temperature in summer is 75 degrees with the daily maximum temperature of 88 degrees. The seasonal average rainfall ranges from approximately 29 inches in the western part of the county to approximately 34 inches in the eastern part of Otoe County.

### **HISTORY OF SYRACUSE**

Syracuse had an unusual origin. The name appears at a site southeast of Unadilla in 1856, nearly six miles west of its present location where salt was discovered. To claim the land, the “Syracuse Town Company” was formed. Syracuse was named for the salt entity in New York, and it was hoped that a similar market would develop for salt in Nebraska. Salt mining was not successful and it soon died down, but the name was kept. In the late 1850s, a school was established for the area. Sixty children were registered and regular attendance was 5.

In 1871, Midland Pacific Railroad, now part of the Burlington Northern Railroad, placed a station in Syracuse and the line went all the way to Nebraska’s capital city, Lincoln. The Missouri Pacific Railroad received 100 acres in 1869 to build the line through Syracuse. Once the railroad was put in, Syracuse became a major shipping point in the county. At this point, Omaha Public Power Department owns the Railroad. Nursery Hill’s two stores and post office were moved to this town and in 1872, the post office became “Syracuse” again. Incorporation was accomplished in January of 1875.

Syracuse also grew as an agricultural center. In 1878, over 350 cars of grain and 100 carloads of livestock were shipped from the station in Syracuse. The original town was built in the bottomland, near the tracks, but it gradually moved to the higher ground. By 1882, over 80 services were listed for Syracuse, including a carriage factory. A stone quarry was developed five miles east of Syracuse and some of its stone was used to build the state’s penitentiary in Lincoln. The opera house of Syracuse was a major attraction for citizens all over the county and moving pictures first appeared in 1901. By the early 1900s, a water system was in place, electricity was sought for the town, and paving the existing roads was being done. As the railroad era diminished, Syracuse did not.

---

## THE PURPOSE OF COMPREHENSIVE PLANNING

The Syracuse Comprehensive Development Plan (hereafter known as the Comprehensive Plan) is designed to promote orderly growth and development for the City. The Comprehensive Plan will provide policy guidelines to enable citizens and elected officials to make informed decisions about the future of the community

*The Plan acts as a tool to “Develop  
a road map that guides the community  
through change”*

The Comprehensive Plan will provide a guideline for the location of future developments within the planning jurisdiction of Syracuse. The Comprehensive Plan is intended to encourage a strong economic base for their community, so the goals of the community are achieved.

The Plan will assist Syracuse in evaluating the impacts of development (i.e. economic, social, fiscal, service and amenity provision, health, safety and welfare) and encourage appropriate land uses throughout the jurisdictional area of the City. The objective of planning is to provide a framework for guiding the community—whether a village, city, county, toward orderly growth and development. The Plan assists the City in balancing the physical, social, economic, and aesthetic features as it responds to private sector interests.

Planned growth will make Syracuse more effective in serving residents, more efficient in using resources, and able to meet the standard of living and quality of life every individual desires.

## THE PLANNING PROCESS

Planning begins with the collection of data in order to provide a snapshot of the past and present community conditions. Analyses of data provide the basis for developing forecasts for future land-use demands in the City.

The second phase of the comprehensive planning process is the development of general goals and policies. These are practical guidelines for improving existing conditions and guiding future growth. The Comprehensive Plan is a vision presented in text, graphics and tables that represent the desires of the community for the future.

The Comprehensive Plan represents a blueprint designed to identify, assess, and develop actions and policies in the areas of population, land use, transportation, housing, economic development, community facilities, and utilities. The Comprehensive Plan contains recommendations that when implemented will be of value to the community and its residents.

Implementation is the final phase of the process. A broad range of development policies and programs are required to implement the Comprehensive Plan. The Comprehensive Plan identifies the tools, programs, and methods necessary to carry out the recommendations. Nevertheless, the implementation of the development policies contained within the Comprehensive Plan is dependent upon the adoption of the Plan by the governing body, and the leadership exercised by the present and future elected and appointed officials of the community.



---

The Comprehensive Plan was prepared under the direction of the Syracuse Planning Commission with the assistance and participation of the Syracuse City Council, the Plan Review Committee and citizens of Syracuse. The planning time period for achieving goals, programs, and developments identified in the Syracuse Comprehensive Plan is twenty (20) years, that is, 2015 to 2035. However, the community should review the Comprehensive Plan annually and update the document in ten to fifteen years, or when a pressing need is identified. Updating the Comprehensive Plan will allow the community to incorporate ideas and developments that were not known at the time of the present comprehensive planning process.

## **COMPREHENSIVE PLAN COMPONENTS**

Nebraska State Statutes require the inclusion of certain elements in a Comprehensive Plan. State Statutes prescribes that a “Comprehensive Development Plan” consists of both graphic and textual material and is designed to accommodate anticipated long-range future growth. The Comprehensive Plan is comprised of the following components:

- A Community Profile,
- Community Facilities,
- Energy Element
- Community Goals and Policies,
- Environmental Analysis,
- Land Use Analysis,
- Transportation,
- Plan Implementation.

Analyzing past and existing demographic, housing, economic and social trends permit the projection of likely conditions in the future. Projections and forecasts are useful tools in planning for the future; however, these tools are not always accurate and may change due to unforeseen factors. Also, past trends may be skewed or the data may be inaccurate; creating a distorted picture of past conditions. Therefore, it is important for Syracuse to closely monitor population, housing and economic conditions that may impact the community. Through periodic monitoring, the community can adapt- and adjust-to changes at the local level. Adaptability to socio-economic change allows the community to maintain an effective Comprehensive Plan for the future; to enhance the quality of life and standard of living for all residents.

The Comprehensive Plan documents where Syracuse has come from, where it is now, and the likely direction it may be heading in the future. The Comprehensive Plan is not a static document, but should evolve as changes in the land-use, population or local economy occur during the planning period. The Comprehensive Plan is a management tool for community leaders to base their decision-making process upon when considering future developments. These decisions will assist Syracuse in achieving their physical, social, and economic goals.

---

## **GOVERNMENTAL AND JURISDICTIONAL ORGANIZATION**

The City of Syracuse functions under a Mayor/Council form of government for cities. The governmental functions of Syracuse, Nebraska are provided and coordinated by the City Council, comprised of four (4) elected officials, plus an elected Mayor.

The planning and zoning jurisdiction for Syracuse includes the area within one-mile of their corporate limits, as written under the authority of Section 16-902, Nebraska Revised Statutes, 1943 (as amended). As the community grows and annexes land into their corporate limits, their extraterritorial jurisdictions will extend further into the County.

---

**COMMUNITY ASSESSMENT:  
CONDITIONS AND TREND ANALYSIS**  
*(UPDATED 2015)*

---

## COMMUNITY ASSESSMENT: CONDITIONS AND TREND ANALYSIS

Population statistics aid in developing a picture for Syracuse and Otoe County. It is important for Syracuse to understand where it has been and in which direction it appears to be going. Population is the driving force behind housing, the economy, employment and fiscal stability of communities and counties. Historic population conditions assist in developing demographic projections, which in turn assist in determining future housing, retail, medical, employment and educational needs within the City. Projections provide an estimate for the City from which to base future land-use and development decisions. However, population projections are only estimates and unforeseen factors may effect projections significantly.

### POPULATION TRENDS AND ANALYSIS

Table 1 indicates the population for the incorporated communities, including Syracuse, in Otoe County, the unincorporated areas and Otoe County between 1970 and 2010. This information provides the residents of Syracuse a better understanding of past and present trends regarding the population changes within the City and County. The 1970 population in Syracuse was 1,562 persons, increasing to 1,638 in 1980, a change of 4.9%. Syracuse's population in 1990 amounted to 1,646 persons, which is an increase of 8 persons or 0.5% from 1980. Since 1990, growth has continued with the population increasing by 3.1% or to 1,697 persons in 1998. The period between 2000 and 2010 saw an increase in population of 10.22%, with the current population at 1,942. Overall, between 1970 and 2010, the population of Syracuse has increased by 380 persons or 24.33 %.

**TABLE 1: POPULATION TRENDS, OTOE COUNTY & COMMUNITIES, 1970 TO 2010**

Community	1970	1980	% Change 1970 to 1980	1990	% Change 1980 to 1990	2000	%Change 1990 to 2000	2010	% Change 2000 to 2010	% Change 1970 to 2010
Burr	108	101	-6.50%	75	-25.70%	66	-12%	57	-13.64%	-47.22%
Douglas	175	207	18.30%	199	-3.90%	231	16.08%	173	-25.11%	-1.14%
Dunbar	252	216	-14.30%	171	-20.80%	237	38.60%	187	-21.10%	-25.79%
Lorton	47	47	0.00%	47	0.00%	39	-17.02%	41	5.13%	-12.77%
Nebraska City	7,441	7,127	-4.20%	6,547	-8.10%	7,228	10.40%	7,289	0.84%	-2.04%
Otoe	204	197	-3.40%	196	-0.50%	217	10.71%	171	-21.20%	-16.17%
Palmyra	386	512	32.60%	545	6.40%	546	0.18%	545	-0.18%	41.19%
<b>Syracuse</b>	<b>1,562</b>	<b>1,638</b>	<b>4.90%</b>	<b>1,646</b>	<b>0.50%</b>	<b>1,762</b>	<b>7.05%</b>	<b>1,942</b>	<b>10.22%</b>	<b>24.33%</b>
Talmage	285	246	-13.70%	246	0.00%	268	8.94%	233	-13.06%	-18.25%
Unadilla	271	291	7.40%	294	1.00%	342	16.32%	311	-9.06%	14.76%
Otoe County	15,576	15183	-2.50%	14,252	-6.10%	15,396	8.03%	15,740	2.23%	1.05%

Source: U.S. Census Bureau, Census of Population and Housing, 1970 - 2010

Otoe County had been seeing a declining population since 1970; however, the trend appears to have reversed during the last 15-20 years. Otoe County had a population of 15,576 people in 1970 and this population decreased to 15,183 persons in 1980 or -2.5%. Otoe County's population in 1990 amounted to 14,252 persons, which is a change of -931 persons from 1980. During the period of 1990 through 2000 the population increased to 14,787, a change of 535 persons. And from 2000 to 2010 the county population increased once again 2.23%, or 344 persons. During the 40 years shown in Table 1, the county's greatest change has occurred in the unincorporated areas of the county. Prior to 2000 the county saw a population decline of 8.5%. Since 2000, the population has met, and exceeded the 1970 total.

---

## MIGRATION ANALYSIS

Migration Analysis will allow Syracuse to better understand the specific dynamics that are influencing population change. Migration indicates the population size that has migrated into or out of the City. Migration is the remaining number of individuals after the natural change (i.e. births minus deaths) is subtracted from the total change in population. Table 2 shows the total change in population for Syracuse for each decade between 1980 and 2010. A negative number in the “Total Migration” column indicates the number of persons that have migrated out of the City, while a positive number indicates the number of persons that have migrated into the City.

**TABLE 2: MIGRATION ANALYSIS, SYRACUSE, 1980 TO 2010**

Syracuse	Total Change (persons)	Natural Change (persons)	Total Migration (persons)
1980-1990	-580	-75	-505
1990-1998	292	-184	476
2000-2010	180	38	142

Source(s): U.S. Census Bureau, Census of Population and Housing, 1960 - 1990, 1998, 2000-2010;  
Nebraska Department of Health and Human Services System, Vital Statistics Report(s), 1960 -1998, 2002-2012

The data in Table 2 indicate that over the past 30 years the population changes in Syracuse have been driven by two factors. From 1980 to 1990, the overall change was affected by both a negative natural change within the population (deaths exceeding births) and a significant amount of out-migration. Between 1990 and 1998 the overall change became positive. The change was a combination of a negative natural change (deaths still exceeding births) but the out-migration became in-migration with 476 people moving into Syracuse. The period of 2000 through 2010 saw net-positive numbers in both natural and migration change in Syracuse. The result was a population increase of 180 persons.

## AGE STRUCTURE

Age structure is an important component of population analysis. By analyzing age structure, one can determine which age cohorts within Syracuse are being affected by population shifts and changes. Each age cohort affects the population in a number of different ways. For example, the existence of a larger number of young cohorts (20-44 years) has a greater ability to sustain future population growth rather than a predominance of older cohorts. The data are analyzed in two ways, within Table 3; the first looks at the number of persons in each age cohort in 2000 and compares that number to the number of persons in the same age cohort in 2010. The second notes each age cohort, in 2000, and then examines that same cohort as it ages over the ten-year period.

**TABLE 3: AGE-SEX CHARACTERISTICS, SYRACUSE, 2000 TO 2010**

Age	2000		2010		2000-2010		2000-2010	
	Number	% of Total	Number	% of Total	Net Change	% Change	Cohort Change	% Change
0-4	101	5.70%	144	7.40%	43	42.57%	144	N/A
5-9	99	5.60%	116	6.00%	17	17.17%	116	N/A
10-14	109	6.20%	107	5.50%	-2	-1.83%	6	5.94
15-19	91	5.20%	116	6.00%	25	27.47%	17	17.17
20-24	67	3.80%	66	3.40%	-1	-1.49%	-43	-39.45
25-34	174	9.90%	194	10.00%	20	11.49%	36	39.56
35-44	225	12.80%	216	11.10%	-9	-5.17%	42	62.69
45-54	170	9.60%	242	12.50%	72	42.35%	17	9.77
55-64	140	7.90%	176	9%	36	25.71%	6	2.67
65-74	222	12.60%	169	8.70%	-53	-23.87%	29	17.06
75-84	232	13.20%	206	10.60%	-26	-11.21%	-16	-11.43
85+	132	7.50%	190	9.80%	58	43.94%	-42	-18.92
Total	1762	100%	1942	100.00%	180	10.22%	312	134.48

2000		2010	
Total 19 yrs and Under	400	Total 19 yrs and Under	483
% of total population	22.70%	% of total population	24.87%
Total 65 yrs and older	586	Total 65 yrs and older	565
% of total population	33.30%	% of total population	29.09%
Median Age	45.8	Median Age	45.5
Total females	957	Total Females	1,050
Total Males	805	Total Males	892
Total Population	1,762	Total Population	1,942

Source: U.S. Census Bureau, Census of Population and Housing, 2000, 2010

The cohort change in Table 3 indicates the population increased from 2000 to 2010 and was weighted towards children born after 2000. Increases in the cohorts occurred in most age groups between 2000 and 2010. Most notably, Syracuse experienced growth in the important age groups between ages 25 and 44. A population in this age range is important to growing and sustaining families in a community.

Increase in Cohorts				
2000 Age Cohort	Number	2010 Age Cohort	Number	Change
NA	NA	0-4	144	144
NA	NA	5-9	116	116
0-4	101	10-14	107	6
5-9	99	15-19	116	17
15-24	158	25-34	194	36
25-34	174	35-44	216	42
35-44	225	45-54	242	17
45-54	170	55-64	176	6
65-74		75-84	206	29
<b>Total Change</b>			<b>+413</b>	

---

Decreases in the cohorts occurred in a few age groups between 2000 and 2010, these cohort shifts were:

<b>Decrease in cohorts</b>				
2000 Age Cohort	Number	2010 Age Cohort	Number	Change
10-14	109	20-24	66	-43
65-74	222	75-84	206	-16
75-84	232	85+	190	-42
<b>Total Change</b>				<b>-101</b>

There was a loss of 58 elderly persons in Syracuse during this period. Some of the elderly declines were likely due to two factors: 1) relocation to different locations for either climate or health facilities reasons, or 2) the mortality rate of these age cohorts tends to be higher than most other cohorts. The decreases in population of select age groups were more than offset by increases in the majority of age groups. In order to ensure continued growth within Syracuse, the community needs to identify strategies to continue to attract the younger age cohorts back to the City after they have completed their advanced education. This will provide the ability to further increase future births, which will allow the future population to stabilize and grow.

#### **POPULATION PROJECTIONS**

Population projections allow Syracuse, if all things stay equal, to estimate what the population will be in future years. Projections are estimates based upon present day and past circumstances. A number of factors (demographic, economic, social, etc.) may affect projections positively or negatively. At the present time, these projections are the best crystal ball Syracuse has for predicting future population changes.

#### ***Trend Line Analysis***

Trend line analysis is a process of projecting future populations based upon changes during a specified period of time. In the analysis of Syracuse, three different trend lines were reviewed; 1960 to 1998 (estimate), 1980 to 1998 (estimate) and 1990 to 1998 (estimate). Review of these trend lines indicates Syracuse will continue to increase in population through 2030. The following projections summarize the decennial population for Syracuse through 2030:

<b>Year</b>	<b>Trend: 1960 to 1998</b>	<b>Trend: 1980 to 1998</b>	<b>Trend: 1990 to 1998</b>
2020	2,118 persons	2,331 persons	2,017 persons
2030	2,310 persons	2,798 persons	2,095 persons

---

### ***Cohort Survival Analysis***

Cohort survival analysis reviews a population by different age groups and sex. The population age groups are then projected forward by decade using survival rates for the different age cohorts. This projection model accounts for average birth rates by sex and adds the new births into the future population.

The Cohort Survival Model projection indicates Syracuse's population may experience steady growth through 2040. While projections are based on birth and mortality rates that are not readily available for the community, the statewide figures were utilized to provide population estimates. The following projection is based on applying the survival rates for age cohorts, but does not consider the effects of in-migration or out-migration:

<b>Year</b>	<b>Cohort Survival Model</b>
2020	2019 persons
2030	2099 persons
2040	2182 persons

### **Regional Growth Model**

The original basis for completing this model for Syracuse was the construction of the 960-bed Tecumseh State Correctional Institution. Tecumseh is located approximately 25 miles south of Syracuse and Syracuse may have experienced an increase in demand for residences and public services and public infrastructure due to the additional employment opportunities in Tecumseh. The \$74 million correctional facility, opened in 2001, created a reported 503 prison jobs. According to the Nebraska Department of Correctional Services, an estimated one-quarter or about 110 employees of the workforce of the Tecumseh State Correctional Institution came from existing personnel, while the remainder were new employees not employed by the Department of Correctional Services at the time.

The following model has been developed to estimate the likely population and employment impacts related to specific and general activities occurring in southeastern Nebraska during the next 10 to 20 years. Determining the scope of all population and economic impacts is difficult, especially in the case where the close proximity to two metropolitan areas hinders delineating all the impacts Johnson and Otoe County may feel. Local residents of Syracuse who are commuting farther than 20 minutes may decide to pursue new career opportunities. The outcome of the Regional Growth Models may be used to assist Syracuse in determining impacts on housing, education, infrastructure and the local economy.

Previous experiences of communities with similar developments indicated local population growth would lag at the startup of the correctional facility operations. Evidence suggests employees begin commuting to work from their established residences, and after one to three years of commuting, tend to move closer to their place of employment. A rule of thumb determined from past knowledge suggests that in the first year of operations, 50% to 60% of employees will live within 30 miles of the facility, but by the fourth year of operations, 80% to 85% will live within a 30 mile radius. Thus, the prison being built in Tecumseh potentially impacted Syracuse in several ways.



---

Occurrences from other locales suggests approximately 50% of the new employment may reside in Johnson or Otoe County by the end of the fifth year of the correctional facility becoming operational, or by 2006.

The number of new residents in Syracuse derived directly from the correctional facility is difficult to quantify or measure; however, the plan looks at a continued 1.5% and 2.0% growth rate for Syracuse. This plan looks at these two figures because of Syracuse's location on Nebraska Highway 50 and Nebraska Highway 2 and its close proximity to Lincoln, Omaha and Tecumseh. The following model utilizes the 1.5% and 2.0% scenario to determine likely population outcomes, based on 2010 population levels.

1.5% Growth Model

Year

2010	1942
2020	2254
2030	2654

2.0% Growth Model

Year

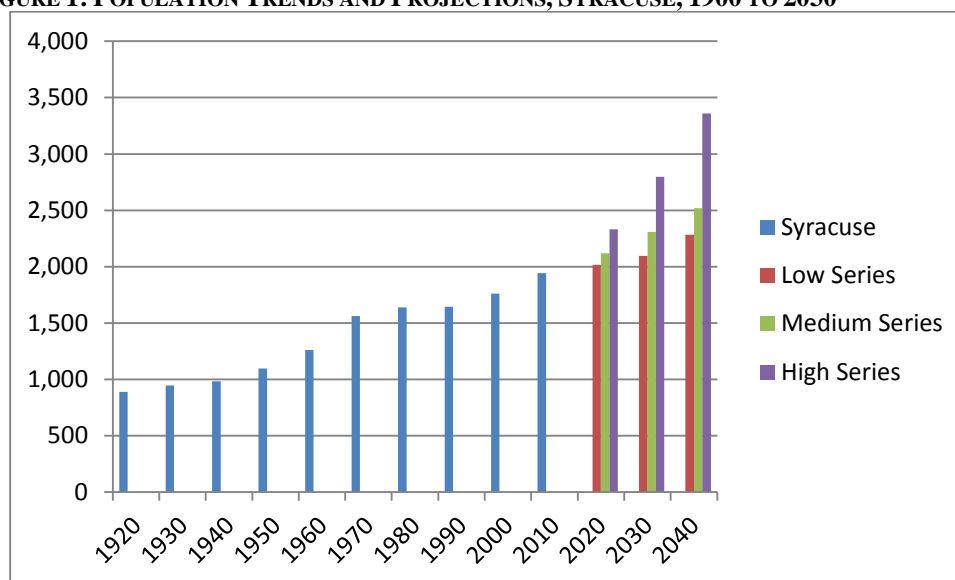
2010	1942
2020	2331
2030	2798

***Summary of Population Projections***

Using the modeling techniques discussed in the previous paragraphs, a summary of the three population projections for Syracuse through the year 2040 are shown in Figure 1. Three population projection scenarios were developed and include (1) a Low Series; (2) a Medium Series; and, (3) a High Series. The following population projections indicate the different scenarios that may be encountered by Syracuse through the year 2040:

Year	Low Series=1990-98	Medium Series = 1960-98	High Series = 2.0% Model
2010	1942 persons	1942 persons	1942 persons
2020	2017 persons	2118 persons	2331 persons
2030	2095 persons	2310 persons	2798 persons
2040	2284 persons	2520 persons	3358 persons

**FIGURE 1: POPULATION TRENDS AND PROJECTIONS, SYRACUSE, 1900 TO 2030**



Source: U.S. Census Bureau, Census of Population and Housing, 1900-2010

Figure 1 indicates that the 2010 population estimate, for Syracuse, was the community's peak population. The Figure also indicates the Low-, Medium-, and High-Series projections for the years 2020, 2030, and 2040. Each projection indicates the population in Syracuse will continue to grow through the planning period.

## HOUSING PROFILE

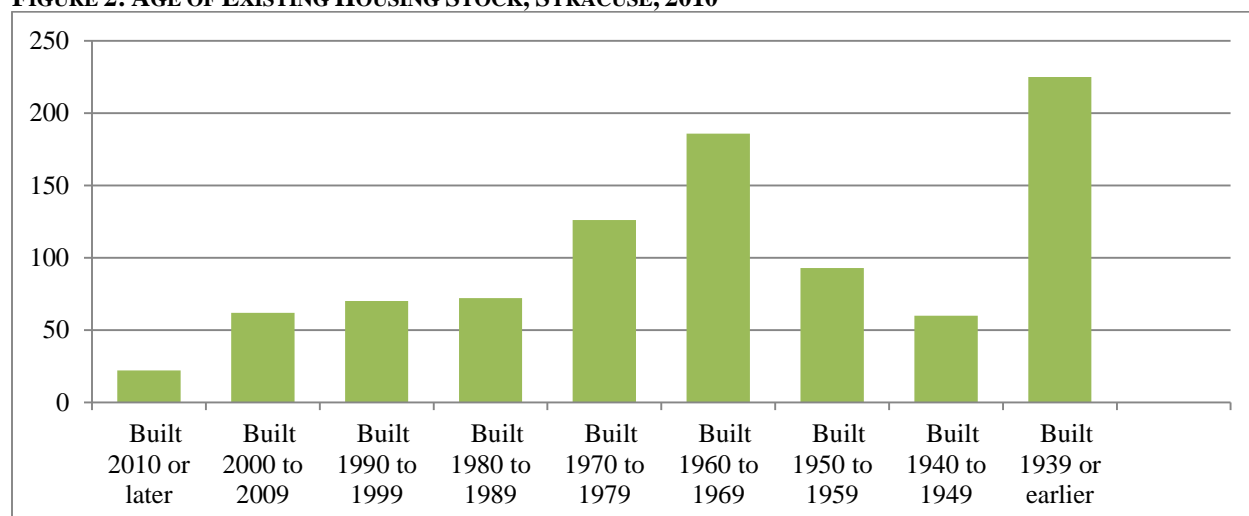
The Housing element of the Comprehensive Development Plan identifies existing housing characteristics and projected housing needs for residents of Syracuse. A primary goal of the City should be to provide safe, decent, sanitary and affordable housing for every family and individual residing within Syracuse. The housing profile for Syracuse is analyzed to determine the composition of owner-occupied, renter-occupied, and the existence of vacant units. It is also important to evaluate information on the value of owner-occupied housing units, and monthly rents for renter-occupied housing units, to determine if housing costs are a financial burden to Syracuse residents.

To project future housing needs, several factors must be considered. These factors include population change, household income, employment, land use, and residents' attitudes. The following tables and figures will provide the information that will aid in determining future housing needs and direct policies that are designed to accomplish the housing goals for Syracuse.

### AGE OF EXISTING HOUSING STOCK

The age of Syracuse's housing stock may reveal a great deal about population and economic conditions of the past. The age of the housing stock may also indicate the need for rehabilitation efforts, or new construction within the City. Examining the housing stock is important in order to understand the overall quality of housing and the quality of life in Syracuse.

**FIGURE 2: AGE OF EXISTING HOUSING STOCK, SYRACUSE, 2010**



Source: U.S. Census Bureau, Census of Population and Housing, 2000

Figure 2 indicates that 199 or 25.0% of Syracuse's total 797 housing, as of 2000, were constructed prior to 1940. This indicates that one-fourth of Syracuse's housing stock was 70 years old in 2010. In addition, housing in this age group tends to be in need of rehabilitation or removal; however, this is not always the case. Between 1940 and 1979, Syracuse saw new housing construction add 480 homes or 60.2% of the total housing stock as of 2000 data. During this period, Syracuse also saw an increase of 656 persons in the community. This growth equaled 1.37 persons per household. Between 1970 and 1979, construction booms were the norm throughout Nebraska. Finally, from 1980 to March of 1990, the amount of construction decreased to 72 units; this too, was typical in Nebraska. It will be important to monitor the older homes in the future in order to keep them from becoming in disrepair.

## HOUSING TRENDS

Table 4 reviews data regarding the housing composition of Syracuse. Table 4 includes information on the population living in households and group quarters; the amount of owner- and renter-occupied housing vs. total housing units; the composition of housing types; and the change in the median contract rent and median value of owner-occupied units. All the data is for 2000 and 2010.

**TABLE 4: COMMUNITY HOUSING TRENDS, SYRACUSE, 2000 AND 2010**

<b>Selected Characteristics</b>		<b>2000</b>	<b>2010</b>
Total Population		1762	1942
In households		1677	1864
in group quarters		85	78
Person per household		2.22	2.31
Total housing units		798	861
Occupied housing units		754	829
Owner occupied units		573	563
Renter occupied units		181	266
Vacant housing units		44	32
homeowner vacancy rate		1.90%	0.00%
Rental vacancy rate		4.70%	3.60%
Single family Units		676	730
duplex/multifamily		94	141
mobile home		22	35
Median Rent - 2000-2010		2000	2010
Syracuse		395	489
Nebraska		491	648
Median Value of Owner-Occupied Units		2000	2010
Syracuse		\$81,400	\$109,800
Nebraska		\$88,000	\$123,900

Source: U.S. Census Bureau, Census of Population and Housing, STF-1A, 1980, 1990

Table 4 indicates that in 2000 there were 1,762 persons living in households, increasing to 1,942, in 2010, a change of 10.2%. During the same period, the number of persons in group-quarters decreased from 85, in 2000, to 78, in 2010 or -8.2% for the time period. From 2000 to 2010, the number of persons per household increased from 2.22 to 2.31. Typically, a decrease is the norm for communities in Nebraska. This change was due primarily to the increasing number of households with children.

In 2000, Syracuse had 798 total housing units. Of the 798 housing units, 754 were occupied, leaving 44 units vacant. Of the 754 occupied units, 573 were owner-occupied or 76.0%. The remaining occupied units were renter occupied. By 2010, the total number of housing units increased to 861 units. Of the total housing units in Syracuse, 829 were occupied leaving 32 as vacant. Of the occupied units, 563 or 67.9% were owner-occupied. This left 266 units or 32.1% as renter-occupied. The number of housing units developed or converted to renter occupied increased substantially over the 10-year period.

Table 4 also examines the Median Contract Rent and the Median Value of Owner-occupied units for 2000 and 2010. In 2000, the Median Contract Rent, in Syracuse, was \$395 per month, by 2010 the Median Contract Rent increased by 23.8% to \$489 per month. The increase in the Median Contract Rent is compared to the Consumer Price Index (CPI) for the United States from 2000 to 2010. The increase in the CPI was 26.6% for this period. Therefore, the

Median Contract Rent for Syracuse increased at a slower rate than the CPI, meaning renters in Syracuse were paying less in real dollars in 2000 than in 2010. In addition, the increase in the Median Contract Rent for Syracuse was less than the increase for the State of Nebraska.

The final item to review in Table 4 is the change in the Median Value of Owner-Occupied Units. The Median Value of Owner-Occupied Units, in 2000, was \$81,400. By 2010, the median housing values had increased to \$109,800, an increase of 34.9%. Comparing this increase to the change in the CPI of 26.6%, it can be determined that median housing values increased; in terms of real dollars.

Table 5 examines the number of persons in a household and compares the composition of owner- and renter-occupied units. Table 5 indicates 424 owner-occupied households of the total 592 owner-occupied units or 71.6% contained one or two persons in the household. This indicates several conditions; 1) the households containing one person were likely elderly individuals, 2) the number of two person households is likely a mixture of elderly and younger couples with first-time homebuyers. This is further supported by the data contained in Table 5, where a large number of owner-occupied households contained individuals 55 years old or older.

In 2010, 196 renter-occupied households comprised of one- or two-persons, making up 77.5 % of the total renter-occupied households. The age compositions of renter-occupied units were mixed. There were 52 units or 20.6% of the total renter-occupied units that had individuals 34 years old or younger living in the unit. In addition, there were 101 units or 39.9% of the renter-occupied units with individuals 65 years old or older. Therefore, age groups living in renter-occupied households were more diverse.

**TABLE 5: TENURE OF HOUSEHOLD BY SELECTED HOUSING CHARACTERISTICS, 2010**

Household Characteristic	Owner-occupied	% O.O.	Renter-occupied	% R.O.
Tenure by Age of Householder				
15 to 24 years	3	0.51%	16	6.32%
25 to 34 years	64	10.81%	36	14.23%
35 to 44 years	88	14.86%	34	13.44%
45 to 54 years	109	18.41%	43	17.00%
55 to 64 years	76	12.84%	23	9.09%
65 years and older	252	42.57%	101	39.92%
<b>Total</b>	<b>592</b>	<b>100.00%</b>	<b>253</b>	<b>100.00%</b>
Tenure by Household Size				
1 person	163	27.53%	144	56.92%
2 persons	261	44.09%	52	20.55%
3 persons	57	9.63%	18	7.11%
4 persons	70	11.82%	18	7.11%
5 persons	26	4.39%	14	5.53%
6 persons	9	1.52%	3	1.19%
7 or more persons	6	1.01%	4	1.58%
<b>Total</b>	<b>592</b>	<b>100.00%</b>	<b>253</b>	<b>100.00%</b>

Source: U.S. Census Bureau, Census of Population and Housing, STF-1, 2010

Table 6 examines specific housing conditions and calculates the number of substandard housing units based upon standards established by the United States Department of Housing and Urban Development (HUD). HUD identifies

substandard conditions, by adding the number of units lacking complete plumbing facilities and the number of units having more than one-person per room. The data in Table 6 are identified in the U.S. Census for 1980 and 1990. However, the amount of substandard units is based on the 1990 U.S. Census.

Table 6 indicates from 2000 to 2010, the total number of housing units, in Syracuse, increased from 797 to 861 respectively. This was a change of 64 or 6.4 units per year. In 2012, there were an estimated 845 occupied units in Syracuse, of those occupied units 8 units lacked complete plumbing facilities and no units had more than 1.00 persons per room. These numbers indicate that less than 1% of occupied housing units in Syracuse are substandard by HUD definitions.

**TABLE 6: SELECTED HOUSING CONDITIONS – SYRACUSE, 2000 - 2012**

Inventory Change Profile		Syracuse	
2010 Total Housing Units		861	
2000 Total Housing Units		797	
Change in Number of Housing Units between 2000-2010			
Total Units		64	
Annual Units		6.4	
2012 total housing units-Plumbing Facilities & Overcrowded Units			
Occupied Housing Units		845	
Lacking Complete Plumbing Facilities		8	
Units with 1.01 persons or more per room		0	
Substandard Housing Units		8	

\*Substandard housing is defined by the U.S. Department of Housing and Urban Development as (1) lacking complete plumbing facilities; and, (2) with more than 1.01 persons or more per room.

Sources: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1980, 1990; American Community Survey, 2012

## FUTURE HOUSING NEEDS

This section reviews future housing needs based upon the Low-, Medium-, and High-Series population projections. The projected housing needs, in Table 7, assume the 2010 composition of owner-occupied and renter-occupied units will remain approximately the same, as well as, the persons per household for both owner and renter-occupied units. The total land required is based upon average size building lots for single-family and multi-family dwellings. Based upon these assumptions, the following acreage requirements are required to meet housing needs for Syracuse between 2020 and 2040.

Based upon the population projections for Syracuse, there will be a demand for a significant amount of new single-family and multi-family dwelling units in the community. The projected housing requirements are only for new construction relative to new residents, and do not include any replacement housing, including deteriorating and/or dilapidated units, needed by existing residents. In addition, each projection series reviews the approximate amount of land needed to accommodate the residential uses associated with community growth. The land area requirements assume the following:

- a minimum of 7,500 square feet of lot area per new owner-occupied dwelling; and,
- a minimum of 4,000 square feet of lot area per renter-occupied dwelling.

The Low Series population projection forecasts a demand for 29 new owner-occupied units and 14 renter-occupied units by 2020. This new housing will require approximately 6.28 new acres for the residential uses.

The Medium Series population projection forecasts a demand for 59 new owner-occupied dwelling units and 28 renter-occupied dwelling units by 2020. This demand will require a total of 12.73 new acres of land developed into residential uses.

The High Series population projection forecasts a demand for 122 new owner-occupied dwelling units and 57 renter-occupied units by 2020. These new units will require approximately 26.24 new acres of land developed to accommodate this growth.

**TABLE 7: PROJECTED HOUSING NEEDS, SYRACUSE**

	Low Series Projection	Medium Series Projection	High Series Projection
2020			
New Owner Occupied Units	29	59	122
New Renter-Occupied Units	14	28	57
2030			
New Owner Occupied Units	23	57	137
New Renter-Occupied Units	11	26	65
2040			
New Owner Occupied Units	27	61	164
New Renter-Occupied Units	26	30	78
Totals			
New Owner Occupied Units	79	177	423
New Renter-Occupied Units	51	84	200

Source: JEO Consulting Group, Inc., 2014

## ECONOMIC AND EMPLOYMENT PROFILE

Economic data are collected in order to understand area markets, changes in economic activity and employment needs and opportunities in Syracuse. In this section, household income statistics are reviewed for Syracuse and Nebraska. Employment by industry and basic/non-basic analyses is performed to better understand the economic forces at work in Syracuse.

### INCOME STATISTICS

Income statistics for households are important in determining the earning power of the households in a community. The data will indicate household income levels in comparison with the State. In addition, these data sets are

reviewed to determine whether households are exhibiting income increases at a rate that is comparable to the Consumer Price Index (CPI).

**TABLE 8: HOUSEHOLD INCOME, SYRACUSE, 2000-2012**

2000	Number	Percent	2012	Estimate	Margin of Error	Percent	% Margin of Error
Total households	713		Total households	861	+/-80	100	(X)
Less than \$10,000	61	8.6	Less than \$10,000	79	+/-41	9.2%	+/-4.6
\$10,000 to \$14,999	59	8.3	\$10,000 to \$14,999	54	+/-36	6.3%	+/-4.0
\$15,000 to \$24,999	101	14.2	\$15,000 to \$24,999	169	+/-66	19.6%	+/-7.0
\$25,000 to \$34,999	111	15.6	\$25,000 to \$34,999	96	+/-43	11.1%	+/-4.9
\$35,000 to \$49,999	138	19.4	\$35,000 to \$49,999	96	+/-36	11.1%	+/-4.4
\$50,000 to \$74,999	134	18.8	\$50,000 to \$74,999	118	+/-41	13.7%	+/-4.9
\$75,000 to \$99,999	58	8.1	\$75,000 to \$99,999	138	+/-47	16.0%	+/-5.4
\$100,000 to \$149,999	39	5.5	\$100,000 to \$149,999	77	+/-35	8.9%	+/-3.9
\$150,000 to \$199,999	6	0.8	\$150,000 to \$199,999	5	+/-8	0.6%	+/-0.9
\$200,000 or more	6	0.8	\$200,000 or more	29	+/-16	3.4%	+/-1.9

Source: U.S. Census Bureau, Census of Population and Housing, 2000, 2010

Table 8 reviews household income in Syracuse and the State of Nebraska for 2000 and 2012. Because the 2010 Census did not include economic data, figures were derived from 2012 estimates, the most recent data available. The table indicates that the number of households earning less than \$15,000.00 increased over the 12-year period. Conversely, the number of households earning more than \$150,000 also increased.

**TABLE 9: HOUSEHOLD INCOME BY AGE**

Income Categories	Under 25 years	25 to 44 years	45 to 64 years	Over 65 years	<u>All Households</u>	% of total Households
Less than \$10,000	4	26	5	44	<b>79</b>	9.2%
\$10,000 to \$14,999	0	0	0	54	<b>54</b>	6.3%
\$15,000 to \$19,999	0	14	13	43	<b>70</b>	8.1%
\$20,000 to \$24,999	0	67	13	19	<b>99</b>	11.5%
\$25,000 to \$29,999	0	16	14	18	<b>48</b>	5.6%
\$30,000 to \$34,999	6	7	6	29	<b>48</b>	5.6%
\$35,000 to \$39,999	0	0	10	10	<b>20</b>	2.3%
\$40,000 to \$44,999	0	19	7	5	<b>31</b>	3.6%
\$45,000 to \$49,999	0	13	13	19	<b>45</b>	5.2%
\$50,000 to \$59,999	0	22	23	8	<b>53</b>	6.2%
\$60,000 to \$74,999	0	13	41	11	<b>65</b>	7.5%
\$75,000 to \$99,999	11	36	50	41	<b>138</b>	16.0%
\$100,000 to \$124,999	6	11	23	3	<b>43</b>	5.0%
\$125,000 to \$149,999	0	28	6	0	<b>34</b>	3.9%
\$150,000 to \$199,999	0	0	0	5	<b>5</b>	0.6%
\$200,000 or more	0	0	27	2	<b>29</b>	3.4%
<b>Total</b>	<b>27</b>	<b>272</b>	<b>251</b>	<b>311</b>	<b>861</b>	100.0%

Source: U.S. Census Bureau, American Community Survey (ACS), 2008-2012 Estimates

Table 9 examines Household Income in Syracuse based on age of the householder. The majority of the workforce population (age 25 to 64 years) households earned \$75,000 to \$99,000 annually.



Table 9 indicates that 9.2% of all households earned less than \$10,000. The majority of those earning less than \$10,000 are aged over 65 years and likely to be out of the workforce. Thus, a major proportion of the households earning \$10,000.00 or less were in their later years of life and living on fixed incomes.

**TABLE 10: SPECIFIED OWNER AND RENTER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME, SYRACUSE, 2012**

Income Categories	Owner-Occupied Households	% O.O Housholds	Renter Occupied Households	% R.O Households	Total Households	% of Total Households
Less than \$ 20,000	101		94			
Less than 30 % of income	34	6.0%	0	0.0%	34	4.0%
More than 30% of income	67	11.8%	94	33.0%	161	18.9%
\$20,000 to \$34,999	90		105			
Less than 30% of income	63	11.1%	15	5.3%	78	9.1%
30 percent or more	27	4.8%	90	31.6%	117	13.7%
\$35,000 to \$49,999	68		28			
Less than 30 percent	62	10.9%	17	6.0%	79	9.3%
30 percent or more	6	1.1%	11	3.9%	17	2.0%
\$50,000 to \$74,999:	101		17			
Less than 30 percent	101	17.8%	17	6.0%	118	13.8%
30 percent or more	0	0.0%	0	0.0%	0	0.0%
\$75,000 or more:	208		41			
Less than 30 percent	208	36.6%	41	14.4%	249	29.2%
30 percent or more	0	0.0%	0	0.0%	0	0.0%
Total	568	100%	285	100%	853	100%

Source: American Community Survey 2012

Table 10 examines owner and renter costs as a percentage of the household income. The intention of this table is to determine the amount of households in each category that have a housing cost burden. The definition of housing cost burden, per the U. S. Department of Housing and Urban Development (HUD), is when the ratio of total housing costs to income is equal or greater than 30%.

Table 10 indicates that there were an estimated total of 568 owner-occupied households in 2012. Of the 568 owner-occupied households, 100 or 17.6% had a housing cost burden. Of the 100 households indicating a housing cost burden, 67 households were earning less than \$20,000 per year. Therefore, the vast majority of the housing cost burden for owner-occupied households was in the lower income levels and this condition should improve as these households begin to earn more.

The renter-occupied households in Syracuse totaled 285 units. Of the 285 renter-occupied households, 195 or 68.4% indicated a housing cost burden. Of the 195 renter-occupied households showing a housing cost burden, 94 or 48.2%

indicated income levels of less than \$20,000 annually. Another 90 renter-occupied households, or 46.2%, show a cost burden and earn between \$20,000 and \$34,999. Therefore, similar to owner-occupied households, as households begin earning more income their ability to eliminate their housing burden is greater. Table 11 indicates that there were 295 total households or 34.6% that indicated a housing cost burden.

**TABLE 11: OWNER AND RENTER COSTS BY AGE OF HOUSEHOLDER AS A PERCENTAGE OF HOUSEHOLD INCOME, SYRACUSE, 2012**

Housing Cost Analysis	Owner-Occupied Households	% O.O Households	Renter Occupied Households	% R.O Households	Total Households	% of Total Households
Less than 30% of income	468	82.4%	90	31.58%	558	65.4%
More than 30% of income	100	17.6%	195	68.42%	295	34.6%
Total	568	100%	285	100%	853	100%

Source: American Community Survey, 2012

## INDUSTRY EMPLOYMENT

Analyzing employment by industry assists in determining key components of Syracuse's labor force. This section indicates the types of employment Syracuse residents were involved with during 2012. These estimates indicate the types of jobs held of local residents anywhere not just within the City of Syracuse. The data in Table 12 indicates employment size by industry for Syracuse and the State of Nebraska between 2000 and 2012.

**TABLE 12: EMPLOYMENT BY INDUSTRY, SYRACUSE, 2012**

Employment by Industry, Syracuse, 2012 Estimates										
INDUSTRY	Syracuse 2000		Syracuse 2012			Nebraska 2000		Nebraska 2012		
	Number	% of Total	Number	Margin of Error	% of Total	Number	% of Total	Number	Margin of Error	% of Total
Agriculture, forestry, fishing and hunting, and mining	24	3.10%	25	+/-16	2.8%	49,942	5.60%	44,737	+/-2,495	4.7%
Construction	76	9.80%	26	+/-20	2.9%	56,794	6.50%	62,939	+/-3,253	6.6%
Manufacturing	88	11.40%	112	+/-48	12.4%	107,439	12.20%	106,359	+/-5,690	11.1%
Wholesale trade	27	3.50%	10	+/-10	1.1%	31,265	3.60%	26,292	+/-2,376	2.7%
Retail trade	80	10.30%	69	+/-29	7.6%	106,303	12.10%	111,088	+/-4,420	11.6%
Transportation and warehousing, and utilities	43	5.60%	65	+/-34	7.2%	53,922	6.10%	53,617	+/-2,950	5.6%
Information	37	4.80%	11	+/-13	1.2%	21,732	2.50%	19,527	+/-1,996	2.0%
Finance and insurance, and real estate and rental and leasing	51	6.60%	53	+/-27	5.9%	67,370	7.70%	68,627	+/-3,158	7.2%
Professional, scientific, and management, and administrative and waste	23	3%	65	+/-46	7.2%	63,663	7.30%	78,173	+/-4,138	8.2%
Educational services, and health care and social assistance	162	20.90%	284	+/-68	31.5%	181,833	20.70%	222,530	+/-5,586	23.3%
Arts, entertainment, and recreation, and accommodation and food services	77	9.90%	78	+/-45	8.6%	63,635	7.30%	77,355	+/-4,065	8.1%
Other services, except public administration	41	5.30%	38	+/-25	4.2%	40,406	4.60%	42,929	+/-2,739	4.5%
Public administration	45	5.80%	67	+/-32	7.4%	33,933	3.90%	42,463	+/-2,551	4.4%
<b>Civilian employed population 16 years and over</b>	<b>774</b>	<b>100%</b>	<b>903</b>	<b>+/-99</b>	<b>100%</b>	<b>878,237</b>	<b>100%</b>	<b>956,636</b>	<b>+/-6,513</b>	<b>100%</b>

Source: American Community Survey, 2012

Table 12 indicates there were shifts in the employment sectors from 2000 to 2012. There were some sectors that had gains in employment while the remainder had losses. Overall, there was an increase in the number of persons living in Syracuse amounting to an estimated 34 persons. Therefore, the gains in some sectors were balanced with the losses in other industrial categories.

The greatest sector indicating a relative loss was in Construction with a loss of 50 jobs or a change of -6.9%. This change may be directly related to completion of the State Correctional Facility near Tecumseh. A sector that loss employment was the Arts, entertainment, and recreation and accommodation and food service sector, in Nebraska; this has been a sector that has shown some growth between 2000 and 2012.

---

There were more sectors showing an increase than those sectors exhibiting a loss between 2000 to 2012. The sectors showing the greatest gains were: Educational Services with 122 new jobs or 10.6% growth, Professional, scientific, and management, and administrative, and waste experienced a growth of 42 jobs, or 4.2% ..

Overall, the change in employment by industry, in Syracuse, amounted to a gain of 129 jobs or 16.8 %. Syracuse experienced job growth significantly higher than the state, which increased just 8.9% over the same period.

#### **WORKFORCE COMMUTER CHARACTERISTICS**

Workforce Commuter Population examines the number of employed persons within a given locale. This aids in determining how many are employed within their resident community and how many are employed outside the area or commute. Every person that commutes from the resident community has the potential to spend additional dollars outside their home area, thus, creating a greater leakage of retail dollars for the area. By providing employment opportunities within the community for the commuters, the area has a better chance of increasing the number of retail dollars kept in the community as opposed to having the dollars leak out of the local economy.

Table 13 shows commuter characteristics for residents of Syracuse. The size of Syracuse's commuter population is also included in the table. In 2000, 46.2% of the population in Syracuse worked in Syracuse; 53.8% worked outside of the City. 42.8% of the 2000 commuter population of Syracuse worked outside of Otoe County.

**TABLE 13: COMMUTER POPULATION, SYRACUSE 2000 TO 2010**

Place of Residence	Place of Work	2000	2010	% Change 2000 - 2010	% of 2000 Total	% of 2010 Total
Syracuse	In Syracuse	342	343	0.3%	46.2%	42.7%
	Outside Syracuse	398	460	15.6%	53.8%	57.3%
	Total	740	803	8.5%	100.0%	100.0%
	In Otoe County	423	398	-5.9%	57.2%	49.6%
	Outside Otoe County	317	405	27.8%	42.8%	50.4%
	Total	740	803	8.5%	100.0%	100.0%

Source: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1990, 2000

Table 14 indicates the travel time to work for each decade between 1980 through 2010, for those working and living in Syracuse. The average commute time for workers living in Syracuse has doubled over the 30-year period. Workers in places of employment in areas just outside of the community have dwindled while a large increase occurred in commuters traveling over 20 minutes.

**TABLE 14: TRAVEL TIME TO WORK, SYRACUSE, 1980 TO 2010**

Travel time to work	1980	1990	2000	2010	% Change 1980-2010
Less than 5 minutes	141	163	166	183	29.79%
5 to 9 minutes	298	260	176	160	-46.31%
10 to 19 minutes	92	110	81	55	-40.22%
20 to 29 minutes	39	55	91	118	202.56%
30 to 44 minutes	50	44	77	100	100.00%
45 to 59 minutes	26	55	124	121	365.38%
60 minutes or more	12	26	25	66	450.00%
<b>Total:</b>	674	729	740	<b>803</b>	
Mean travel time (minutes)	11.4	14	19.3	22.8	100.00%

Sources: U.S. Census Bureau, Census of Population and Housing, STF-3A, 1980, 1990, 2000, American Community Survey 2010

#### **SYRACUSE: REGIONAL BASIC/NON-BASIC ANALYSIS**

The following data examines six occupational areas that were established by the U.S. Census Bureau to evaluate trends in employment and the area economy. Blakely defines basic employment and non-basic employment in, “Planning Local Economic Development: Theory and Practice” as follows:

- Basic employment is associated with business activities that provide services primarily outside the area via sales of goods and services, but whose revenues are directed to the local area in the form of wages and payments to local suppliers<sup>1</sup>
- Non-Basic employment is primarily the sale of goods and services within the local area and the revenues re-circulating in the form of wages and payments.

This analysis is used to further understand which occupational areas are exporting goods and services outside the area, thus importing dollars into the local economy. This analysis is performed for Syracuse and compared to the State of Nebraska. The six occupational areas are listed below:

- Managerial and Professional specialty occupations
- Technical, sales and administrative support occupations
- Service occupations
- Farming, forestry, and fishing occupations
- Precision production, craft and repair occupations
- Operators, fabricators, and laborers

Table 15 indicates the work sector, the percent of basic employment, the percent of non-basic employment, and the percent of the State workforce in each occupational area. Subtraction of the State’s workforce in a particular occupation from Syracuse’s workforce for the same occupation determines which occupations are basic or non-basic. The occupations in Syracuse having a lower proportion than the same occupation Statewide would be

<sup>1</sup> Blakely, p. 297, Sage Publications, Newbury Park, 1989

---

considered to non-basic. Table 15 indicates the occupations(s) which are basic or non-basic in relation to the production of goods and services.

**TABLE 15: BASIC/NON-BASIC EMPLOYMENT, SYRACUSE, 2010**

Occupation Category	Basic	Non-Basic	% of Syracuse Workforce	% of State Workforce
Management, business, science, and arts occupations	0.0%	26.8%	26.8%	34.8%
Service occupations	5.4%	16.2%	21.6%	16.2%
Sales and office occupations	0.0%	24.8%	24.8%	25.0%
Natural resources, construction, and maintenance occupations	2.3%	10.1%	12.4%	10.1%
Production, transportation, and material moving occupations	0.6%	13.8%	14.4%	13.8%

Economic Base Multiplier for Syracuse is 7.00

Source: American Community Survey, DP-1, 5 Year Estimates, 2010

In 2010, Syracuse had three work force sectors with Basic employment. These sectors were:

- Service occupations
- Natural resources, construction, and maintenance occupations
- Production, Transportation, and material moving occupations

Based upon the basic employment of the work force, the base multiplier is equal to 7.00. The base multiplier may be interpreted in two ways: first, the number can be interpreted to mean that every job tied to basic employment (exports) supports 7.00 jobs within the local economy. The second interpretation is that every dollar generated on the basic side of the economy generates 7.00 dollars in the local economy. The base multiplier has decreased from 7.86 in 1990.

The base multiplier indicates if one job or one dollar is lost on the basic side of the economy, then, there is a potential loss of 7.00 jobs or dollars locally. Therefore, Syracuse needs to continue to strive for a diverse economy with basic employment in as many sectors as possible. The more balanced the basic employment/economy is, the less likely the economy is to suffer if a major recession strikes in one or two sectors.

**TABLE 16: REGIONAL AND STATE LABOR FORCE COMPARISONS, SYRACUSE 2010**

Study Area	Occupation 1	Occupation 2	Occupation 3	Occupation 4	Occupation 5
<b>Syracuse</b>	<b>26.80%</b>	<b>21.60%</b>	<b>24.80%</b>	<b>12.40%</b>	<b>14.40%</b>
Otoe County	31.40%	13.90%	23.50%	11.50%	19.70%
Nebraska City	25.20%	14.40%	22.60%	10.90%	26.90%
Tecumseh	12.80%	18.70%	16.40%	29.00%	23.20%
Lancaster County	38.60%	16.40%	25.50%	8.20%	11.40%
Cass County	33.50%	15.90%	24.00%	13.50%	13.10%
Omaha	35.60%	17.60%	27.50%	7.90%	11.50%
Lincoln	38.30%	17.10%	25.30%	8.00%	11.40%
Nebraska	34.80%	16.20%	25.00%	10.10%	13.80%

Occupation 1 = Management, business, science, and arts occupations

Occupation 2 = Service occupations

Occupation 3 = Sales and office occupations

Occupation 4 = Natural resources, construction, and maintenance occupations

Occupation 5 = Production, transportation, and material moving occupations

Source: U.S. Census Bureau, American Community Survey DP-3, 2010

Table 16 is a comparison of Syracuse's work force breakdown to State of Nebraska, Otoe County, Tecumseh, Omaha, and Lincoln and nearby counties. The table is provided to allow Syracuse residents the ability to see how the county compares to other entities. In addition, the table contains the base multiplier for each entity.

## **RETAIL TRADE, SALES AND FISCAL PROFILE**

Retail trade is an important part of the local economy. Examining the retail economy of a community permits one to analyze the level of retailing activity occurring within the city limits. Some of the most important activities for rural-based communities comprise the transactions of goods and services, which take place between consumers and local businesses. The level of retail sales in a community is a component of the attractive forces (pull-factor) the retail sector exerts on the community and the surrounding area's residents. Also, the range of goods and services offered, and resident's behavioral characteristics, such as consumer preferences and familiarity with the retail market will affect the level of activity in the local economy.

Location has always been an important factor to the retail sector. Major transit routes that serve local businesses provide a greater level of exposure and access to nonresidents. Syracuse has the major elements discussed above which include a State Highway that provides east-west traffic between Lincoln and Syracuse, a State Highway that runs north and south connecting to the City of Omaha and the new State Prison in Tecumseh. In addition, the City of Syracuse is within 25 miles of Interstate 29, in Iowa, providing the city access to other regional markets.

## **RETAIL TRADE AREA AND NET TAXABLE SALES AND SALES TAX REVENUE**

The retail trade area for a community is not restricted to its corporate limits, but extends outward in each direction toward surrounding communities. The retail trade area, for Syracuse is greatly influenced by the markets of Lincoln and Omaha. However, whenever a community such as Syracuse can offer special amenities, the easier it will be to overcome some of this influence.

Examining net taxable sales is an important part of understanding whether the retail entities are either growing or declining in total sales. Net taxable sales data permit the calculation of State Sales Tax collections. Table 17 notes

---

the net taxable sales and State sales tax collections for the City of Syracuse between 1984 and 1998. Using the taxable sales data, one can estimate a community's retail trade pull-factor, which is the ratio of the average per capita retail sales in the community to the average per capita retail sales in the State. This type of analysis generates a figure that enables one to estimate whether Syracuse is doing better, worse than or about as well as can be expected in retail trade transactions in comparison with a larger entity.

**TABLE 17: NET TAXABLE SALES AND SALES TAX  
SYRACUSE, 2003 -2013**

Year	Net Taxable Sales*	State Sales Tax
2003	\$ 15,016,508.00	\$ 825,909.13
2004	\$ 16,170,386.00	\$ 891,272.04
2005	\$ 17,112,782.00	\$ 943,964.86
2006	\$ 18,715,750.00	\$ 1,029,782.00
2007	\$ 20,034,832.00	\$ 1,101,916.36
2008	\$ 22,678,561.00	\$ 1,247,322.10
2009	\$ 21,696,304.00	\$ 1,193,501.11
2010	\$ 22,719,724.00	\$ 1,249,895.14
2011	\$ 23,329,697.00	\$ 1,283,134.78
2012	\$ 24,075,333.00	\$ 1,324,144.91
2013	\$ 24,775,941.00	\$ 1,362,678.13

\*Does not include motor vehicle sales

Source: Nebraska Department of Revenue, 2014

With the exception of 2009, the City of Syracuse has seen a steady growth in the amount of net taxable sales during the period from 2003 to 2013. In 2003 taxable sales amounted to \$15,016,508 and grew to \$24,775,941 by 2013. During this period sales declined slightly in 2009 to a level of \$21,696,561. The percent change in net taxable sales for Syracuse between 2003 and 2013 amounts to 65%, while the rate of inflation during the same period amounted to 26.6%. Therefore, retail sales in Syracuse increased at a much higher rate than inflation. With the growth rate for Net Taxable Sales being higher than the rate of inflation then the retail sales and incomes of local retailers were more in real dollars in 2013 than in 2003.

#### **RETAIL TRADE PULL-FACTOR ANALYSIS**

The retail trade pull-factor is calculated by comparing Syracuse's state sales tax collections and population to the State's total sales tax collections and population. These figures permit one to determine the retail trade pull-factor of a community. In 1990, the pull-factor for Syracuse amounted to 1.21, meaning that Syracuse was receiving more than its share, on average, than the State. Based upon 1998 population estimates and the net taxable sales receipts, the retail trade pull-factor for Syracuse decreased to 0.78; indicating a decrease in Syracuse's ability to attract more retail dollars into the community. These figures remained consistent until 2011, when the retail trade pull-factor dropped to 0.74. This decline continued through 2012, with the pull-factor dropping to 0.71.

---

The initial pull-factors, in the previous paragraph, were based upon a comparison to the State of Nebraska. However, as indicated earlier, Syracuse's economy is affected by both the economies of Lincoln and Omaha. The following analysis looks at the impact each city has on Syracuse retail market. The same process as above is used, except, instead of using the Net Taxable Sales for the State of Nebraska, the Net Taxable Sales for Omaha and Lincoln are used and compared to Syracuse in the same manner.

Comparing Syracuse's Net Taxable Sales to Omaha's Net Taxable Sales indicates, in 1990, Syracuse had a pull-factor of 0.66. By 1998 this pull-factor had increased to 0.76. This trend reversed since then, with the pull-factor declining to 0.51 in 2012.

Based upon a comparison of similar data from the City of Lincoln, Syracuse's pull-factor was 0.95, thus basically holding its own. By 1998 the pull-factor had increased to 1.27 which is even better than the State comparison for the same time. Pull-factor has decreased since 1998, from 0.84 in 2010 to 0.79 in 2012. These comparisons indicate that Omaha has a much more significant impact on Syracuse's retail market than does Lincoln. Therefore, the data indicates that people from Syracuse generally go to Omaha as opposed to Lincoln when shopping out of the community.

#### **FISCAL TRENDS**

The final component of this section includes an analysis and description of fiscal trends of the City of Syracuse, between 1995 and 1999 and 2014. Table 18 exhibits the assessed valuations and tax levies imparted on the residents of the City of Syracuse. The assessed valuations are based upon real and personal property, but does include the valuation of the School District. The information was collected from the Syracuse Assessors Office. The trends of assessed valuations and property rates between 1995 and 1999 are exhibited in Figure 3.



**TABLE 18: ASSESSED VALUATIONS AND TAX LEVIES, SYRACUSE 1995 TO 2000**

CITY OF SYRACUSE	1995-1996	1996-1997	1997-1998	1998-1999	1999-2000	2013-2014
<b>Assessed Valuation</b>	\$46,904,360	\$52,726,061	\$52,167,515	\$53,791,746	\$62,607,090	\$97,443,148
<b>City Levy</b>	0.6144	0.463853	0.450000	0.449783	0.425212	.5
<b>Debt Service</b>	0.1923	0.152022	0.071546	0.081208	0.000000	
<b>City Total</b>	0.8067	0.615875	0.521546	0.530991	0.425212	
<b>Other Levies</b>	1.6975	2.016321	1.730951	1.581839	1.448722	2.10994
<b>Total Levy</b>	2.5042	2.632196	2.252497	2.031622	1.873932	2.60994

Source: Otoe County Assessors Office, 2000

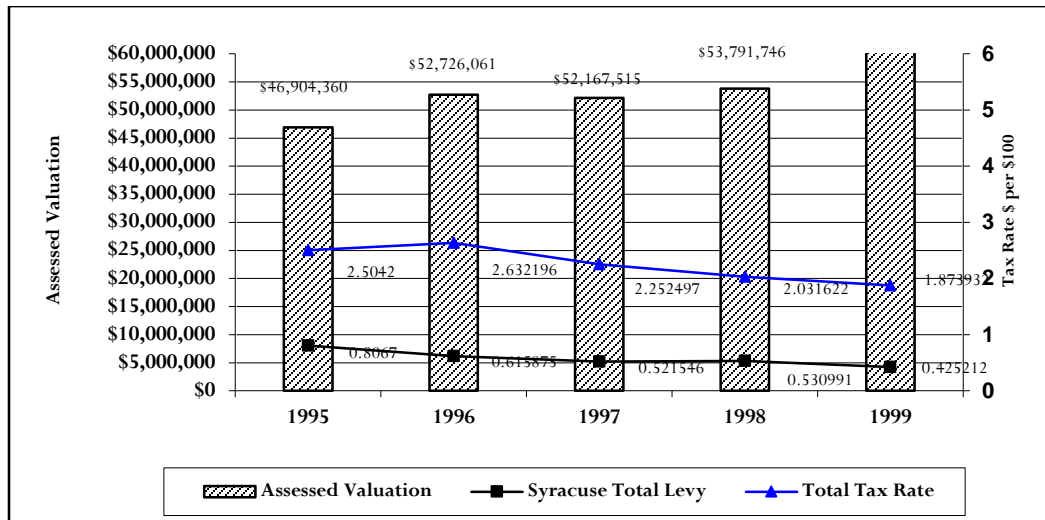
The assessed valuation of Syracuse's real and personal property fluctuated between 1995 and 1999, however the overall trend exhibited an (increase) in assessed valuations. In 1995, Syracuse's real and personal property was valued at \$46,904,360 rising to \$62,607,090 in 1999. Figure 3 indicates the trends of tax levies and assessed valuation of Syracuse from 1995 to 1999.

Syracuse's total tax levy includes both the City tax levy and all other taxes levied on residents by either the City of Syracuse (i.e. bonds, hospital), Otoe County, School District and other taxing authorities. The City levy contributes to the general operating fund of Syracuse and has fluctuated between 0.6144 and 0.452521 per \$100 of assessed valuations between 1995 and 1999. During this time period, the City levy peaked in 1995 at 0.6144 per \$100 of assessed valuation.

The additional levies from the City of Syracuse, Otoe County, School District and other taxing authorities declined between 1995 and 1999. During the period between 1995 and 1999, total other levies ranged from 1.6975 to 1.448722 per \$100 of assessed valuation. During this time period, the total other City levies peaked in 1996 at 2.01632 per \$100 of assessed valuation.

Combining the City and other tax levies determines the total tax rate assessed on Syracuse residents. The total tax levy declined between 1995 and 1999, peaking in 1996 at 2.632196 per \$100 of assessed valuation. In 1999, residents had a property tax rate of 1.873932 per \$100 of assessed valuation. The reduction in the total tax rate for Syracuse were due primarily to the combination of a lower debt servicing levy, a lower school district levy and property tax relief due to redirecting City sales tax collections to the general operating fund.

**FIGURE 3: FISCAL TRENDS, 1995 TO 1999, SYRACUSE**



Source: Otoe County Assessors Office, 2000

The State of Nebraska Legislature passed property tax lids during 1995, which regulates the levy rate that communities may assess on residents. Communities may increase their levy rate after passing a ballot initiative and a vote of the public. The effect of the tax lid regulations has been significant for all Nebraska communities, and many local services have been scaled-down or eliminated in response to the reduction in the general operating funds and restrictive budgets.

---

**SYRACUSE COMMUNITY  
FACILITIES**  
*(UPDATED 2015)*

---

## **SYRACUSE COMMUNITY FACILITIES**

State and local governments provide many goods and services for their citizens. The people, buildings, equipment and land used in the process of providing these goods and services are referred to as public facilities.

Public facilities represent a wide range of buildings, utilities and services that are built and maintained by many government agencies. Such facilities are provided to insure the safety, well-being and enjoyment of the residents of a jurisdiction and in this case Syracuse. These facilities and services provide the county residents with social, cultural, educational, law enforcement, fire protection and recreational opportunities designed to meet area needs. It is important for all levels of government to anticipate the future demand for their goods and services if they are to remain strong and vital. The sequential step is to evaluate the ability of the county to meet that future demand and determine at what level services will be provided. The analysis of existing facilities and of future goods and services is known as the Facilities Plan.

The Facilities section of the Syracuse Comprehensive Plan reviews present capacities of all public facilities and services. The section then evaluates these capacities with current demands and accepted standards to determine whether the capacity is adequate, determine future adequacy of these facilities and services to meet future demands within the planning period. Finally, recommended improvements where public facilities are not considered adequate for present or future needs are made.

The Facilities Plan for Syracuse is divided into the following categories:

- Recreational Facilities
- Educational Facilities
- Fire and Police Protection
- Community Buildings
- Transportation Facilities
- Communication Facilities
- Public Utilities
- Health Facilities

---

## RECREATIONAL FACILITIES

Recreational Facilities in Syracuse are divided up in the following manner: The first topic is State and Federal Recreational Facilities and second are the facilities tied to the community.

### STATE AND FEDERAL RECREATIONAL FACILITIES

The State of Nebraska through the Nebraska Game and Parks Commission has two facilities in Syracuse. Of the two, one is a Recreation area and the final one is a Historic Park. The following is a description of each facility:

***Wilson Creek Wildlife Management Area*** is located approximately 15 miles north of Tecumseh, near Dunbar, Nebraska. The facility includes 27 acres of pastureland and 15 acres of water. Hunting for dove, pheasant, rabbit, and waterfowl are permitted within the facility.

***Triple Creek Wildlife Management Area*** is located 12 miles west of Tecumseh, near Palmyra, Nebraska. The facility contains 56.47 acres of cropland and 23.53 acres of timber area. Hunting for deer, dove, pheasant, quail, rabbit, and squirrel are permitted in the facility.

Local recreational facilities throughout or in close proximity to Syracuse include the following:

### GOLF COURSES

***Syracuse Country Club*** is located at 266 W. 9<sup>th</sup> Street and has a 2,815 yard 9 hole private course. This course is open to the public any day of the week. The clubhouse is a converted farmhouse, which adds character to the course. At the present point of the plan, a new clubhouse has been added to the grounds. There is a putting green, bar, golf cart rentals, and a member of the Nebraska Golf Association. There are no spikes allowed on the course and no tee time is required.

***Otoe County Fairgrounds*** are located in Syracuse on Plum Street on the south side of town. The Otoe County Fairgrounds houses the Kimmel Agricultural Exposition Building, which is used for various activities. In addition to the Pavilion, the fairgrounds include display buildings, livestock buildings, and an outdoor arena.

### AQUA CENTER OF SYRACUSE

The Aqua Center of Syracuse is located at 1180 Chestnut Street. The pool offers swim lessons, is open for parties, and has a swim team.

### PARKS

***Dr. C.R. Williams Park*** is located east of Cherl Drive and west of Plum Street in the middle of town. It contains 16.3 acres of land. Included in this park are:

- T-ball/practice field
- Swimming pool

- 
- Two picnic shelters
  - Playground equipment
  - Benches
  - Trails for biking and walking, and
  - Flower gardens

**Syracuse South Park** is located on 1<sup>st</sup> and Midland Streets. It is the home to the Otoe County Fair Midway in mid-August and contains 8.1 acres of land. The facilities and activities offered at this park include:

- RV camping
- Picnic Shelters
- Sand Volleyball, and
- Playground equipment

**Syracuse Sports Complex** is located on West 3<sup>rd</sup> Street, immediately west of Walnut Street. The facility contains a four-plex of baseball and softball fields with additional soccer/utility fields.

### **RECREATIONAL RECOMMENDATIONS**

Syracuse is located in the Nebraska Recreation Planning Region II. Recreation Planning Region II consists of 17 Southeastern Nebraska counties. These counties include Saunders, Lancaster, Cass, Butler, Johnson, and Otoe. Basic park and recreation space and location planning offers the following recommendations for parks and recreation areas. High density recreation areas should be located near urban areas and user-oriented in design and a range of recreational facilities should be available which are appropriate to the park setting and mass use; and general outdoor recreation areas should utilize natural resources, and be equipped with man-made facilities.

### **EDUCATIONAL FACILITIES**

The public schools in Nebraska are grouped into six classes, depending upon the type of educational services provided and the size of school district. The six classes, as defined by the State of Nebraska, are:

- Class 1 Any school district that maintains only elementary grades
- Class 2 Any school district with territory having a population of one thousand (1,000) inhabitants or less that maintains both elementary and high school grades
- Class 3 Any school district with territory having a population of more than one thousand (1,000) and less than one hundred thousand (100,000) that maintains both elementary and high school grades
- Class 4 Any school district with territory having a population of one hundred thousand (100,000) or more and less than two hundred thousand (200,000) inhabitants that maintains both elementary and high school grades
- Class 5 Any school district with territory having a population of two hundred thousand (200,000) or more that maintains both elementary and high school grades
- Class 6 Any school district that maintains only a high school. The territory of Class 6 districts is made up entirely of Class 1 districts (or portions thereof) that have joined the Class 6.

Since 1990, Class 1 districts have had the ability to “affiliate” with Class 2, 3, 4, and 5 districts in order to provide a high school education to the district’s students.

---

## Public Schools

The residents of Syracuse are served by one school district. This district is a consolidated district, which takes students from Syracuse, Dunbar and Avoca. This school district is #27.

**TABLE 19: PUBLIC SCHOOL ENROLLMENTS, 2012-2013**

<u>School District</u>	<u>Pre-K</u>	<u>K-6</u>	<u>7-8</u>	<u>9-12</u>	<u>Total</u>
27-Syracuse-Dunbar-Avoca	38	318	112	247	715

Source: 2012/13 Nebraska Education Directory

The following paragraph is a description of the Syracuse School District. The paragraph contains data found in Table 19 and Table 20.

*Syracuse-Dunbar-Avoca, District 27* is a consolidation of the former Syracuse, Dunbar, and Avoca School Districts. The district offices are located in Syracuse. The consolidated district consists of approximately 170 square miles of land area, in Otoe, Cass, and Johnson Counties. The district is a Class 3 district. The district has an affiliation with the Smallfoot Public Schools, Unadilla Public Schools, and the Otoe Public Schools, all Class 1 Districts. The district has one elementary school and junior high school combined, creating a K-8 facility. The Senior High School is also located in Syracuse and an addition to the facility was completed in 1997.

The student population, in 2012/2013 was 318 children, Kindergarten through 6<sup>th</sup> grades, 112 students in 7<sup>th</sup> and 8<sup>th</sup> grades, and 247 students in 9<sup>th</sup> through 12<sup>th</sup> grades. The total enrollment was 715 students. The district total Assessed Valuation in 2012/2013 was \$571,676,036.

**TABLE 20: SCHOOL DISTRICT VALUATION, 2012-2013**

School District	Student Population	District Valuation	Cost Per Student by Average Daily Attendance
27- Syracuse-Dunbar-Avoca	715	\$571,676,036	\$12,184.61

Source: The 2012-2013 Nebraska Education Directory

## Post-Secondary Schools

In close proximity to Syracuse are various higher level educational opportunities include:

- University of Nebraska-Lincoln
- University of Nebraska-Omaha
- Bellevue University
- Southeast Community College (Lincoln, Beatrice)
- College of St. Mary's (Omaha)
- Nebraska Wesleyan (Lincoln)
- Union College (Lincoln)
- Peru State College (Peru and Nebraska City)
- Creighton University (Omaha)
- Metropolitan Community College (Omaha)

---

This is just a short list of post-secondary institutions that are available to residents of Syracuse. There are various other schools that offer higher level educational classes, such as vocational and business schools. Most of these types of schools are located either in Omaha or Lincoln. Syracuse's location in the state provides great access to education experience that other counties in the state cannot offer.

## **FIRE AND POLICE PROTECTION**

### **FIRE DEPARTMENT**

The Syracuse Fire District is located in central Otoe County. The fire district covers approximately 121 square miles within Otoe County. The district includes 30 volunteer firefighters. The adequacy of the present equipment inventory has been described as good. The following is a listing of the vehicles currently in service within the fire district:

<u>Year, Make and Type</u>	<u>Pump Size</u>	<u>Tank Size</u>
1995 GMC Grass Truck	150 GPM	250 Gallons
1994 Ford Pumper	1,000 GPM	750 Gallons
1999 Smeal Spartan Pumper	1250 GPB	600 Gallons
1999 Toyne Chevy	250 GPM	1,800 Gallons
1997 S&S GMC Tanker	500 GPM	1,800 Gallons
1993 Cayel Craft International Utility		
1997 Road Rescue Reightliner Utility/Command Vehicle		
2003 Ford Rescue Squad	2-4 patient capacity	
2012 Chevy Rescue Squad	2-4 patient capacity	
1998 Chevy Suburban		

### **LAW ENFORCEMENT**

#### **Otoe County Sheriff's Department**

The City of Syracuse contracts with the Otoe County Sherriff's Department for law enforcement via an inter-local agreement. Nebraska City is the location of the only jail in Otoe County. The jail has a capacity of 18 adults, in 16 cells, with 2 cells dedicated to each female and juvenile detainees. In addition to the 16 cells listed, there are 2 temporary holding cells available in the facility. The jail is an annex to the original courthouse. The building was built in 1988, and is structurally sound. The facility does not meet standards for the Americans with Disabilities Act (ADA). The jail has 4 full-time jailers on staff to assist with the prisoner population.

Based upon the Law Enforcement Employment Data published by the Nebraska Crime Commission, the following data for Otoe County and the surrounding counties, regarding officers is as follows:



---

County	Sworn Officers- 2011	Sworn Officers per 1,000 persons	Sworn Officers- 2012	Sworn Officers per 1,000 persons	Sworn Officers- 2013	Sworn Officers per 1,000 persons
Otoe County	15	1.8	13	1.6	13	1.6
Johnson County	6	1.1	5	1.0	6	1.1
Nemaha County	5	1.3	5	1.3	9	2.3
Lancaster County	73	2.9	77	2.8	75	3.0
Cass County	39	2.7	22	1.2	20	1.1

Otoe County’s Sheriff’s Department has been relatively adequate in the number of Sworn Officers per 1,000 persons of population. In the data above, only one county, Lancaster County, has a large proportion of officers. It will be important in the future for the County and those entities under contract with the County to track this statistic. Tracking this specific statistic will enable all to determine if adequate protection is being provided based upon past trends.

### **Nebraska State Patrol**

The Nebraska State Patrol provides protection throughout the entire county including within the communities.

### **SYRACUSE MUNICIPAL BUILDINGS**

This section is considered to be a summary of the facilities offered by the City.

**City Hall** is located at 495 Midland Street in downtown Syracuse. The city hall was relocated to this facility in 1991. The facility houses the City Clerk’s Office, the Police Department and the City Council Chambers. The building appears to be adequate to meet future demand on spacing requirements.

The **Syracuse Public Library** is located at 480 5<sup>th</sup> Street. The library is currently opened 38 hours per week. The library has an approximate annual operating budget of \$20,125. The total collection consists of over 14,360 books and other materials. The building contains 2,500 square feet of space. The library has a meeting room that will accommodate 72 people.

**Syracuse’s US Postal Facility** is located on 578 Plum Street. The building was dedicated in 1966. The facility is in adequate shape and is GSA leased/owned.

### **CITY AND RURAL HISTORICAL SITES**

Little Nemaha River Bridge was erected in 1901 by John Gillian and is a pinned Pratt truss bridge. The bridge is located near Syracuse. The bridge is considered technologically significant as one of the earliest examples of this construction in Nebraska.

---

## **TRANSPORTATION FACILITIES**

### **Truck Line Service**

There are various truck lines that run and operate in Syracuse. The primary two routes used by truck line include Highways 2, which travels east west, and Highway 50 that runs north/south through the county.

### **Railroad Service**

The nearest passenger services are located in Omaha and Lincoln with AMTRAK.

### **Bus Service**

There is presently no bus service to Syracuse. Greyhound Bus Lines in Omaha and Lincoln provide the nearest bus service.

### **Airports**

**Nebraska City Municipal Airport** is owned and operated by the City of Nebraska City and the Nebraska City Airport Authority. The airport is located approximately 3 miles South of Nebraska City.

The main runway is 33-15 and the length is approximately 4,500 feet long by 75 feet wide. The main runway is a concrete surface. The secondary runway is 2,550 feet long and 150 wide. The Airport experiences single engine, light twin engine, and twin turbo-prop traffic.

Airport zoning is in place for Nebraska City Municipal under Nebraska Revised Statute sections 3-301 to 333 which, allows zoning to restrict height of structures within ten miles of the Airport.

The nearest passenger and freight services are located in Omaha at Eppley Air Field and at the Lincoln Municipal Airport. All major airlines fly out of Eppley Air Field in Omaha and limited flights fly out of the Lincoln Municipal Airport.

## **COMMUNICATION FACILITIES**

### **Telephone Services**

Windstream of Lincoln provides all local telecommunications services in Syracuse. This service is adequate for present and future needs. Long distance carriers in the area include Sprint, MCI, AT&T, and various others.

### **Radio and Television**

Currently there are no stations located in Syracuse. There are various radio stations located in neighboring counties and communities that provide local as well as regional programming for the area.

---

There are currently no local television stations located in Syracuse. However there are various television stations located in neighboring counties that provide local as well as regional programming for the area.

### **Newspapers**

Otoe County has one weekly and one daily newspaper. The Syracuse-Journal-Democrat is a weekly paper located in Syracuse. In addition to these papers, there are others that serve the county as well, which include the Lincoln Journal-Star and the Omaha World Herald, both daily papers.

## **UTILITIES**

### **Electricity**

Syracuse Utilities supplies electricity to the residents of Syracuse with an additional assistance of the Omaha Public Power District. The Utilities buys electricity wholesale from OPPD.

### **Natural Gas**

Natural gas is supplied by Nebraska City Utilities. Supplies appear to be adequate at this time and it is believed that future demand will be met as development occurs in this part of Otoe County.

### **Water Supply and Distribution System**

Syracuse presently supplies groundwater to its residents, businesses, and industries from 2 wells located approximately 9 miles south of the City. Each well can produce approximately 640 gallons per minute when operated alone. The combined capacity of both wells operating simultaneously is approximately 800 gallons per minute. Therefore, the present pumping capacity is either 921,600 gallons per day, with one well operating, or 1,152,000 gallons per day, with both pumps operating. This pumping capacity is supplemented by water storage facilities of 500,000 gallon elevated storage tank located in the northeastern portion of the urban area. Additional flow capacity could be achieved when both wells are operating by reducing the headloss in the 12-inch transmission line to the City. This could be accomplished by installation of another parallel transmission line of equal size. This would reduce the headloss created when both pumps are operating, and provide an additional level of redundancy for the transmission line.

The only form of treatment provided currently is the addition of fluoride. Disinfection is not currently provided on the system. Pending future federal regulations may require that communities provide disinfection of groundwater supplies. If enacted, additional monitoring and testing will be required for byproducts formed by the disinfection process. Additional treatment for removal of these byproducts may be required if they exceed maximum contaminant levels (MCL's).

The average annual consumption from 2001-2010 was approximately 286,000 gallons per day (gpd). The highest peak daily consumption, occurring in July 2003 was 795,700 gallons. The peak to average day factor was 2.78. The

---

average per capita use over this time period was approximately 147 gallons per day. This is considered a reasonable value.

The water distribution system consists of pipe sizes ranging from 4 inches to 12 inches in diameter. The smaller 4-inch mains are located in the older residential areas in the central part of the community. An 8-inch main serves the central business district. Newer subdivisions and more recent main upgrades have utilized larger (6-inch and up) sized mains to improve hydraulic distribution. The distribution system is designed as a grid system with few dead-ends. These sizes are large enough to maintain adequate distribution of water during peak periods such as when large quantities of water are required in a specific area to fight a fire.

Static pressures vary depending upon the location in the City. Static pressures on the lowest, southern portion of the City can be as high as 80-90 psi, while the higher areas in the northern area of the City (i.e. in the area of the Hospital) are at 60 psi. These variations are primarily due to differences in topography of the City and not because of problems with the distribution system layout. All new expansions and extensions should expand the grid network and provide for looping rather than create new dead-end lines. This practice will ensure optimum hydraulic capacity, improve water circulation and turnover, and support good water quality.

Based upon present water use data, the future system requirements can be forecasted by considering projected population increases, estimated per capita water consumption increases and fire flow requirements.

The population of Syracuse is forecasted to reach 1,885 by the year 2010 and could reach as high as 2,118. Assuming a 10 percent increase in per capita consumption, the average daily demand can be expected to reach 317,000 gpd. Peak flow requirements can be expected to reach approximately 900,000 gpd. The effects of the recent expansion at the new intersection of Highways 2 and 50, particularly the development of the motel, will tend to increase the total water demand over time.

The pumping and distribution capacities of the present water system appear to be capable of meeting the estimated average and peak daily demands through the planning period. However, as the water demand grows, the number of hours the well pump(s) are required to operate will increase. This additional pumping could diminish the capacity of the well system. It is recommended that at least one additional well, with similar capacity, be added to support the future water demand and provide additional redundancy in supply.

The present distribution system will, however, need several improvements in the form of expansions to accommodate the proposed future land use pattern proposed in the Future Land Use Plan. Several new developments are under construction in the northern part of the community. These include the Meisinger and Prairie View Additions, and the commercial area at the intersection of Highways 2 and 50. Extension of the existing water distribution system was made to each of these for water supply.

---

Several potential development areas have been identified adjacent to existing additions for future expansion. Expansion areas 1, 2, and 3, all located in the northwest area of the community can be serviced by extension of the water distribution system. Replacement of the 6-inch line along Walnut Street, from the connection to the 12-inch located at the intersection of Ninth and Walnut Streets to Seventeenth Street, should be made with a larger line to increase the flow capacity to these areas. A return loop should also be made to replace the 2-, 4-, and 6-inch along Ninth Street to the same point of intersection at Ninth and Walnut.

The Meisinger Addition is fully planned development that has identified several phases of construction and utility support. Eight-inch water mains are planned to support this development. At least two connection points to the existing water distribution are planned.

The commercial area at the intersection of Highways 2 and 50 is served by 8- and 10-inch extensions from the existing distribution system. Additional capacity should exist to support additional development in that area.

Development in Area 5 could be supported by extension of existing distribution lines from any direction. Line extensions in this area can be used to improve the gridded (looped) network in this area.

To ensure proper documentation of water distribution line extensions and modifications, the City should continue to update the Syracuse Water Plat Map. These efforts will ensure the latest and most accurate information is available for all future planning activities.

### **Sanitary Sewerage System**

The sanitary sewer system in Syracuse consists of gravity sewers ranging in size from 6- to 18-inches with 1 lift station. Wastewater treatment is provided by an extended aeration activated sludge plant. The facility was constructed in the early 1980's. Solids are aerobically digested and discharged to sludge drying beds. The treatment plant capacity is rated at 330,000 gallons per day (gpd). The present sewage flow averages 200,000 gpd, with wet weather flows reaching 400,000 gallons per day. Average flow represents approximately 77 percent of average daily water demand (260,000 in 1999). The per capita discharge is 120 gallons per day (based upon a population of 1,666). These average values are considered reasonable.

The sewer collection system has been designed and constructed to provide adequate flow capacities through the system to the treatment plant. A project in 1998, in which a new 12-inch main line from Ninth to Mohawk Streets to First and Walnut Streets and an 18-inch trunk line from that point to the wastewater treatment plant was constructed, improved the overall capacity in the lower reaches of the collection system. All remaining collection system lines are a minimum of 8-inches in diameter.

The commercial area near the intersection of Highways 2 and 50 are served by a gravity collection system. Line sizes are 8-inch in diameter.

---

A lift station and a 4-inch force main connection to the gravity collection system serve newer subdivisions in the northwest area of the community, including Country Club Heights and the Prairie View Additions. The lift station is located on Seventeenth Street between Pawnee Street and Parker Drive. The lift station was rated for 150 gallons per minute at a total dynamic head of 25 feet. As additional development is added around the Prairie View Addition the capacity of the lift station pumps may need to be upgraded to accommodate the growth.

Expansion directly west of the existing corporate limits, next to the golf course, appears to be capable of supporting a gravity collection system within the development (flowing toward the southeast) and along the adjacent railroad line. However, it would also require a creek crossing or possible lift station in order to connect to the existing gravity collection system near Ninth and Walnut Streets.

Development in Area 5 could be supported by extension of a gravity collection system flow toward the southwest with connection likely near in the East View Addition.

Utility Department officials do not anticipate any capacity problems regarding the capacities of the existing collection system relative to the future land use types, locations and densities proposed in the Future Land Use Plan.

Using the current proportion of average wastewater flow to average water demand of 77 percent and the estimated future water demands, the projected future average wastewater flow is expected to range from 244,000 to 274,000 gallons per day (year 2010). These average values are considered to be within the design capacity of the existing treatment plant. Peak wet weather flows however could reach 488,000 to 1,148,000 gallons per day. Peak values may become excessive and impact treatment plant performance during these events. Reducing the impacts of inflow/infiltration should be considered a priority in future planning of sewer projects. Smoke testing and television inspection should be conducted to identify the portions of the collection system subject to these factors. Repair or replacement of portions of the collection system could offset any need to expand treatment plant capacities.

To ensure proper documentation of sewer collection system extensions and modifications, the City should continue to update the Syracuse Sewer Plat Map. These efforts will ensure that the latest and most accurate information is available for all future planning activities.

---

### **Storm Drainage Facilities**

Runoff is collected and drains predominantly in the southwesterly direction through the upper middle of the City towards a tributary to the Little Nemaha River. During large rainfall events the southwest portion of the City, is subject to lowland flooding. Very few storm drains are installed in the older areas of the City; however the new subdivisions have incorporated storm drainage when necessary.

Since the development and construction of the new Highway 2 alignment north of Syracuse, it has been proposed that a retention basin be constructed to regulate the runoff flows from that area. Reducing the runoff flowrate and spreading the discharge over a longer period of time will reduce the impacts of flooding throughout the City's drainage system. A Drainage Assessment was completed in 2011. This report outlines several storm drainage improvement projects.

New subdivision development should require the installation of storm sewers and consider installation of retention basins to minimize the runoff flowrates and to ensure that post development runoff peaks do not exceed runoff peaks prior to development.

### **Solid Waste Disposal Facilities**

Refuse and trash generated by the residents, businesses, and industries within Syracuse is collected by Allied Refuse & Recycling Services and disposed of at the contractor's landfill of choice. Collection is optional to residents and Allied provides the billing and collection.

## **HEALTH FACILITIES**

The following are a listing of those health services that are available to the residents of Syracuse.

### **Medical Clinics**

The **Syracuse Medical Clinic** is located at 881 Mohawk Street and is owned by Community Memorial Hospital. The clinic has three (3) physicians associated with the facility. In addition, the facility has a number of RNs and LPNs employed to assist with patient care.

### **Eye Care**

Syracuse Family Eyecare is located at 135 9<sup>th</sup> Street. The facility has one optometrist to serve the residents of Syracuse.

### **Nursing Facility**

Adjacent to the Community Memorial Hospital is the Good Samaritan Society, an 88-bed skilled care facility. The Good Samaritan Society also includes a 36-unit assisted living center and a children's daycare center.

---

## Hospitals

**Community Memorial Hospital** is located at 277 East 17<sup>th</sup> Street. The hospital has a total of 18 beds available to serve local needs. The hospital has the services of two local doctors, two physician assistants, and a nurse practitioner as well as several visiting specialists and a number of RNs and LPNs working at the facility. The hospital offers the following rehabilitation services:

- Cardiac Rehabilitation
- Occupational/Speech Therapy
- Physical Therapy
- Pulmonary Rehabilitation

### *Other Hospitals serving the area*

There are numerous hospitals serving the Syracuse area from Lancaster, Sarpy, and Douglas Counties.

- Midlands Community Hospital located at 11111 S. 84th Street in Papillion
- Bergan Mercy Medical Center located at 7500 Mercy Road in Omaha
- Immanuel Medical Center located at 6901 N. 72nd Street in Omaha
- Methodist Hospital located at 8303 Dodge Street in Omaha
- Children's Hospital located at 8301 Dodge Street in Omaha
- University of Nebraska Medical Center 600 S. 42nd Street in Omaha
- Saint Joseph's Hospital located at 601 30th Street in Omaha
- St. Elizabeth's Community Health Center located at 555 South 70<sup>th</sup> Street in Lincoln
- Bryan/LGH East located at 1600 South 48<sup>th</sup> Street in Lincoln
- Bryan/LGH West located at 2300 South 16<sup>th</sup> Street in Lincoln
- Madonna Rehabilitation Hospital located at 5401 South Street in Lincoln
- Veteran's Hospital located at 600 South 70<sup>th</sup> Street in Lincoln



---

## SYRACUSE ENERGY ELEMENT

### INTRODUCTION

Energy plays a crucial role in nearly every aspect of our lives. It is used to grow our food, to move us from place to place, to light our homes, and to make the products we buy. The vast majority of our energy is currently supplied by fossil fuels, which will inevitably run out. Federal regulations are tightening emission rules for power plants, thus increasing the cost of using fossil fuels. By planning for energy, Syracuse can save money, have a more resilient economy, conserve natural resources, and be better prepared for the future.

### ACKNOWLEDGEMENTS

The Nebraska Energy Office	American Wind Energy Association
The City of Syracuse	The U.S. Environmental Protection Agency
National Renewable Energy Laboratories (NREL)	Omaha Public Power District (OPPD)
U.S. Department of Energy (DOE)	U.S. Energy Information Administration (EIA)
Eastern Interconnection States' Planning Council (EISPC)	American Community Survey
AWS Truepower	Social Explorer

### NEBRASKA ENERGY POLICY OVERVIEW

#### Nebraska Legislation LB997

In 2010, Nebraska Legislators passed LB 997 requiring all municipalities, with the exception of villages, to adopt an energy element into their comprehensive plan. The following energy element is included within Syracuse's Comprehensive Plan in order to fulfill the requirement of LB 997. Energy elements are required to have three components:

- Energy infrastructure and energy use by sector
- Utilization of renewable energy sources
- Energy conservation measures that benefit the community

#### Nebraska Energy Plan

The 2011 Nebraska Energy Plan outlines 14 strategies for the state to consider in meeting the following objectives:

- Ensure access to affordable and reliable energy for Nebraskans to use responsibly
- Advance implementation and innovation of renewable energy in the state
- Reduce petroleum consumption in Nebraska's transportation sector

These strategies include:

- Continue support of Nebraska's unique public power system
- Increase opportunities for demand-side energy management and energy efficiencies
- Maximize the investment in Nebraska's coal plants

- 
- Expand Nebraska's nuclear power generation capacity
  - Increase opportunities for industrial and municipal waste-to-energy projects
  - Optimize the use of Nebraska's water resources for hydroelectric power generation
  - Improve municipal water and wastewater management strategies and water quality
  - Continue building Nebraska's wind energy through public-private partnerships
  - Increase opportunities for methane recovery from agricultural and community biomass resources
  - Increase opportunities for woody biomass in Nebraska
  - Support distributed generation of renewable technologies
  - Increase ethanol production, blended and delivered across Nebraska and to markets outside the state
  - Increase development and use of other alternative fuels
  - Diversify and expand opportunities for renewable diesel in Nebraska

#### Nebraska Energy Code

Under §§81-1608 to 81-1616, the State of Nebraska has adopted the International Energy Conservation Code as the Nebraska Energy Code. Any community or county may adopt and enforce the Nebraska Energy Code or an equivalent energy code. If a community or county does not adopt an energy code, the Nebraska Energy Office will enforce the Nebraska Energy Code in the jurisdiction. The purpose of the Code, under §81-1608, is to insure that newly built houses or buildings meet uniform energy efficiency standards. The statute finds that:

*there is a need to adopt the International Energy Conservation Code in order (1) to ensure that a minimum energy efficiency standard is maintained throughout the state, (2) to harmonize and clarify energy building code statutory references, (3) to ensure compliance with the National Energy Policy Act of 1992, (4) to increase energy savings for all Nebraska consumers, especially low-income Nebraskans, (5) to reduce the cost of state programs that provide assistance to low-income Nebraskans, (6) to reduce the amount of money expended to import energy, (7) to reduce the growth of energy consumption, (8) to lessen the need for new power plants, and (9) to provide training for local code officials and residential and commercial builders who implement the International Energy Conservation Code.*

The Code applies to all new buildings, as well as renovations of or additions to any existing buildings. Only those renovations that will cost more than 50 percent of the replacement cost of the building must comply with the Code. There are exceptions to the Nebraska Energy Code including: buildings that are neither heated nor cooled, buildings registered as a historic place, or buildings with very low average energy use. Visit the Nebraska Energy Office website to see all the rules, regulations, and exceptions regarding the Energy Code.

#### Nebraska Legislation LB436 - Net Metering

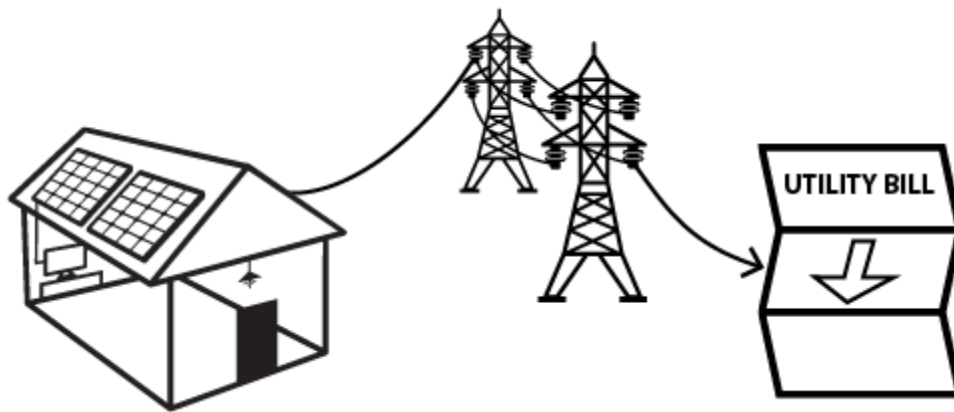
The Nebraska Legislature passed LB436 which allows for net metering. Citizens have the opportunity to generate their own energy and it is found to be in the public interest because it encourages customer-owned renewable energy resources. It also can stimulate the economic growth, encourage diversification of the energy resources used, and

---

maintain the low-cost, reliable electric service for the State of Nebraska. By supplementing your electric bill through “credits” for energy purchased back from the utility company, the citizens of Syracuse can save money and alleviate pressure on the utility grid.

According to their website, Omaha Public Power District (OPPD) has offered net metering since 2009. OPPD allows net metering for any consumer that has a qualified generator using methane, wind, solar, biomass, hydropower or geothermal energy with a total capacity of 25 kilowatts or less. As of December 31, 2013, OPPD had 44 qualified facilities with total generating capacity of 280 kilowatts. In 2013, the total estimated amount of energy produced by these customer generators was 368,883 kilowatt-hours, and the net received from them was 4,436 kilowatt-hours.

**FIGURE 4: NET METERING**



#### Solar and Wind Easements and Local Option Rights Laws

Nebraska's provisions allow property owners to create binding solar and wind easements in order to protect and maintain proper access to sunlight and wind. Counties and municipalities are allowed to develop zoning regulations, ordinances, or development plans that protect access to solar and wind energy resources. Local governing bodies may also grant zoning variances to solar and wind energy systems that would be restricted under existing regulations, so long as the variance is not substantially detrimental to the public good.

For summaries of additional programs, incentives and policies in Nebraska visit the Database of State Incentives for Renewables & Efficiency (DSIRE) website:

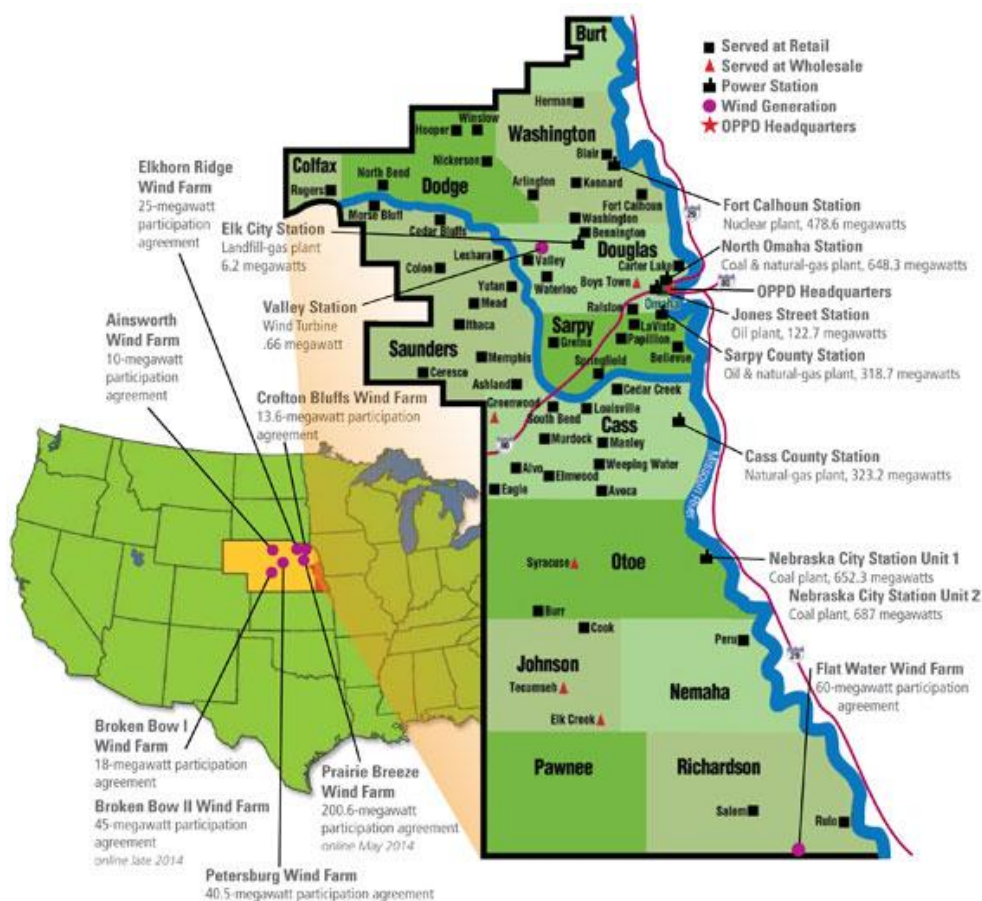
<http://www.dsireusa.org/incentives/index.cfm?re=0&ee=0&spv=0&st=0&srp=1&state=NE>

## ENERGY INFRASTRUCTURE

Syracuse owns and operates the city's electrical system. A \$1.8 million rebuild and upgrade of the aerial portion of the electrical distribution system was completed in 2007. This rebuild was done to improve system reliability and allow for future growth. The city should regularly evaluate the electrical infrastructure and make upgrades as necessary.

As seen in Figure 5 below, the City of Syracuse buys wholesale electricity from OPPD. The city also receives a small allotment of hydro power from Western Area Power Association (WAPA).

**FIGURE 5 COMMUNITIES SERVED BY OPPD**



Graphic from: [http://www.oppd.com/AboutUs/Company/22\\_000583](http://www.oppd.com/AboutUs/Company/22_000583)

Figure 6 shows the mix of energy resources that OPPD uses to generate electricity. Fossil fuels (coal, natural gas, and oil) are the energy source for 72% of OPPD's electricity generation. Using these fossil fuels for electricity generation results in emissions that have been linked to air pollution. Currently, 13.7% of OPPD's electricity is generated from renewable energy sources, most of which comes from wind.

**FIGURE 6: OPPD ENERGY RESOURCES**

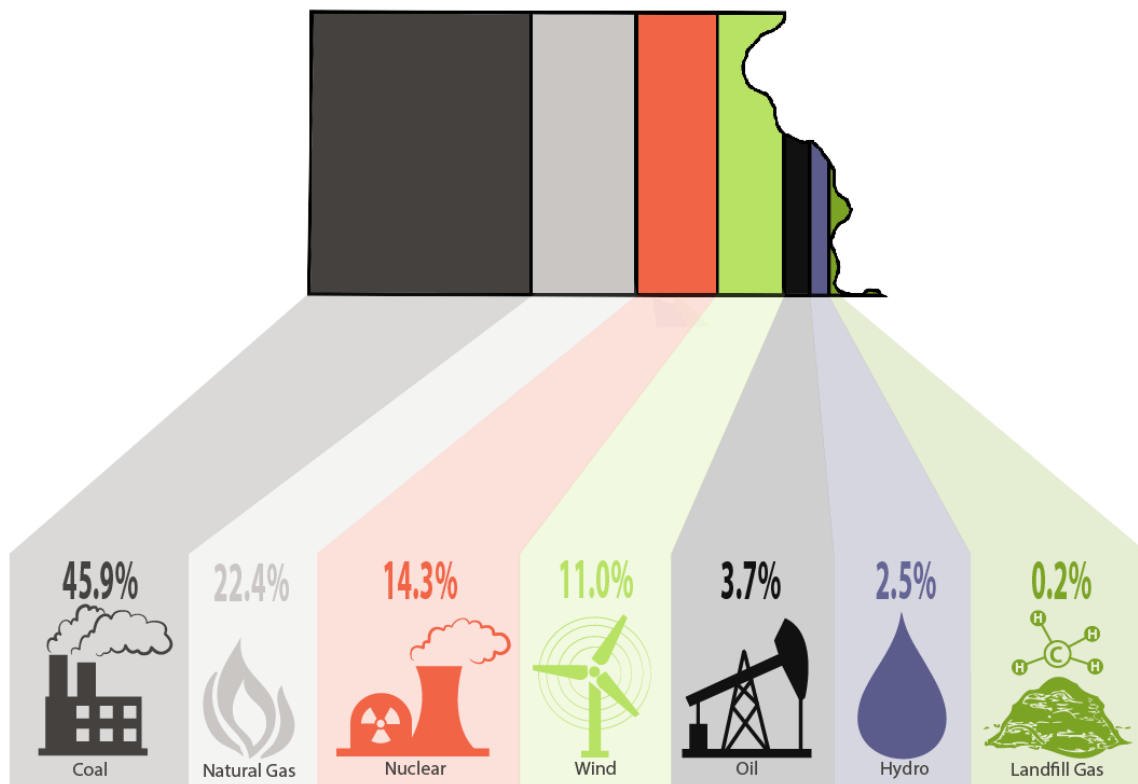


Figure 6 shows the mix of resources that generate electricity for OPPD that serves Syracuse.

In 2014, OPPD created a plan to lower its carbon emissions in reaction to new proposed EPA regulations.

The OPPD board adopted a plan to:

- Retire units 1-3 of the North Omaha coal plant by 2016
- Retrofit units 4-5 of North Omaha in 2016
- Convert units 4-5 of North Omaha to natural gas by 2023
- Retrofit Nebraska City One by 2016
- Maintain at least 33% of their portfolio in renewable energy beginning in 2018
- Reduce demand by 300 MW through energy efficiency and demand side management program

This plan would reduce:

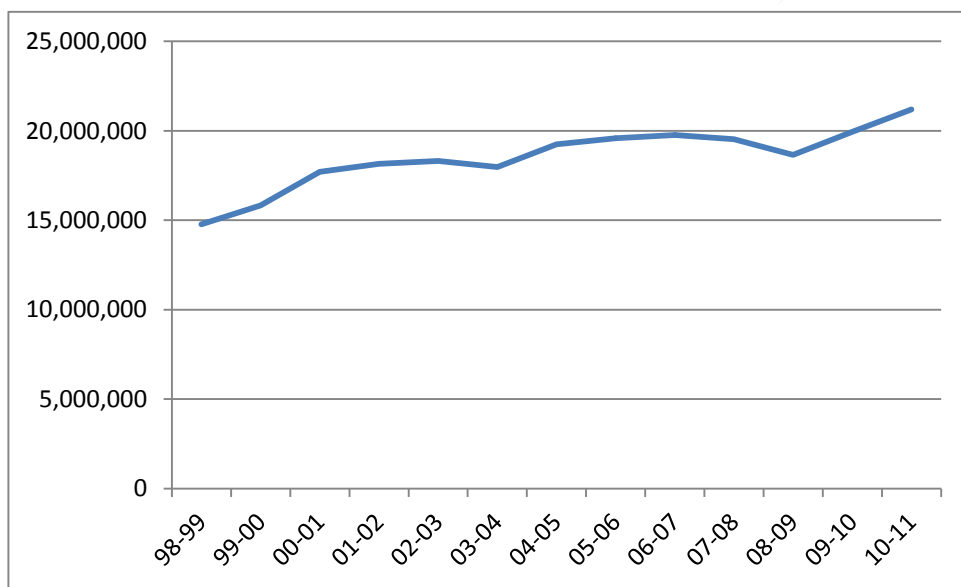
- Carbon dioxide emissions by 49%
- Mercury emissions by 85%
- NOx (nitric oxide and nitrogen dioxide) emissions by 74%
- SOx (sulfur oxide) emissions by 68%

If OPPD plans on maintaining at least 33% of their portfolio in renewable energy beginning in 2018, they will need to increase renewable energy generation considerably. The most recent data indicates that renewable energy was responsible for 13.7% of their electricity generation mix. In order to meet that goal of 33% by 2018, OPPD will need to start aggressively investing in renewable energy and purchasing renewable energy elsewhere.

#### ENERGY USE

As seen in Figure 7 and Table 9, Syracuse's energy consumption is steadily rising. Population growth is responsible in part for the increase in electricity consumption; although it does not completely account for the nearly 20% increase from 2000. Annual energy use per capita has increased 8.64% between 2000 and 2010; from 10,048.07 kWh to 10,916.53 kWh. The increase in municipal electricity consumption is largely due to a municipal facility being built between those time periods.

**FIGURE 7: SYRACUSE ENERGY CONSUMPTION IN KWH FROM 1998-2011**



---

**TABLE 9: SYRACUSE ENERGY CONSUMPTION IN KWH BY SECTOR**

Sector	2000-2001	2010-2011	% Change
Residential	8,394,669	9,555,160	13.82%
Commercial	4,333,094	4,491,857	3.66%
Large Power Users	4,925,114	6,937,586	40.86%
Municipal	51,827	215,299	315.42%
Per Capita	10,048.07	10,916.53	8.64%
Total	17,704,704	21,199,902	19.74%

Although data on transportation fuel consumption was not available, Syracuse is spending a lot of time, money, and energy commuting to work. According to data from the Census, about half of Syracuse's residents work outside of Otoe County. According to the American Community Survey the average commute to work for residents of Syracuse is 24 minutes. This means that the average worker in Syracuse spends over \$1,400 a year in fuel getting to and from work.

The Corporate Average Fuel Economy standards will nearly double vehicle fuel economy by 2025 to 54.5 miles per gallon. Without any action this will lower fuel consumption per capita in Syracuse. Finding strategies to lower the commute time will result in further energy conservation.

#### OPPORTUNITIES FOR ENERGY CONSERVATION

##### **Improving efficiency**

According to the 2012 American Community Survey, over 63% of the houses in Syracuse were built before 1970. These homes are an opportunity for Syracuse to significantly reduce its energy use. In older homes, improvements in insulation, windows, appliances and lighting can cause them to be significantly more energy efficient and save the homeowner in energy costs.

Additional energy saving opportunities are located in the education section below.

##### **Landscaping**

A well-designed landscape not only improves the aesthetics of a home or business, it can reduce water use and lower energy bills. According to the Nebraska Energy Office, a well-designed landscape saves enough energy to pay for itself in less than eight years. For example, when planted in the right spot, trees can provide shade from the sun in the summer and block the cold wind in the winter.

---

### **Recycling and Composting**

Recycling and composting preserves energy by reducing the energy needed to extract raw materials. These practices also reduce the amount of solid waste, which reduces what is dumped in the landfill. Currently, recycling in Syracuse is provided by private refuse companies.

### **Local Food**

Food takes energy to grow, harvest, process and transport. Conditions such as the distance from where the food is grown to our table affect how much energy is used to produce our food. Supporting locally grown food reduces the energy needed for food production.

### **Electric Fueling Station**

Syracuse should research the feasibility of locating an electric or alternative fuel station within town. This fueling station will have the opportunity to capture the electric or alternative fuel cars traveling along Highway 2. This highway is a common link between I-80 and Lincoln travelers headed towards Kansas City or St. Joseph Missouri. Travelers using electric vehicles have to plan their route beforehand in order to ensure that they will have adequate charging stations along the way. As charging an electric car can take anywhere from 25 minutes to a few hours, these travelers will add to the local economy by eating in restaurants or shopping while their car charges. Communities such as Seward, Lexington, and Nebraska City have already invested in electric charging stations.

## **OPPORTUNITIES FOR RENEWABLE ENERGY**

### **Renewable Energy Sources**

Nebraska is the only state in the U.S. that is 100% public power. Since they are not seeking profits, public power districts have been able to maintain some of the lowest electricity prices in the nation. The low cost of energy is one of the reasons that Nebraska has not fully taken advantage of its renewable energy potential. Unlike places such as California, where electricity prices are high, renewable energy systems have historically not been economical for Nebraska.

With new proposed federal regulations, power plants will have to lower their carbon emissions by 30% by 2030. This means that heavy carbon emitters such as coal power plants will require retrofits or improvements in order to meet that goal. Since a large amount of the electrical energy consumed in Syracuse comes from coal, this will most likely affect the price of electricity coming from these power plants. Therefore, it would be in Syracuse's best economic interest to decrease per capita energy consumption and increase the amount of renewable energy produced in Syracuse. Below is a summary of potential renewable energy options for Syracuse. The focus of this section is on wind, hydro, solar, geothermal and biomass. All sources of renewable energy could be considered by Syracuse in the future for their feasibility.

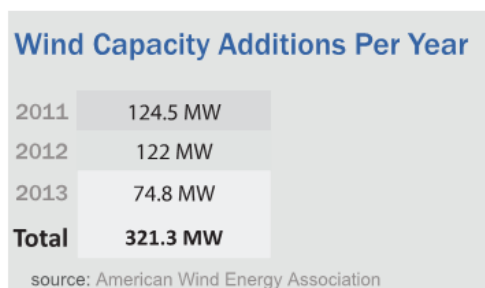


---

## Wind

According to the American Wind Energy Association, Nebraska has one of the best wind resources in the United States; 92% of Nebraska has the adequate wind speeds for a utility scale wind farm. Nebraska ranks 3<sup>rd</sup> in the U.S. in gigawatt hour (GWh) wind generation potential, but has been slow in utilizing this resource compared to other states. Nebraska currently ranks 23<sup>rd</sup> in total MW installed with 534 MW. According to the National Renewable Energy Laboratory, Nebraska's wind potential at 80 meters hub height is 917,999 MW. Wind Power is capable of meeting more than 118 times the state's current electricity needs. Nebraska added a significant amount of wind capacity between 2011 and 2013.

**FIGURE 8: WIND CAPACITY ADDITIONS PER YEAR, NEBRASKA**



As seen in Figure 8, Syracuse and the rest of Otoe County have wind power densities from 300 to 400 watts per square meter. This is some of the lowest wind energy potential in the state. Despite this, areas around Syracuse may be suitable for a wind energy operation. Electricity produced through wind power will be most cost effective on the utility/commercial scale. Small scale wind systems for homes and businesses may not be as cost effective, but they should be encouraged in appropriate settings. Small scale wind systems can be utilized to lower the owner's monthly utility bill in areas with net metering.

Figure 9: Estimated Annual Average Wind Power Density, Syracuse and Nebraska

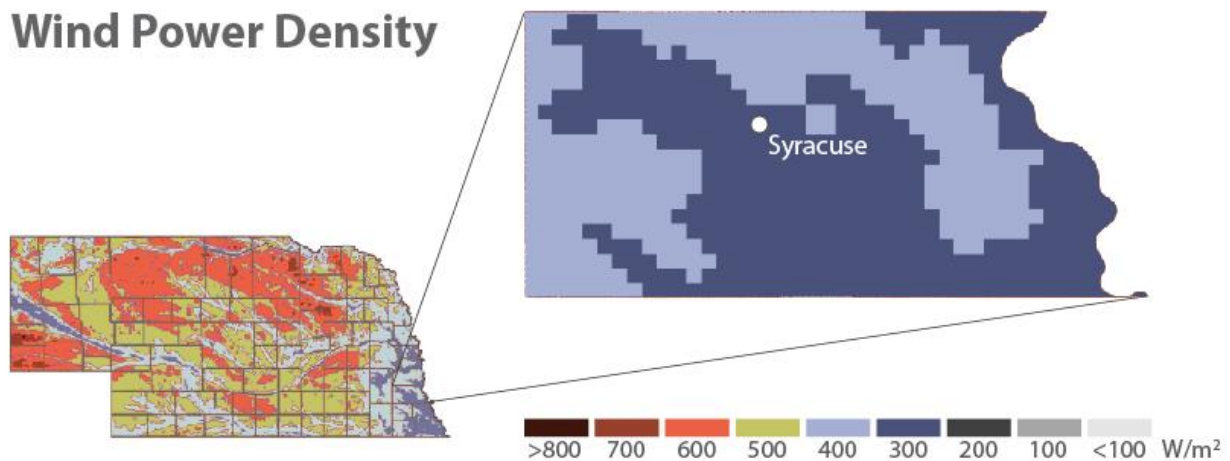


Figure 9 represents the gross estimated annual average wind power density for Nebraska and Otoe County. This data indicates how much energy is available for conversion by a wind turbine at a particular location. This map was created with data from EISPC and AWS Truepower.

### Hydro Power

The electricity from hydropower consumed in Nebraska comes from the 11 dams in or on the border of the state and purchases from Western Area Power Administration. The amount of electricity produced from hydropower is relatively the same every year, unless affected by drought or an offline facility. According to the Nebraska Energy Office, studies conducted in 1981 and 1997 concluded that nearly all of the potential hydro resources had been developed, and that even under the most optimistic scenarios, less than 150 MW of additional power could be produced from existing or new hydro resources. Despite this, there are indications that micro-hydroelectric dams would be feasible in a number of settings across the state, however not likely in Syracuse.

### Biomass

Syracuse may want to consider the feasibility of renewable energy generation from biomass because of the agriculture and existing landfill located in proximity of the city. Biomass (biodiesel, ethanol, landfill gas, methane, wood and wood waste) accounted for 81.7% of all renewable energy generated in Nebraska in 2011.

Direct-fired System- Most biomass plants that generate electricity use direct-fired systems. Simply, these plants burn biomass feedstock directly to produce steam. This steam turns a turbine, which turns a generator that converts the power into electricity. The feedstock for direct systems can be a number of things: wood and wood waste, agricultural residues, municipal solid waste, or industrial waste. Wood fueled systems currently provide energy for a number of manufacturing facilities, two colleges, and other buildings across Nebraska. Wood fueled energy systems have the potential to create significant energy savings versus traditional fossil fuels. The Nebraska Forest Service currently has a grant program to help with the up-front costs of converting to a wood energy system.

---

**Biodiesel-** The two Nebraska commercial scale plants located in Arlington and Scribner have an estimated production capacity of 5.4 million gallons per year, but both have recently closed due to the price of soybeans used for feedstock.

**Ethanol-** Ethanol produced from corn and grain sorghum is a growing energy resource in Nebraska. According to the Renewable Fuels Association, Nebraska has the second largest ethanol production capacity in the nation and the second largest current operating production in the nation. Approximately 14% of the nation's ethanol capacity is in Nebraska's 27 ethanol plants.

91% of Nebraska's ethanol production goes to U.S. domestic markets, 5% is exported to other countries, and 4% is used by Nebraskans. The state's Ethanol Board estimates that 40% of Nebraska's corn crop and 75% of the state's grain sorghum crop are used in the production of ethanol.

Ethanol consumption is mainly in the form of blended gasoline. Ethanol production and consumption is expected to continue to increase as national legislation continues to affect state policies. The Renewable Fuel Standard, established in 2005 as a part of the Energy Policy Act, requires a minimum of 36 billion gallons of renewable fuel to be used in the nation's gasoline supply by 2022. In 2013, 87 octane fuel without ethanol began to be phased out and replaced with an ethanol-blended 87 octane gas. Nearly all fuel stations in Nebraska and Iowa have phased out 87 octane fuel without ethanol as of 2014.

**Biogas-** Biogas is a product of the decomposition of manure, via anaerobic digestion, and is typically made of about 60% methane, and 40% carbon dioxide. Biogas can be used to generate electricity, as a boiler fuel for space or water heating, upgraded to natural gas pipeline quality, or other uses. After the production of biogas, the remaining effluent is low in odor and rich in nutrients. The byproducts of biogas production can be used as fertilizer, livestock bedding, soil amendments or biodegradable planting pots. For additional information about biogas visit:

<http://www.epa.gov/agstar/anaerobic/>

### **Solar Power**

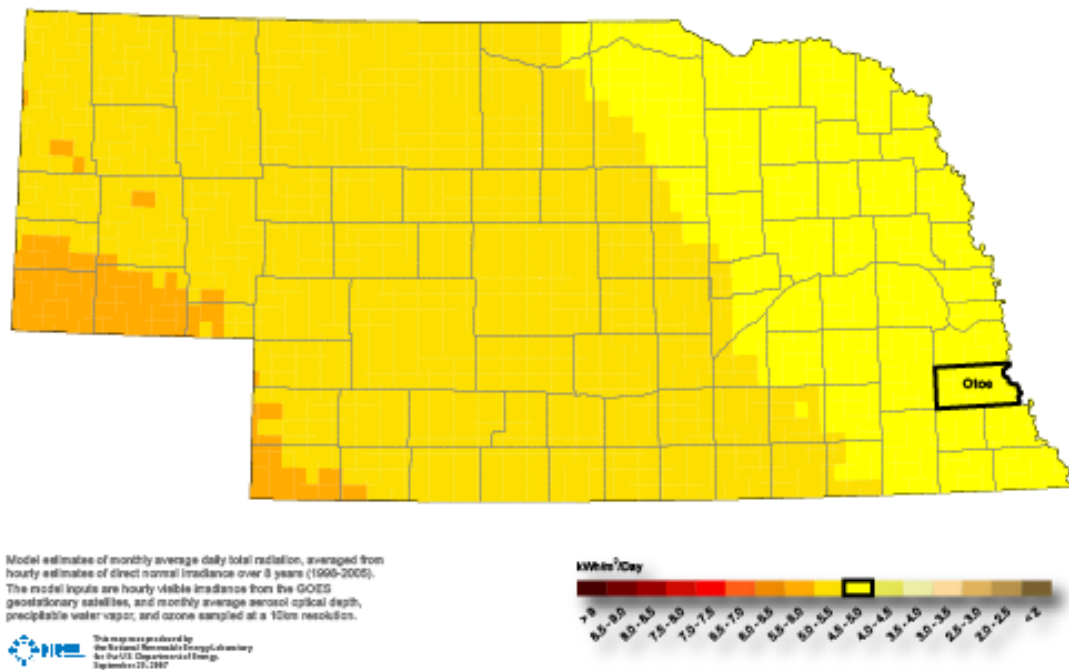
According to the National Renewable Energy Laboratory, Nebraska is ranked 13<sup>th</sup> in solar energy potential. Figure 7 shows Syracuse and the rest of Otoe County have an average solar radiation of 4.5-5.0 kilowatt hours per square meter per day. Currently, solar technologies are marginally used in Nebraska because it has historically been difficult for solar technologies to compete with the state's low electric rates.

According to the International Renewable Energy Agency, the cost of solar photovoltaic (PV) panels decreased 80% from 2009 to 2013. As the cost of solar panels continues to decrease, solar can be utilized at an individual home or

business scale to help supplement electrical needs. Many utilities have incentives to help with the cost of solar, but additional steps could be taken to increase the amount of solar energy generated in Syracuse.

**FIGURE 10: ANNUAL GLOBAL SOLAR RADIATION AT LATITUDE TILT**

### Global Solar Radiation at Latitude Tilt - Annual



Passive solar- Passive solar design takes advantage of a building's site, climate, and materials to minimize energy use. A well-designed passive solar home first reduces energy use for heating and cooling through energy-efficiency strategies and then meets the reduced need in whole or part with solar energy. In simple terms, a passive solar home collects heat as the sun shines through south-facing windows and retains it in materials that store heat, known as thermal mass.

### Geothermal

Heat Pumps- The type of geothermal application that is most practical and economical for the residents of Syracuse is the use of geothermal heat pumps. Closed loop systems move fluids through continuous pipeline loops that are buried underground at depths where the temperature does not fluctuate much. Heat picked up by the circulating fluid is delivered to a building through a traditional duct system. Geothermal heat pumps discharge waste heat into the ground in the summer months and extract heat from the ground in the winter months.

---

Geothermal heat pumps are slowly becoming a popular method of heating and cooling buildings. Heat pumps use much less energy than traditional heating and cooling systems. This translates into energy and money savings while also reducing air pollution. There are many state and utility level incentives to help with the initial cost of geothermal energy.

### **Education**

Syracuse will not be able to achieve its energy goals without the help of its citizens. Syracuse should educate the public on the benefits of energy efficiency and the most feasible renewable energy systems. In the following subsections there are resources provided that Syracuse can use to raise awareness regarding energy efficiency and renewable energy systems.

### **Energy Saving Tips**

The Nebraska Energy Office has listed ways to save money on energy bills for the home, farm, business, or vehicle. Options for energy savings are listed on the Office's web site at <http://www.neo.ne.gov/tips/tips.htm>.

The U.S. Department of Energy created a document that explains tips on saving money and energy at home: [http://energy.gov/sites/prod/files/2014/05/f16/Energy\\_Saver\\_Guide\\_PhaseI\\_Final.pdf](http://energy.gov/sites/prod/files/2014/05/f16/Energy_Saver_Guide_PhaseI_Final.pdf)

On their website, Omaha Public Power District has energy tips and incentives for your home and business: <http://www.oppd.com/ResidentialCustomers/index.htm> .

### **Energy Tracking Programs**

OPPD's Watt Detector program allows residents to plug in appliances and track their energy use. Other programs such as the ENERGY STAR Tracking Tool, allow the owner to track their energy use in order to meet energy management goals.

### **Jobs and Economic Development Impact Models (JEDI)**

Developed for the National Renewable Energy Laboratory, the JEDI models were created to demonstrate the economic benefits associated with renewable energy systems in the United States. This model can be used by anyone: government officials, decision makers, citizens. The model is simple, the user enters in information about the project and it will generate economic impact data such as jobs, local sales tax revenue etc.

---

## FUNDING

### **Financial Incentives**

There are a number of federal and state incentives for renewable energy production and energy efficiency. These include:

- Renewable Energy Tax Credit (Corporate)
- Renewable Energy Tax Credit (Personal)
- Property Tax Exemption for Wind Energy Generation Facilities
- Sales and Use Tax Exemption for Community Wind Projects
- Sales and Use Tax Exemption for Renewable Energy Property
- Dollar and Energy Savings Loans (State Loan Program)

Many Utility companies have rebate programs for energy efficiency or renewable energy systems. For summaries of additional programs, incentives and policies in Nebraska visit the Database of State Incentives for Renewables & Efficiency (DSIRE) website:

<http://www.dsireusa.org/incentives/index.cfm?re=0&ee=0&spv=0&st=0&srp=1&state=NE>

### **Green Fund Program**

The city of Syracuse could create a program to help fund municipal energy projects. One such program could be a revolving green fund. First, the city would establish a baseline year for municipal energy use.

After making energy improvements, track the energy savings, and then use the money from the energy savings to create funding for continued energy improvements. A program such as this can help fund energy saving projects at the same cost as if the city did nothing. Many universities have created a green revolving fund such as this.

### **Grants**

The city of Syracuse should explore grant opportunities to help fund energy conservation or renewable energy projects. There are many state, federal, and non-profit agencies that distribute funding for energy projects.

### **Energy Assistance Programs**

Residents wanting help paying their utility bills can visit this website with links to many programs in Nebraska:

<http://nebraskaenergyassistance.com/assistance/>

The Weatherization Assistance Program helps lower income families save on their utility bills by making their homes more energy efficient. The Nebraska Energy Office administers the federally-funded program. This website describes the program and how to apply: <http://www.neo.ne.gov/wx/wxindex.htm>

---

## Definitions

**LEED:** Leadership in Energy & Environmental Design (LEED) is a green building certification program that recognizes best practices in building and construction. In order to receive LEED certification, building projects satisfy prerequisites and earn points to achieve different levels of certification. Building to LEED standards does not require the expensive LEED certification. (<http://www.usgbc.org/leed>)

**ENERGY STAR:** The ENERGY STAR is a U.S. Environmental Protection Agency voluntary program that helps businesses and individuals save money and protect our climate through energy efficiency. The ENERGY STAR program has influenced the adoption of energy efficient products, practices, and services through partnerships, objective measurement tools, and consumer education. (<http://www.energystar.gov/>)

## Goals and Strategies

The following are goals and strategies suggested for Syracuse:

1. Reduce energy use per capita in Syracuse
  - a. Encourage multi-modal transportation
    - i. Increase use of trails, walking, and bicycling as alternative modes of transportation
    - ii. Plan trails and sidewalks to connect neighborhoods and provide access to commercial areas and community facilities
  - b. Ensure efficient use of land resources
    - i. Encourage new development adjacent to existing development
    - ii. Encourage infill development
    - iii. Encourage mixed use development
  - c. Increase local jobs to decrease average commute time and energy use
  - d. Take advantage of programs and incentives offered by state agencies and OPPD
  - e. Increase the energy efficiency of buildings within Syracuse
    - i. Educate homeowners regarding practical energy efficiency measures
    - ii. Encourage meeting current LEED standards for new buildings and renovations in Syracuse
    - iii. Partner with utility companies to enhance Syracuse's understanding of energy use patterns, rates, programs, and incentives
    - iv. Encourage residential and commercial energy upgrades
    - v. Encourage energy conservation through the siting of development and landscaping
  - f. Encourage development of charging stations and other infrastructure for alternative fuels
  - g. Encourage recycling in Syracuse
  - h. Educate citizens regarding energy element
    - i. Implement education, outreach and citizen engagement strategies

- 
1. Establish a webpage where the city can inform citizens of its energy related efforts, as well as provide energy saving tips
    2. Develop a demonstration garden at a highly visible public facility
      - ii. Raise Syracuse's residents' awareness of the wise use of energy
      - iii. Recognize local projects that support the goals and strategies of the energy element
  2. Increase the amount of renewable energy generated in Syracuse
    - a. Inform citizens about practical renewable energy options
    - b. Examine and remove unintended barriers for appropriate renewable energy generation
    - c. Evaluate the feasibility of producing energy from a city owned facility
    - d. Encourage renewable energy use in buildings
  3. Increase the amount of local food that is consumed in Syracuse
    - a. Review existing codes regarding composting
    - b. Support local food production
      - i. Support markets for local food such as farmers' markets
      - ii. Encourage community education regarding locally produced food
  4. Reduce energy consumption within the city of Syracuse's operations
    - a. Conduct building energy audits on priority city buildings to identify energy retrofit and improvement opportunities
    - b. Educate city staff regarding energy consumption
    - c. Educate city staff on latest trends, energy codes, and systems
    - d. Explore feasible on-site renewable energy applications in appropriate city facilities and projects
    - e. Research funding opportunities to finance energy efficiency improvements
    - f. As city vehicles are decommissioned, consider replacing them with alternative fuel or fuel efficient vehicles
    - g. Work with public power districts to regularly review and evaluate distribution systems, and other energy infrastructure.



---

## ENVIRONMENTAL AND NATURAL RESOURCES



---

## ENVIRONMENT AND NATURAL RESOURCES

In order to formulate a truly valid and “comprehensive” plan for the future development of Syracuse, it is first necessary to evaluate the environmental and man-made conditions which currently exist to determine the impacts that these factors may have on limiting future land uses in the City. This component of the Syracuse Comprehensive Development Plan provides a summary of the environmental and man-made conditions, which are present in the City, and identifies and qualifies the characteristics of each which will directly or indirectly impact future land uses in the City. For clarity, the evaluations are presented in two separate analyses:

### NATURAL ENVIRONMENTAL CONDITIONS

#### Geology

- Soils
- Topography and Drainage
- Flood Hazards
- Water Supply and Quality
- Air Quality

### MAN-MADE CONDITIONS

- Regional Location and Physical Background
- Past Land Development Trends
- Transportation System Impacts

## NATURAL ENVIRONMENTAL CONDITIONS

### GEOLOGY

In Syracuse, the surface materials are loess, glacial deposits, alluvium, shale and limestone. The deep bedrock consists of calcareous shale and limestone. Benfield and Kipson soils occur in areas where the shale and limestone bedrock is at the surface. The location of Benfield and Kipson soils occur in a 1 to 4 mile wide strip in the eastern edge of the City adjoining and paralleling the Missouri River.

After the bedrock materials on the surface were buried under glacial material during the ice age, the landscape was one of hills and valleys. After the ice melted, some of the valleys were filled with sand and gravel while other valleys were filled with clayey material. In Otoe County, the dominant glacial deposit is grayish and clayey and has many fine to coarse sand grains, some pebbles and cobbles and a few boulders. Burchard, Pawnee, Shelby and Steinauer soils are in areas where this deposit is at the surface.

Associated with the clayey glacial deposit are silty, sandy, loamy and clayey materials. Malcolm soils are in areas of grayish coarse silty material, Dickinson soils are in areas of sandy material, Morrill soils are in areas of brown or reddish brown loamy material and Mayberry soils are in areas of brown or reddish brown clayey material.

Grayish brown loess is the predominant surface material in the County. It is most extensive in the uplands. Loess consists mostly of silt-sized particles and some clay-sized particles. Dow, Marshall, Monona, Ponca, Sharpsburg and Wymore soils formed in areas of loess.

---

The alluvium is mostly silty and clayey material that washed from uplands slopes onto the flood plains in the valleys. In the Missouri River flood plain, the material came from outside the area; it is loamy, clayey and sandy. Colo, Judson, Kennebec and Nodaway soils are in areas of silty material. Albaton, Onawa, Wabash, Zoe and Zook soils are in areas of clayey material. Haynie soils are in areas of loamy material and Sarpy soils are in areas of sandy material.

The implications of the geology of Otoe County with regard to future development within the County are as follows. First, due to the location of soils within Otoe County that are conducive for cultivated crops, crop production will continue to be a strong enterprise. The geology does, however, create limitations with regard to urban development and certain types of farming practices, including confined livestock operations, that should be noted.

- Surface water contamination is possible due to the many local drainageways, including tributaries of the Little Nemaha and Missouri Rivers, that receive runoff of herbicides, pesticides and soil erosion from the upland areas.
- Shallow wells, perched water tables and shallow depths to bedrock in areas of the County can result in groundwater contamination from septic tank / tile field systems, as well as, concentrated livestock operations. In addition, groundwater availability within the County ranges from none to large quantities. The wide range of groundwater availability serves to limit crop production in areas where groundwater is not available due to lack of water for irrigation. Lack of groundwater also serves to limit residential and other non-agricultural developments.
- The numerous hills and valleys and corresponding drainageways within the County impact transportation routes, specifically county roads, in that such topography requires high numbers of surface drainage structures which include culverts and bridges.

Many of these limitations, including additional soil and groundwater characteristics, are more thoroughly discussed later in this section of the Comprehensive Development Plan. It is important, however, to point out that as Otoe County continues to develop and expand it will face the pressures of non-agricultural development in the rural areas and respecting environmental limitations will become a major concern.

## **SOILS**

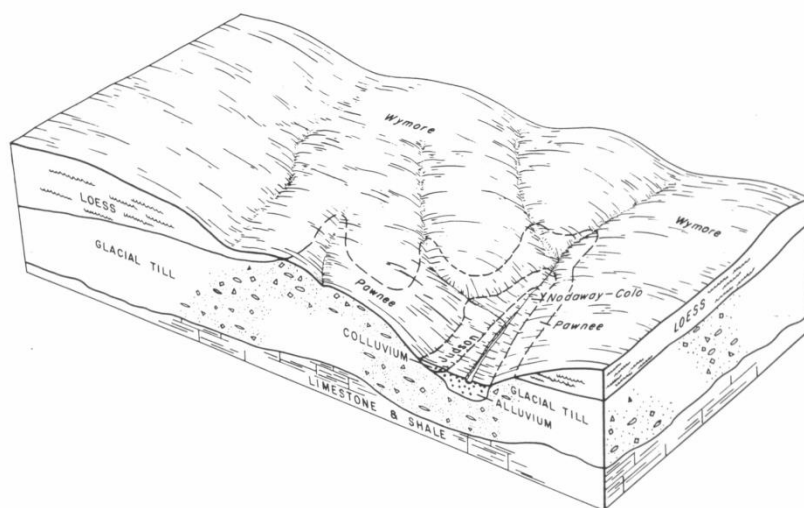
Soils in Syracuse consist of 3 different soil associations. A soil association is a landscape that has distinctive proportional patterns of soil and typically consists of one or more major soil(s) and at least one minor soil. The associations are named for the major soils that occur. The locations of the 3 soil associations in the County are indicated on Figure 4 and described as follows.

### **Wymore Association**

This soil association makes up approximately 34% of Otoe County. As Figure 4 indicates, the majority of soils within the Wymore Association are located in the western two-thirds of the County. The major soil, Wymore, is moderately well drained and has a surface layer of very dark brown silty clay or silty clay loam. In many areas, these soils are eroded and the subsoil is at the surface. 85% of the soils within this association are Wymore soils, while the remaining 15% are minor soils consisting of Colo, Judson, Mayberry, Morrill, Nodaway, Pawnee and Sharpsburg soils. Of these, Judson soils are located on the foot slopes of the hills; Mayberry, Morrill and Pawnee

soils are located on hills downslope from the Wymore soils; Nodaway and Colo soils are located in nearly level areas on the bottom lands in the narrow valleys of upland drainageways and Sharpsburg soils are located in positions similar to those of Wymore soils. Figure 5, details the pattern of soils, common topography and underlying material in the Wymore Association.

**FIGURE 11: WYMORE SOIL ASSOCIATION**

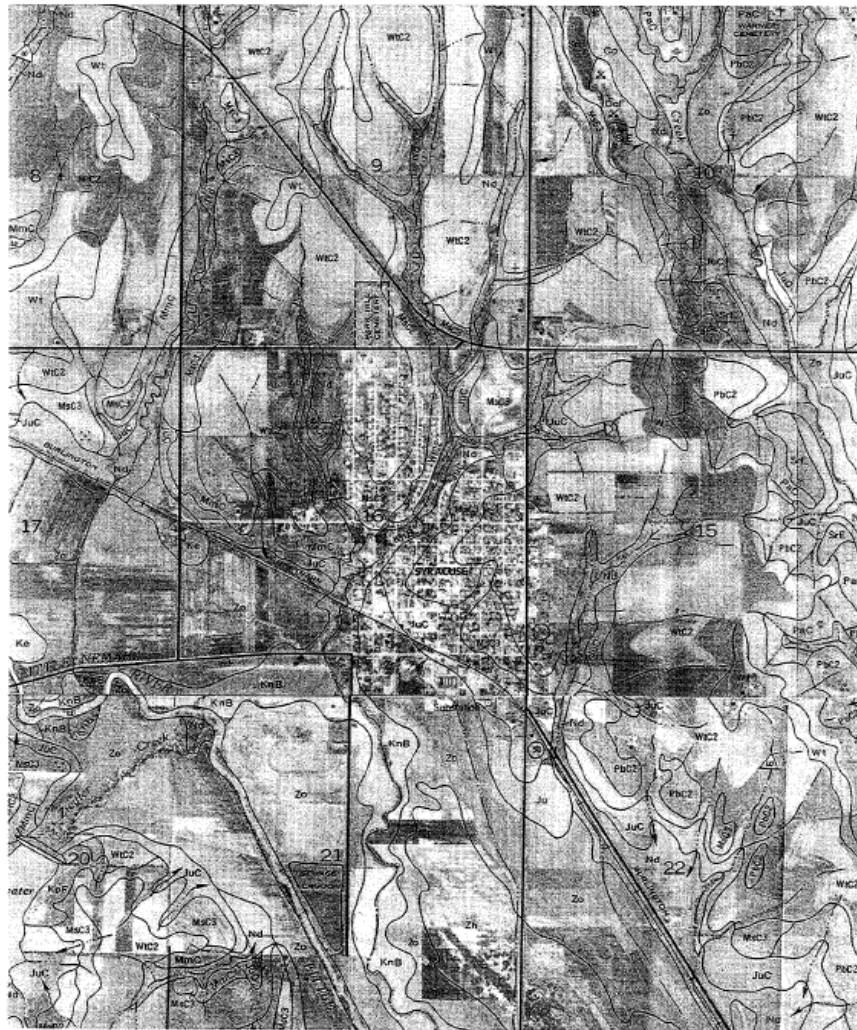


Source: Soil Survey of Otoe County, Nebraska U.S. Dept. of Agriculture, Soil Conservation Services, 1982

This Association consists mainly of soils on ridges and side slopes on some of the highest uplands in the County. The ridges and side slopes are uneven in width and length and in percent of slope. The slope in this Association ranges from 0 to 7%. In addition, there are some nearly level divides in the Association and several small waterways draining the areas.

The Wymore Association soils have high potential for cultivated crops and pasture grass production. The major crops grown on these soils include grain sorghum, wheat, corn and soybeans. Erosion is the principal hazard for this Association, as well as, maintaining the content of organic matter and soil structure and selecting crops that are best adapted to the soils and climate. In most places in this Association groundwater is limited, but is generally adequate for domestic use. Rural water districts supply some farms in this area of the County.

FIGURE 12 GENERAL SOILS MAP



**SOIL LEGEND FOR SYRACUSE AND SURROUNDING AREA**

DeF	Dickinson fine sandy loam, 11 to 20 percent slopes
JuC	Judson silt loam, 2 to 6 percent slopes
KnB	Kennebec-Nodaway silt loams, 0 to 4 percent slopes
KpF	Kipson-Benfield complex, 6 to 20 percent slopes
MmC	Mayberry clay loam, 3 to 9 percent slopes
MaC3	Morrell-Mayberry complex, 3 to 9 percent slopes, severely eroded
Nd	Nodaway-Colo complex, 0 to 2 percent slopes
PaC	Pawnee clay loam, 3 to 9 percent slopes
PaD	Pawnee clay loam, 9 to 12 percent slopes
PbC2	Pawnee clay loam, 3 to 9 percent slopes, eroded
SrE	Shelby and Burchard clay loams, 9 to 15 percent slopes
W	Water
W1	Wymore silty clay loam, 0 to 2 percent slopes
W1C2	Wymore silty clay, 2 to 7 percent slopes, eroded
Za	Zoe silty clay loam, 0 to 1 percent slopes
Zo	Zook silty clay loam, 0 to 1 percent slopes

**JEO**  
Consulting  
Group, Inc.

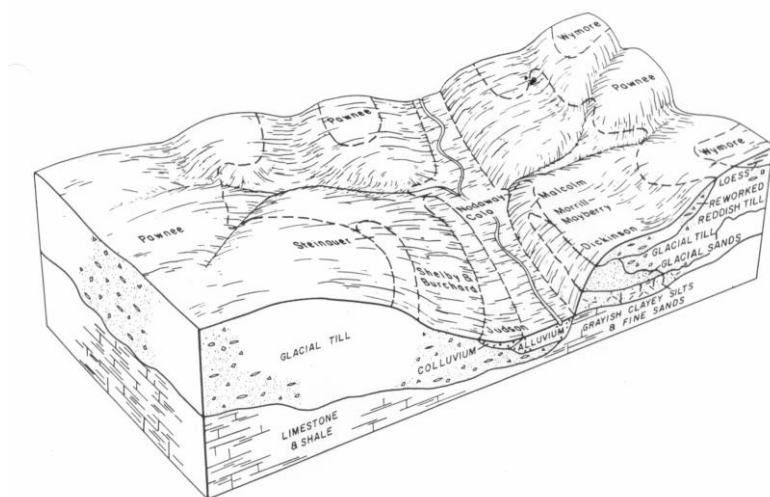
**DETAILED SOILS MAP  
THE CITY OF SYRACUSE, NEBRASKA  
AND THE SURROUNDING AREA**

---

### **Pawnee-Morrill-Shelby Association**

This Association occurs in approximately 29% of Otoe County. This Association is located throughout the County with larger concentrations in the western half of the County. The Pawnee-Morrill-Shelby Association is approximately 43% Pawnee soils, 10% Morrill soils and 7% Shelby soils. Other soils, including Burchard, Colo, Dickinson, Judson, Malcolm, Mayberry, Nodaway, Steinauer and Wymore soils are of minor extent within this Association. Pawnee soils are moderately well drained and are commonly found on gently sloping and strongly sloping ridgetops and side slopes above the Morrill and Shelby soils. They are commonly eroded and the clay subsoil is at the surface. The surface layer is dark brown clay or clay loam.

**FIGURE 13: PAWNEE-MORRILL-SHELBY SOIL ASSOCIATION**



Source: Soil Survey of Otoe County, Nebraska U.S. Dept. of Agriculture, Soil Conservation Services, 1982

The Morrill soils are well drained and they also are commonly eroded. They have a surface layer of dark brown clay loam and the subsoil is yellowish red, reddish brown and brown clay loam. The Shelby soils are well drained and somewhat excessively drained. They are commonly less eroded than the Pawnee or Morrill soils because they are not farmed regularly. They are commonly located on hill downslopes away from the Pawnee soils. Their surface layer is black clay loam and the subsoil is brown and dark yellowish brown clay loam. Colo and Nodaway soils are found on bottomlands in narrow valleys of drainageways. Judson soils are in high valley areas or on foot slopes. Burchard, Dickinson, Malcolm, Mayberry and Steinauer soils are closely intermingled with the major soils. Wymore soils are at the higher elevations in the Association and on some ridgetops above the major soils. The typical pattern of soils, topography and underlying material in the Pawnee-Morrill-Shelby Association is illustrated in Figure 6.

This Association consists mainly of soils on hills above numerous drainageways and streams. The slope generally ranges from 3 to 30%. Some slopes are long and smooth other is abrupt and steep. There are some gently sloping hilltops and in some areas there are pebbles and a few stones on the surface. Canyons and bluffs where the slope is more than 30% exist in this Association.

---

Approximately 50% of this Association is used for cultivated crops, the remainder is mainly in pasture, although some small tracts are used for hay production. The principal crops on this Association include grain sorghum, wheat and alfalfa. Overall, the soils in this Association have medium potential for cultivated crops and high potential for grasses, as well as, a high potential as areas for wildlife and recreational uses.

Erosion is the principal hazard for this Association. Other concerns in management of these soils include maintaining fertility and the content of organic matter. Flooding is a hazard on some of the narrow bottom lands along drainageways. Areas in grass that are used as pasture need grazing control and other management to insure vigorous growth. There are few farms on this Association and those that exist are mainly of the grain-forage-livestock type. This is due to the fact that the supply of good water from wells is limited, however, there is an adequate supply of water for limited domestic use. As in the Wymore Association, rural water districts supply some farms with water through pipelines. Many local ponds and springs along the drainageways typically provide water for livestock production. Potential sites for dam constructions are numerous throughout this Association.

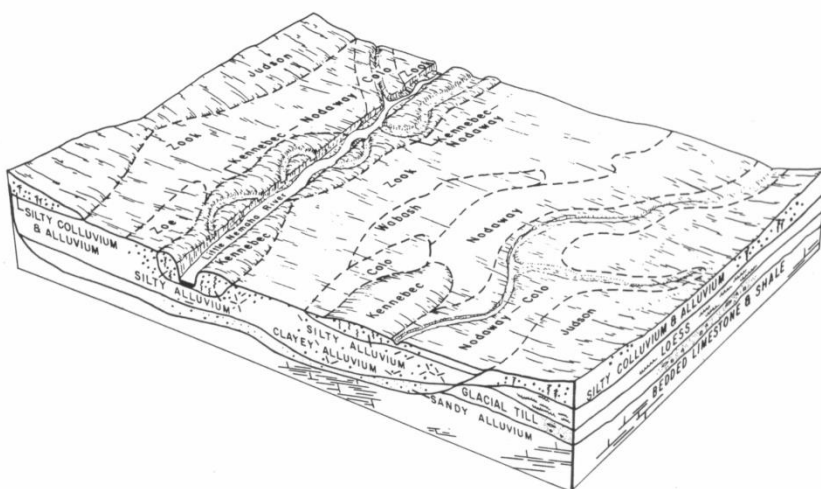
#### **Zook-Nodaway-Judson Association**

The typical pattern of soils, topography and underlying material in the Zook-Nodaway-Judson Association is illustrated in Figure 7. This Association makes up about 13% of Otoe County. The majority of this Association is found along the major rivers and drainageways within the County, including the Nemaha River and its tributaries. Of the soils in this Association, approximately 27% are Zook soils, 25% Nodaway soils and 18% Judson soils. The remaining 30% is divided between Colo, Kennebec, Wabash and Zoe soils. Zook soils are poorly drained and they are commonly found in areas some distance from the original main stream channels. The surface layer is very dark brown silty clay loam, the subsurface layer is black silty clay loam and silty clay and the subsoil is dark gray silty clay. Nodaway soils are moderately well drained and are commonly adjacent to stream channels. They have a surface layer of very dark grayish brown silt loam, a subsurface layer of black and very dark brown silt loam.

Judson soils are well drained and are found on stream terraces and foot slopes at the base of the uplands. They have a surface layer of very dark brown silt loam, a subsurface layer of black and very dark brown and brown silty clay loam. Colo soils are somewhat poorly drained and poorly drained and they are in areas similar to the Zook soils and along the narrower valleys. Kennebec soils are moderately well drained and are in areas adjacent to stream channels. Wabash soils are very poorly drained and clayey. Zoe soils are poorly drained and saline-alkali. The Kennebec and Wabash soils are found at some of the lower elevations within this Association.

---

**FIGURE 14: ZOOK-NODAWAY-JUDSON SOIL ASSOCIATION**



Source: Soil Survey of Otoe County, Nebraska U.S. Dept. of Agriculture, Soil Conservation Services, 1982

This Association consists mainly of soils on flat bottomlands on some of the lowest elevations in the County. The bottomlands are nearly 2 miles wide on the lower reaches of the rivers, but are less than one-half mile wide in the upper reaches of tributary creeks. The slope in this Association ranges from 0 to 6 %. Drainageways dissect the bottomlands and the lower reaches of some creek and river channels have been straightened. The channels are mostly deeply entrenched and have vertical banks. In addition, there are gently sloping foot slopes in some at the base of the uplands.

Nearly all of the acreage in this Association is cultivated because the soils in this Association have high potentials for cultivated crops including corn, grain sorghum, soybeans and wheat. Farms in this Association are either the cash-grain or grain-livestock types. Very few farmsteads and buildings are located in areas of these soils due to the fact that these soils have high potentials for flooding. Water is available for livestock from local streams, a few springs and shallow wells and the supply of good groundwater from wells is not adequate for irrigation or large municipalities. Wetness and flooding of the soils in spring are the principal concerns in management of the soils in this Association.

#### **PRIME CROP LAND**

The preservation of soils, which are the most productive in terms of crop production, is a critical issue in any County planning effort. In Nebraska and other states where the major component of the economy is agricultural production, this issue of preserving prime cropland for future generations is a key component in planning for the future of any rural area.

Prime crop land soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to producing food, feed, forage, fiber and oilseed crops. Such soils have properties that are favorable for the economic production



of sustained high yields of crops. The soils need only to be treated and managed using acceptable farming methods. The moisture supply, of course, must be adequate and the growing season has to be sufficiently long. Prime cropland soils produce the highest yields with minimal inputs of energy and economic resources and farming these soils results in the least damage to the environment. Approximately 237,866 acres, or nearly 60% of the County, is considered prime cropland. A recent trend in land use in some parts of the County has resulted in the loss of some prime cropland to urban and industrial uses. The loss of prime cropland to other uses puts pressure on marginal lands, which generally are wet, more erodible, droughty or difficult to cultivate and less productive than prime crop land. If prime crop land is to be preserved for agricultural production, it would indicate that loss of such land through development of non-agricultural uses including residential, commercial, industrial and other non-agricultural developments must be avoided or at least minimized by providing other, more appropriate, locations for such uses.

**TABLE 20: PRIME CROP LAND SOILS WITHIN SYRACUSE, NEBRASKA**

<u>SOIL NAME</u>	<u>SOIL SYMBOL</u>	<u>TOTAL ACREAGE OF SOIL</u>	<u>PERCENT OF OTOE COUNTY, NEBRASKA</u>
<b>Colo silty clay loam</b> (0 to 1% slopes)	Co	1,430	.4%
<b>Judson silt loam</b> (0 to 2% slopes)	Ju	700	.2%
<b>Judson silt loam</b> (2 to 6% slopes)	JuC	18,520	4.7%
<b>Kennebec silt loam</b> (0 to 1% slopes)	Ke	1,770	.5%
<b>Kennebec-Nodaway silt loam</b> (0 to 4% slopes)	KnB	2,220	.6%
<b>Nodaway silt loam</b> (0 to 1% slopes)	Nc	5,240	1.3%
• <b>Nodaway-Colo Complex</b> (0 to 2% slopes)	Nd	35,400	8.9%
<b>Sharpsburg silty clay loam</b> (0 to 2% slopes)	Sh	1,160	.3%
<b>Sharpsburg silty clay loam</b> (2 to 5% slopes)	ShC	11,390	2.9%
<b>Sharpsburg silty clay loam eroded</b> (2 to 5% slopes)	ShC2	850	.2%
<b>Wymore silty clay loam</b> (0 to 2% slopes)	Wt	9,840	2.5%
<b>Wymore silty clay eroded</b> (2 to 7% slopes)	WtC2	122,146	30.8%
• <b>Zook silty clay loam</b> (0 to 1% slopes)	Zo	15,300	3.9%

Source: Soil Survey of Otoe County, Nebraska, United States Department of Agriculture Service in cooperation with University of Nebraska, Conservation and Survey Division

• denotes prime crop land areas only where properly drained

SYRACUSE, NEBRASKA ▪ COMPREHENSIVE DEVELOPMENT PLAN ▪ 2015



---

Development of large scale confined livestock feeding operations, in areas where these prime soils occur, would result in the loss of notable quantities of this very productive cropland. Thus these operations should be permitted to occur only when the long-term economic gain is determined to be greater than the long-term economic loss of the prime croplands. It should also be noted that several soils categorized as prime crop land have other environmental limitations which should prohibit or at least restrict the development of non-agricultural uses, including confined livestock feeding operations. The limitations include the potential for flooding, high water tables and strong erosion potentials.

Table 20 lists the prime cropland soils within the County. As indicated by this Table, 60.2% of the land within the County is considered to be prime cropland. 13.5% of this total is considered prime crop land only where the soils are properly drained and where frequent flooding or ponding does not occur. The majority of this land is located along the Missouri and Nemaha Rivers and their tributaries. Figure 8 details the location of the prime cropland soils within Otoe County.

#### ***SOILS LIMITATIONS***

As detailed in Table 21, there are numerous soils located in Otoe County, Nebraska which should be avoided by non-agricultural development and large livestock operations due to the potential for environmental damage. These limitations include such problems as flooding, as well as, other factors that increase the potential pollution of surface or groundwater through run-off and/ or seepage into high water tables.

The environmental hazard factors indicated in Table 22 are designed to provide the Planning Commission and County Officials with an indication of potential environmental problems associated with various uses which may be proposed in different areas of the County. These factors can be explored in detail prior to a determination of whether a use is appropriate in a given area.

These environmental hazard factors, which are linked to the soil types, are mapped on six overlays according to the type of use proposed. The overlays are placed over the Prime Crop Land Map to demonstrate the relationship and limitations of prime crop land and non-prime crop land with regard to the land development. Again, the overlays were created to provide the Planning Commission and County Officials the ability to provide a general evaluation of the appropriateness of any proposed use in any area with environmental limitations.

It is important to note that there are several factors that should be examined within Otoe County as continued rural non-farm development occurs or as the existing urban areas expand. Many of the soils in the County have limitations to septic tanks and tile fields. Therefore, dense development on these soils could create substantial problems in future years. Areas with high degrees of slope are also not conducive to dense non-farm development due again to the potential of environmental damage created by the lack of adequate sewage utilities.

**TABLE 21: ENVIRONMENTAL HAZARDS FOR VARIOUS LAND USES, SYRACUSE****Environmental Hazard Codes**

1 --FLOODING	2 ---HIGH WATER TABLE (LESS THAN 6 FEET)
3 --DEGREE OF SLOPE	4 ---EXCESSIVE SEEPAGE
5 --WETNESS / PONDING	6 ---SLOW PERCOLATION RATE
7 --POOR FILTER	8 ---DEPTH TO ROCK

**POINT OF REFERENCE**

ENV. FACTORS ENVIRONMENTAL FACTORS THAT LIMIT DEVELOPMENT OF VARIOUS LAND USES  
(INDICATED AS A NUMBER IN ACCORDANCE TO THE ENVIRONMENTAL HAZARD CODE PROVIDED)

LIMIT LEVEL LEVEL OF LIMITATION THAT SUCH ENVIRONMENTAL FACTORS HAVE ON THE VARIOUS LAND USES

**ENVIRONMENTAL HAZARDS FOR VARIOUS LAND USES**

SOIL TYPE	DWELLING WITH BASEMENT (Fig. 9)	SEPTIC TANK ABSORPTION FIELD (Fig. 10)	SEWAGE LAGOON (Fig. 11)	COMMERCIAL / INDUSTRIAL STRUCTURES (Fig. 12)
(Co) COLO (0 TO 1% SLOPES) ENV FACTORS LIMIT LEVEL	1,5 SEVERE	1,2,5 SEVERE	1,2,5 SEVERE	1,5 SEVERE
(JuC) JUDSON (2 TO 6% SLOPES) ENV FACTORS LIMIT LEVEL	- SLIGHT	- SLIGHT	3,4 MODERATE	3 SLIGHT
(Ke) KENNEBEC (0 TO 1% SLOPES) ENV FACTORS LIMIT LEVEL	1 SEVERE	1,5 SEVERE	1 SEVERE	1 SEVERE
(KnB) KENNEBEC- NODAWAY (0 TO 4% SLOPES) ENV FACTORS LIMIT LEVEL	1 SEVERE	1,5 SEVERE	1,5 SEVERE	1 SEVERE
(Nc) Nodaway (0 TO 1% slopes) ENV FACTORS LIMIT LEVEL	1,5 SEVERE	1,5 SEVERE	1,5 SEVERE	1,5 SEVERE
(Nd) Nodaway-Colo Complex (0 to 2% slopes) ENV FACTORS LIMIT LEVEL	1,5 SEVERE	1,5 SEVERE	1,5 SEVERE	1,5 SEVERE
(SH, SHC, SHC2) SHARPSBURG (0 TO 5% SLOPES) ENV FACTORS LIMIT LEVEL	- SLIGHT	6 MODERATE	3,6 MODERATE	3 MODERATE
(SHD2) SHARPSBURG (5 TO 11% SLOPES) ENV FACTORS LIMIT LEVEL	3 SEVERE	3,6 SEVERE	3 SEVERE	3 SEVERE
(Wt) WYMORE (0 TO 2% SLOPES) ENV FACTORS LIMIT LEVEL	5 SEVERE	6 SEVERE	- SLIGHT	5 SEVERE
(WtC2) WYMORE (2 TO 7% SLOPES) ENV FACTORS LIMIT LEVEL	5 SEVERE	6 SEVERE	3 MODERATE	3,5 SEVERE
(Zh) ZOE (0 TO 1% SLOPES) ENV FACTORS LIMIT LEVEL	1,5 SEVERE	1,5,6 SEVERE	1 SEVERE	1,5 SEVERE
(Zo) ZOOK (0 TO 1% SLOPES) ENV FACTORS LIMIT LEVEL	1,5 SEVERE	1,5,6 SEVERE	1 SEVERE	1,5 SEVERE

SOURCE: SOIL SURVEY OF OTTOE COUNTY, NEBRASKA, UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE IN COOPERATION WITH UNIVERSITY OF NEBRASKA, CONSERVATION AND SURVEY DIVISION

\* Data regarding confined livestock feeding interpolated by Stahr & Associates, Inc. & J E O Consulting Group, Inc.

**FIGURE 16: DWELLINGS WITH BASEMENTS**

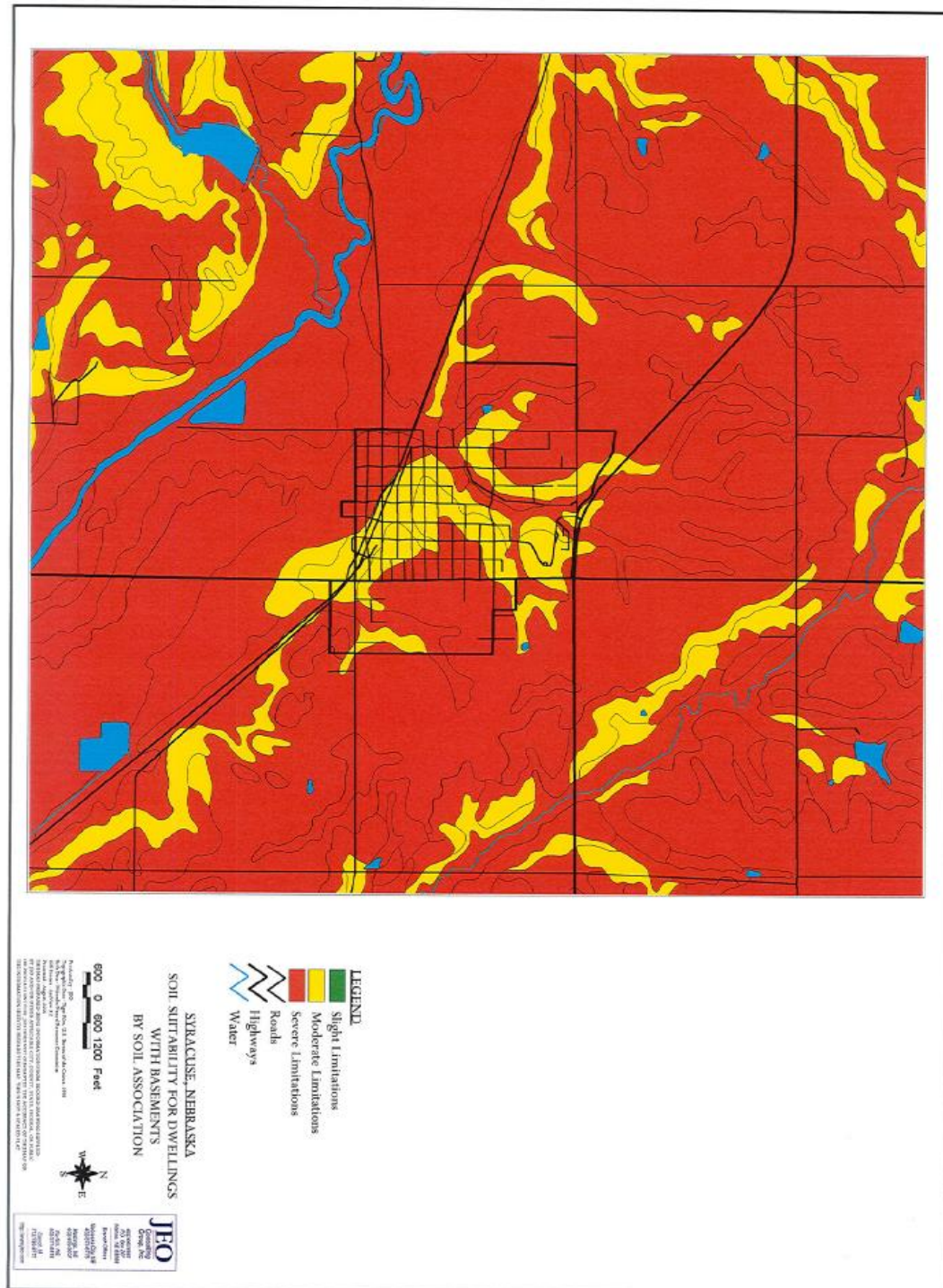
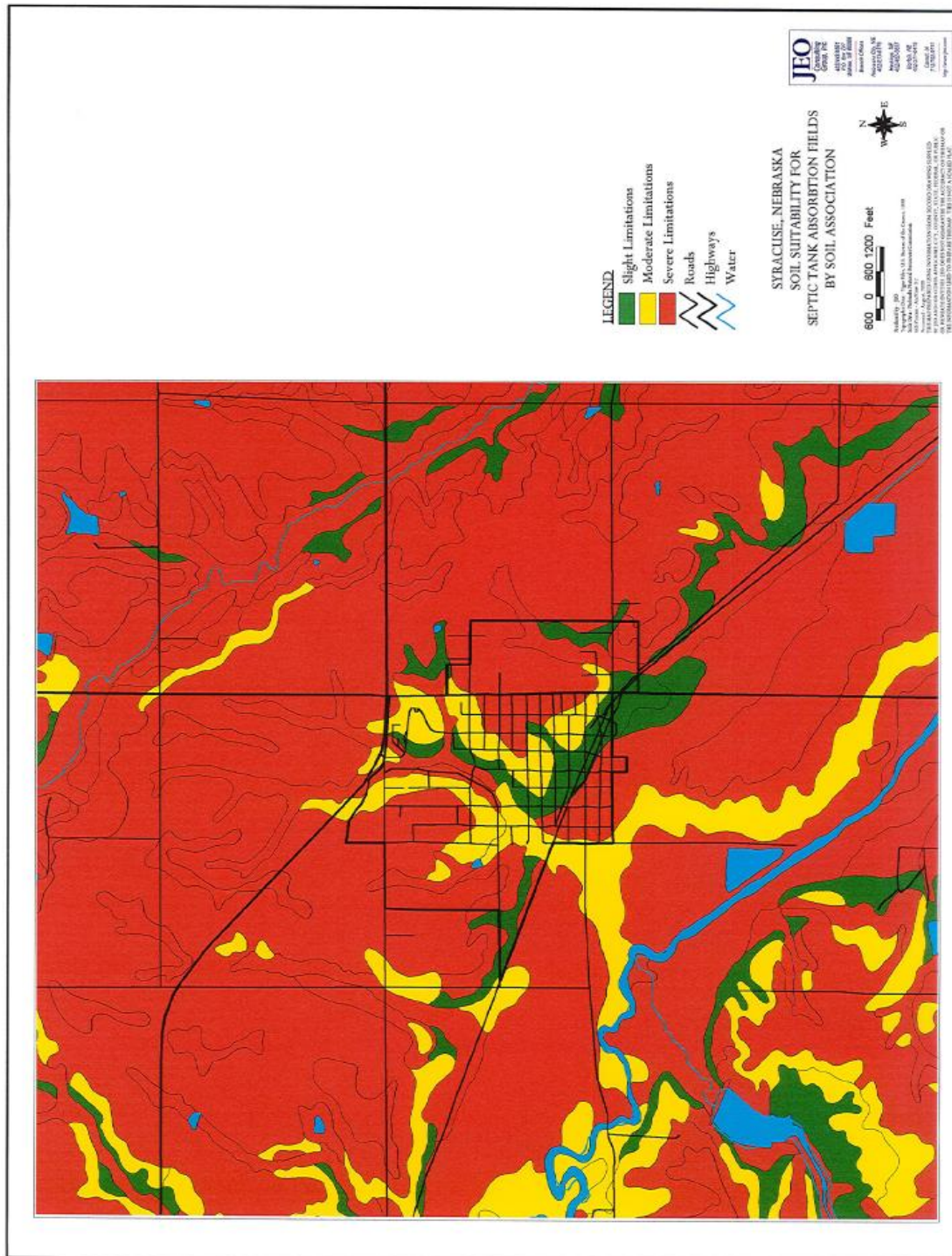
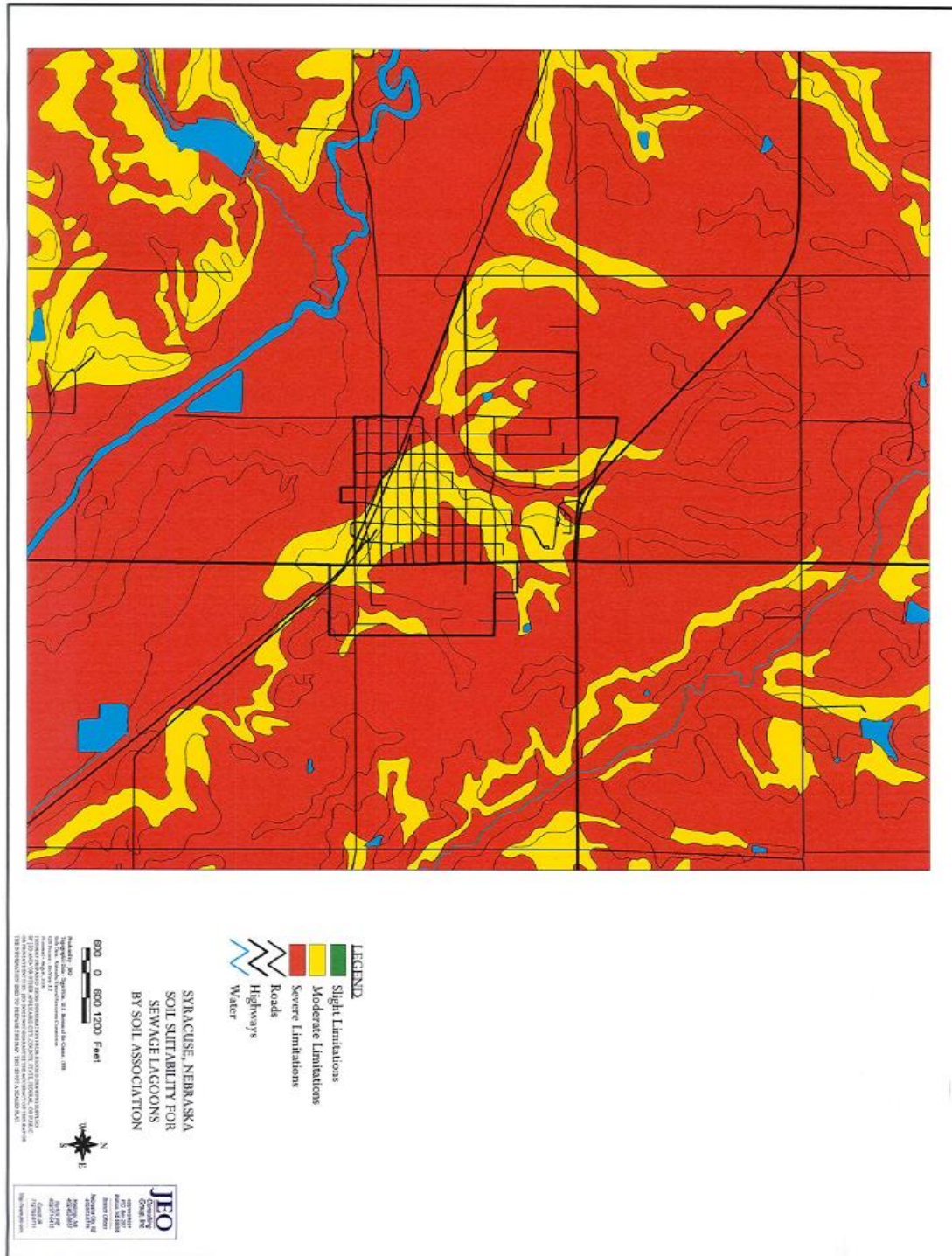




FIGURE 17: SEPTIC TANK ABSORPTION FIELD

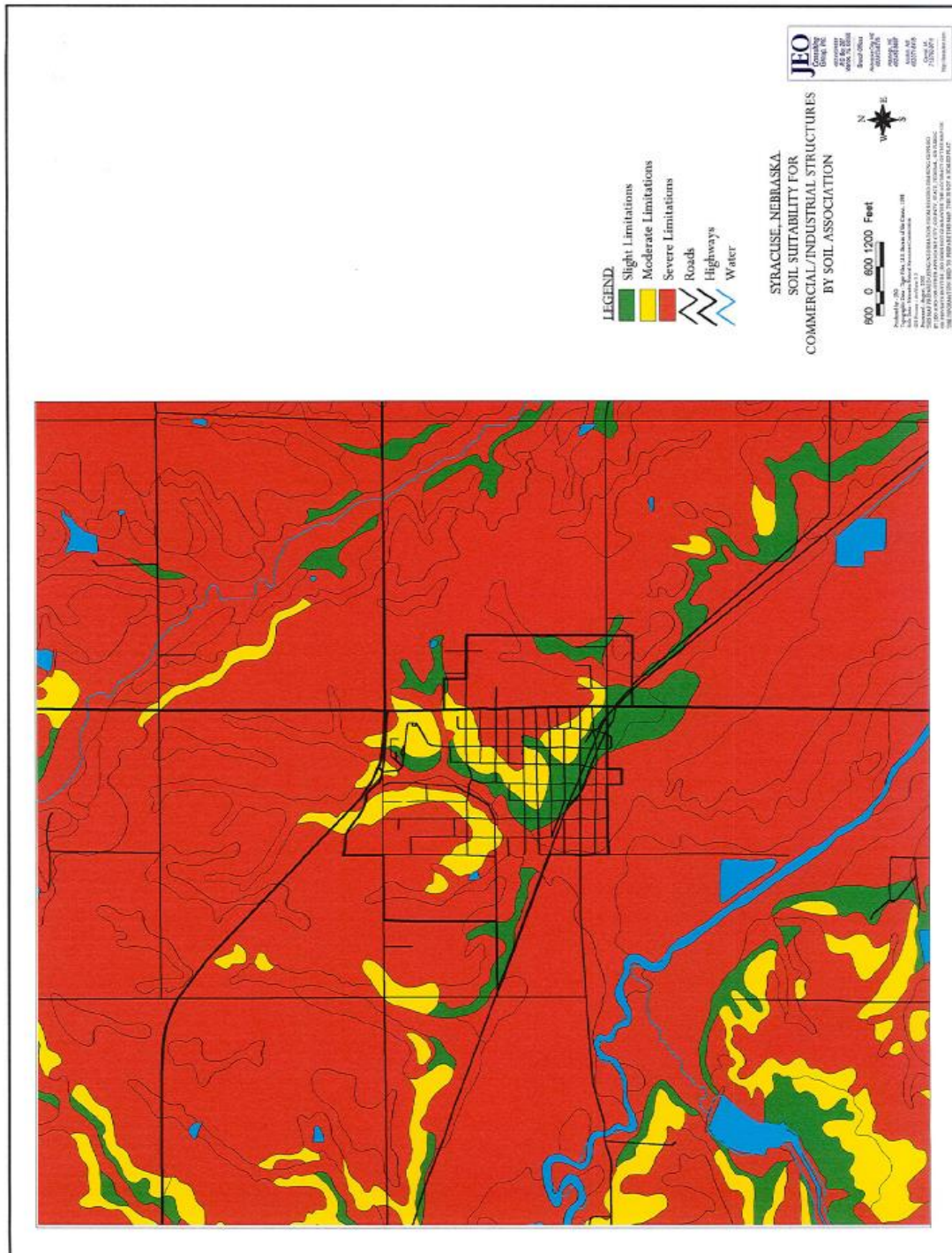


**FIGURE 18: SEWAGE LAGOON**





**FIGURE 19: COMMERCIAL/INDUSTRIAL STRUCTURES**





---

## **TOPOGRAPHY AND DRAINAGE**

Otoe County, Nebraska can be identified by long, gradual slopes located on the north side of stream valleys and short, steep slopes on the south side that are generally shallow; however, in places they are sharply cut and have short, steep grades. The steepest slopes in the County are on the uplands and other steep areas, which adjoin the bottomlands of some streams. Most of these areas are narrow strips. Figure 20 details the location of slopes with Otoe County that are in excess of 15% to show areas where severe limitations to future development exist. The bottom lands range in width from a few rods along the smaller streams to nearly 2 miles along the Little Nemaha and Missouri Rivers. The highest elevation is located on the upland divide between the Little Nemaha and Big Nemaha Rivers in the southwestern part of the County. The lowest elevation is in the southeastern corner of the County along the Missouri River.

Drainage in Otoe County is chiefly southeastward. The County has a number of major and minor streams, each is fed by many tributaries. The Little Nemaha River flows southeastwardly across the central part of the County and receives approximately 85% of the surface run-off in the County. The principal tributaries include the North and South Forks of the Little Nemaha River and the Muddy, Russel, Owl, Silver, Hooper, Brownell, Sandy and Rock Creeks. Most of the water from the rest of the County is carried eastward directly to the Missouri River by Camp, Four Mile, Walnut and Table Creeks and northward to Weeping Water Creek by small streams. Nearly all of the rivers and major creeks flow constantly, except during prolonged droughts.

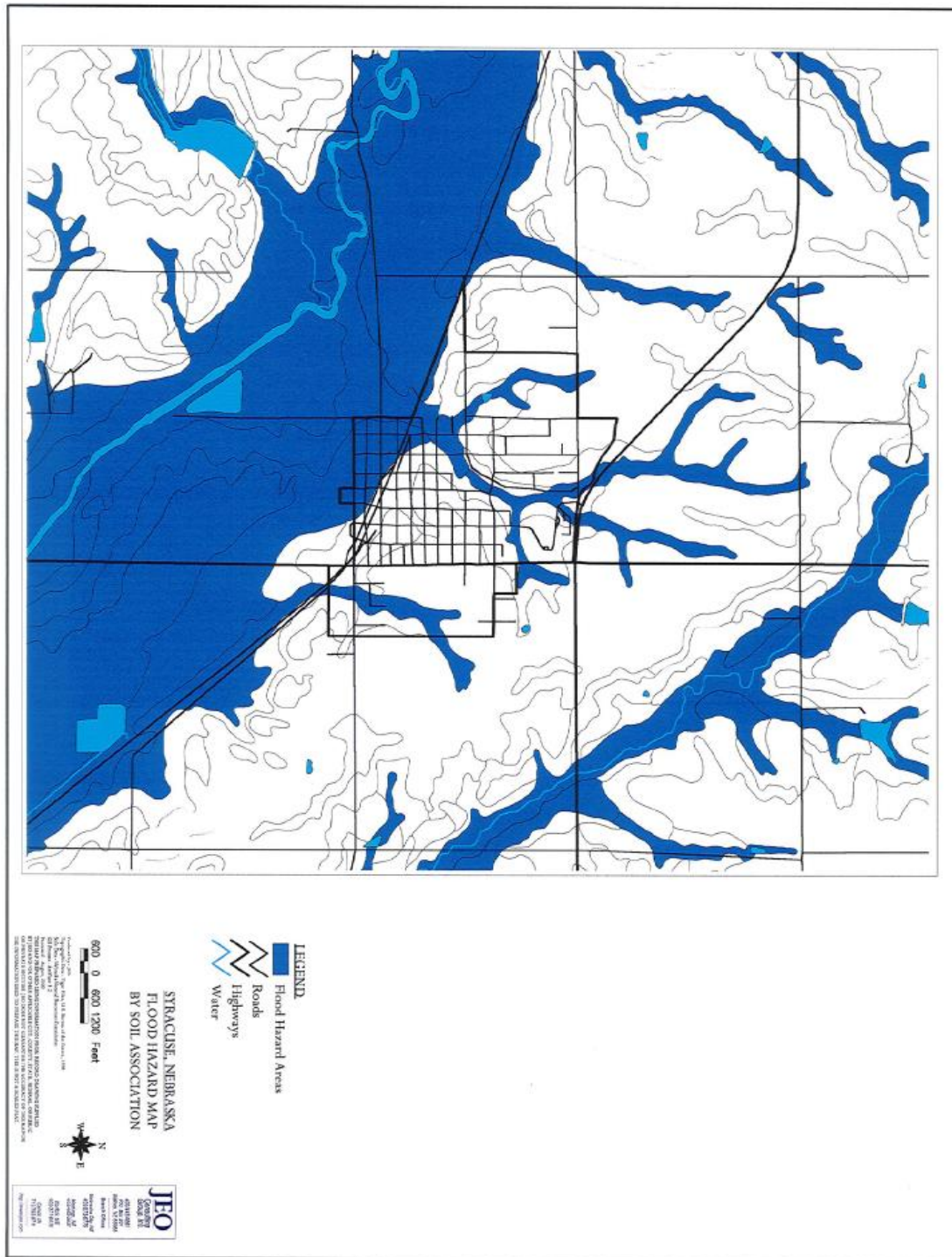
## **FLOOD HAZARDS**

There are 15 primary areas in the County, which are subject to flooding. As indicated on Figure 14, these areas include: 1) the areas of the Little Nemaha River which traverses Otoe County; 2) areas along the South Fork of the Little Nemaha River throughout the County; 3) areas along the North Fork of the Little Nemaha River throughout the County; 4) areas near Muddy Creek located in the south-central portion of the County; 5) areas along Rock Creek located in the southeast portion of the County; 6) areas near Wilson Creek located in the north-central portion of the County; 7) areas along Hooper Creek located northeast of the Village of Palmyra; 8) areas near Spring Creek located in the south-central portion of the County; 9) areas along Weeping Water Creek located in the northern portion of the County; 10) areas near Flood Creek located in the northern portion of the County; 11) areas near Walnut Creek located north of Nebraska City; 12) areas along Owl and Wolf Creeks three miles before they feed into the Little Nemaha River; 13) land surrounding North and South Table Creeks within and around Nebraska City; 14) areas surrounding Three Mile Creek located south of Nebraska City and 15) areas along the Missouri River along the eastern border of the County.

SYRACUSE, NEBRASKA ▪ COMPREHENSIVE DEVELOPMENT PLAN ▪ 2015



**FIGURE 21: FLOOD HAZARD AREAS**



---

Due to the flooding hazard in these areas, building and structure development of these areas should be avoided. In addition, development of sewage disposal systems, lagoons or confined livestock feeding operations, which would seep or drain into the surface or ground waters in these areas should be strongly prohibited.

Flooding along the creeks running near or through Nebraska City and through the Villages within the County does occasionally occur, especially during periods of high rainfall in the upland areas which then drains rapidly into the creeks which run in or near the urban areas. The location of the floodways also impacts the direction of growth for the urban areas.

### **WATER SUPPLY AND WATER QUALITY**

Otoe County is located within a groundwater region known as the Nebraska Glacial Drift. Glacial till of low permeability mantles most of the region. Deposits of sand and gravel in buried valleys and along stream valleys are areas where groundwater can be located. Groundwater quantities in these areas are, however, limited. Sandstones of the Dakota Group are another source of groundwater. The shales and sandstones of the Dakota Group underlie much of the region with older shales and limestone located in the southeast. In some locations, groundwater in the Dakota Group is very salty. The Dakota Group sediments are extremely variable and prediction of yields from this group is difficult.

The quantity of the groundwater in Otoe County is somewhat limited and in some areas vulnerable to environmental damage due to the high water tables. In addition, as described below, groundwater in the County has certain negative traits that limit its use. Due to this fact, many area farms rely upon rural water pipeline transport of water for domestic use and many local ponds and streams serve to provide water for livestock. Wells within Otoe County generally provide adequate quantities of water for domestic use in rural areas but the quality of such water, although not harmful, may be less than desirable.

In Otoe County there are large concentrations of total dissolved solids (TDS) in the groundwater. There are three concentration zones within the County. These three zones include 201-500 milligrams per liter, 501-1000 milligrams per liter and greater than 1000 milligrams per liter. The majority of the County is located in the 501-1000 milligrams of solids per liter of water zone. The second largest zone is that of the greater than 1000 milligrams per liter zone. These solids consist of calcium, magnesium, sodium, potassium, bicarbonate, sulfate and chloride. The main reason for these high concentrations is due to the fact that there are river valleys within Otoe County. These areas have been affected by seepage from rivers. The rivers may have been enriched in total dissolved solids by evapotranspiration, which is the process where water is transmitted, as a vapor, to the atmosphere as the result of evaporation from any surface and transpiration of plants, and by irrigation return flows. The U.S. Department of Health recommends a limit of 500 milligrams per liter of TDS in drinking water, thus the groundwater in many areas of Otoe County is potentially unhealthy.

---

It is important to note that, although the concentration of total dissolved solids serves to indicate the level of mineralization of water in the groundwater reservoir, this is only one aspect of water quality. TDS is not an indicator of health-related contaminants, such as nitrates, radioactive and non-radioactive metals and organic compounds. Therefore, analysis of specific potential contaminants in the wells within Otoe County is warranted when there may be a health concern related to water.

The transmissivity, which measure's of ability of an aquifer to transmit water (primarily to wells), of the groundwater within Otoe County is minimal compared to the State of Nebraska. Transmissivity in Otoe County occurs, on average, at a rate of 0 to 20,000 gallons per day per foot. Usually where transmissivity values exceed 20,000 gallons per day per foot, wells can be developed with yields adequate for some types of irrigation. Since Otoe County has such low levels of transmissivity very few wells exist within the County and, as a result, the development of center-pivot irrigation systems in the County has been very limited

The availability of large quantities of water is an important ingredient for livestock production, crop irrigation and some industrial uses. High water tables in some areas of the County limit development of industrial uses, concentrated rural housing developments and confined livestock feeding operations due to the substantial potential for contaminating the groundwater. In addition, the lack of adequate supply of quality groundwater in the western two-thirds of the County and the low levels of transmissivity of the groundwater substantially impair the ability to develop larger rural subdivisions for concentrated rural housing in this area. Groundwater is available in larger amounts in the eastern one-third of the County and is more conducive to larger-scale development projects.

#### **AIR QUALITY**

Air quality in the rural areas of Otoe County can generally be considered excellent as the large amount of undeveloped land with its natural cover and the crop land cultivation techniques used in the area provide adequate ground cover to minimize air pollution from wind blown soils. The only notable air contamination issue in the rural areas of Otoe County is that of the odors produced and emitted from larger livestock operations, specifically hog operations. These uses, although limited in Otoe County and only of limited size, do emit varying levels of odor depending upon to a large extent on the size and type of feeding operations and the management of the manure produced. These operations are located south of Syracuse, near the Village of Palmyra and west of the Village of the Talmage.

The issue of odors produced by livestock operations is one of the main reasons many Counties have developed Comprehensive Development Plans and zoning regulations. It is an issue that will be addressed in the zoning regulations for Otoe County in order to minimize the conflicts between the livestock feeder and / or industry and neighboring property owners. Although it is technically impossible to eliminate most all odor production from the confined livestock feeding uses, as well as, odors emitted from open lot livestock feeding uses; and thus unrealistic to indicate that this issue can be totally resolved. It is, however, possible to minimize this conflict through requirement and / or encouragement of manure handling practices which will minimize odor production and through

---

development of minimum spacing or distance standards between any such confined livestock feeding operation and adjoining residential, public and / or other non-agricultural uses.

### **MAN-MADE CONDITIONS**

#### **REGIONAL LOCATION AND PHYSICAL BACKGROUND**

Otoe County, Nebraska is located in the southeastern portion of the State of Nebraska. The State of Iowa on the east borders it, across the Missouri River. The County covers an area of 396,416 acres. It is important to note that the location of the Missouri River along the eastern edge of Otoe County has and will continue to strongly impact land uses on the eastern periphery of the County and thus needs to be addressed both in the Comprehensive Development Plan, as well as, within the zoning regulations for the County.

According to the United State Census of Agriculture, approximately 72% of the acreage of the County is cropland, approximately 3% is woodland, 16% is other farmland and the remaining 9% is non-farm land and / or areas of urban development. As can be seen, agriculture is the main economic enterprise in Otoe County with most farms being the cash-grain or diversified grain-livestock type. Since agricultural production in Otoe County is the predominant economic activity and the majority of the County is rural, the existing agricultural areas should be protected.

#### ***Past Development Trends***

The presence of man-made features has and will continue to influence development within Otoe County and the urban areas within the County. The location of the Little Nemaha and Missouri Rivers was the primary determining factor in the settlement of the urban areas of the County. The settlement of the urban areas was then further impacted by the development of the railroad and finally, by the development of the highways serving the County.

Development of man-made land uses in the rural areas of Otoe County has been limited primarily to agricultural related uses, including rural homes and outbuildings. However, due to Otoe County's close location to the cities of Lincoln and Omaha and due to the expanding urban area in the County, especially Nebraska City, the demand for and the development of rural areas has been increasing. In several instances the residential subdivisions that have occurred have not taken the proper precautionary steps to ensure that concentrated development can occur in areas with environmental hazards. In addition, many of these rural development projects have not properly examined the public service impacts that they may create, such services include fire and police protection, as well as, emergency transportation. This man-made land use trend is one in which the local governing bodies will need to establish definite policies on and / or limitations for in order to avoid substantial negative impacts in the future.

Industrial development, including the construction of confined feeding operations, within Otoe County has been minimal. The majority of industrial development has been located near the urban areas of the County, along the Missouri River and / or along the major highways.

---

Development of man-made land uses in the urban areas has followed different patterns depending on the relationship of the urban area to a creek or river or major transportation route. In the instance of Nebraska City, growth has been in a fan shape away from the Missouri River to areas along and near the J. Sterling Morton Beltway. Growth in the Villages has also occurred in fan shape away from the Little Nemaha River and in the instances of Palmyra and Unadilla has expanded towards State Highway 2.

***Transportation System Impacts***

The major transportation components in the County consist of U.S. Highway 75 and State Highways 2, 43, 50, 67, and 128. The railroad systems within Otoe County include the Union Pacific, Burlington Northern and the Missouri Pacific rail lines all of which run through Nebraska City. The major highway within the County is State Highway 2. State Highway 2 is a four lane divided highway that allows access from Lincoln to Nebraska City, as well as, further east to connect within I-29 or local highways within Iowa. The remaining highways serve to provide access to the Villages in Otoe County that are not located near State Highway 2. The majority of these minor highways, directly or indirectly, connect with State Highway 2. This highway network provides excellent access to each of the urban areas in the County, as well as, providing convenient farm to market roadways for all areas of the County.

Virtually all commercial and industrial uses in the County occur near these major roadways, typically in or near the urban areas of the County. With the recent construction of the J. Sterling Morton Beltway the demand for additional commercial and industrial development along this roadway will increase over the next decade. The location of the highways, specifically the location and improvement of State Highway 2 and the location of the J. Sterling Morton Beltway, has and will continue to impact the development of the urban areas in the County. These highways provide the primary determinant for the location of industrial uses in these urban areas.



---

**GOALS, ISSUES,  
AND POLICIES**  
*(UPDATED 2015)*



---

## GOALS, ISSUES, AND POLICIES

Planning for the future of counties is an ongoing process of goal setting and problem solving that aim to bring about livable places. Planning focuses on ways of solving existing problems facing the county, as well as providing a powerful tool people can use to achieve their vision for the future.

Visioning is a process of evaluating present conditions, identifying problem areas, and bringing about a community-wide consensus on how to overcome existing problems and manage change. By learning about its strengths and weaknesses, a community can decide what it wants to be, and then develop a plan that will guide decisions toward that vision.

Because change is continuous, a community must decide the specific criteria they will use to judge and manage change. Instead of reacting after the fact to forces altering the community, residents armed with a strategic vision can better reinforce the changes they desire, and discourage changes detracting from the vision. Having a shared vision allows a community to focus its diverse energies and avoid conflicts in the present as well as the future.

The foundation of a comprehensive development plan is the section on goals and objectives. This is where citizen concerns and vision are translated into action statements that can be used to direct future growth and change within Syracuse. This is where a consensus on "what is good development?" and "how to manage change in order to provide the greatest benefit to the community at-large?" is formed. The Syracuse goals and objectives attempt to address various issues affecting the community and the questions of "what" and "how" we plan in the community.

**Issues** are items either positive or negative from the past, present and/or the future. Issues may represent present concerns needing to be continued or discontinued in the future. In all cases, issues are items affecting the quality of life within Syracuse.

**Goals** are desires, necessities and issues to be attained in the future. A goal should be established in a manner that allows it to be accomplished. Goals are the end-state of a desired outcome. Goals also play a factor in the establishment of policies within a community. In order to attain certain goals, objectives and/or policies within the city government may need to be modified or changed from time to time.

**Policies** are concerned with defining and implementing the broad goals of the Comprehensive Plan. Policies are a means to achieving the goals established by Syracuse. They are specific statements of principle or actions that imply a clear commitment that is not mandatory. Policies have three different elements:

- an end that needs to be achieved,
- a means by which to achieve that end, and
- an administrative mechanism by which the means are carried out

These policies will synthesize the information from the goals, as well as the responses from the participants of the Town Hall and Focus Group meetings in order to develop solutions that will achieve the goals of the Comprehensive

---

Plan. Therefore policies play an important role in the Comprehensive Plan because they are the actions that need to be taken to meet the goals.

The goals and policies assure the Comprehensive Plan accomplishes the desires of the residents in Syracuse. For this reason, this section of the Plan is a compilation of local attitudes generated through public meetings and workshops. If followed, development or improvements in the community will have a direct link to residents' stated interests. Therefore, these goals and objectives should be referred to as diligently as the Future Land Use Map or any other part of the Comprehensive Plan. Likewise, they should be kept up to date to truly reflect the current attitudes of the community and its residents.

It is important for Communities to establish their goals and policies in a manner that allows for both long-term and short-term accomplishments. The short-term goals and policies serve several functions:

- Allow for immediate feedback and success, which fuels the desire to achieve additional goals and better policies.
- Allow for the distribution of resources over time thus assuring a balanced use of public investment.
- Establish certain policies that need to take before the long-term goals can be accomplished.

### **Town Hall Meeting**

On Monday, January 17, 2000, a town hall meeting was held at a local bank in Syracuse in order to gather input on issues (both positive and negative) facing Syracuse. The group in attendance was asked to identify negatives and positives aspects of Syracuse. Then the group was asked to identify different issues needing to be addressed throughout Syracuse. Finally, the group was asked to name specific projects they desired to be completed in the next 5, 10, or 20 years. The group was then asked to prioritize the top three answers for each question.

Note the number of points for each question may differ due to the fact that not all residents prioritized three concerns for each question or they used all of their points to indicate one major problem that needed action. In addition, not every resident of Syracuse will agree with the order of these issues or that these were all the aspects of the Community that should have been listed, but this was taken from the participants at the town hall meeting. Another detail of note, not all issues indicated have goals and policies identified since they do not have bearing on the land use of the Community. The Community, through the appropriate governing body should attend to these issues not addressed by the goals and policies due to their specific nature.

### **Negatives**

Identified negative aspects for Syracuse are listed below. The biggest negatives for Syracuse indicated was the "no change attitude," with 16.4% of the total points, a "stagnate Main Street," with 16.4% of the total points, and "dead end streets in newer developments," with 15.2% of the total points. In all, the residents of Syracuse identified 19 negative aspects of their community. Not all of the aspects received points, but were still included in the list because they were concerns of the residents at the meeting.

Identified Negative Aspects of Syracuse	Corresponding Points/Percentage
No Change Attitude	13 points or 16.4%
Stagnate Main Street	13 points or 16.4%
Dead End Streets in Newer Developments	12 points or 15.2%
Interest by Public on City Operations	7 points or 8.9%
Opening Closed Streets	6 points or 7.6%
Sense of Community	6 points or 7.6%
Coordination of Organizations	6 points or 7.6%
Lack of Creativity/Flexibility in Zoning	6 points or 7.6%
Cost to Expand Infrastructure	4 points or 5.1%
Regulations for Home-Based Businesses	3 points or 3.8%
Main Street Theme	2 points or 2.5%
Elementary School versus ADA	1 point or 1.2%
Too Dull	0 points or 0.0%
Parking on-street or no parking	0 points or 0.0%
Coffee Shop gossip	0 points or 0.0%
Signage-Welcome and Guidance	0 points or 0.0%
No outside attractions	0 points or 0.0%
Good Highways to Larger Cities	0 points or 0.0%
Substance Abuse Problem	0 points or 0.0%
<b>Total</b>	<b>79 points or 100.0%</b>

### Positives

Next, area residents were asked to list the positive aspects of their community. In all, 38 items were listed as positive points of Syracuse. The issue that Syracuse residents thought was the most positive aspect of their community was the “location” of their community with 15.9% of the total points. Their fire department and rescue squad received the second most points with 13.8% and their park and recreation programs received 8.5% of the points. Because each positive aspect was important to the residents of Syracuse, they all were listed, even if the issue did not receive any points.

Identified Positive Aspects of Syracuse	Corresponding Points/Percentage
Location	15 points or 15.9%
Fire Dept./Rescue Squad	13 points or 13.8%
Park & Recreation Program	8 points or 8.5%
Good Schools	6 points or 6.3%
Hospital	5 points or 5.3%
Good Volunteers	5 points or 5.3%
Hard Surfaced Streets	5 points or 5.3%
Clean Community	4 points or 4.2%
Growing versus Shrinking	4 points or 4.2%
Population-not too small or too big	3 points or 3.2%
Home Ownership	3 points or 3.2%
School's Growth Capacity	3 points or 3.2%
Developers willing to spend money	3 points or 3.2%
Good City Core	3 points or 3.2%
Good Infrastructure	2 points or 2.1%
Good Organizations/Networks	2 points or 2.1%
Low Crime Rate	2 points or 2.1%
Golf Course	2 points or 2.1%
Some Industry in Town	2 points or 2.1%
Basic Needs in Town	1 point or 1.0%
Good Doctors	1 point or 1.0%
Highways to Larger Cities	1 point or 1.0%
Moderate Housing Stock	1 point or 1.0%
Controlled Growth	0 points or 0.0%
Good Neighborly People	0 points or 0.0%
Good Library	0 points or 0.0%
Willingness to Open Businesses	0 points or 0.0%
City/Ag Relationship	0 points or 0.0%
Implement Dealer	0 points or 0.0%
Bike Path	0 points or 0.0%
Financial Soundness	0 points or 0.0%
Opportunities to get involved	0 points or 0.0%
Fairgrounds/Kimmel Hall	0 points or 0.0%
Proud of Homes	0 points or 0.0%
Various Meeting Halls	0 points or 0.0%
Streetscapes in neighborhoods	0 points or 0.0%
Churches	0 points or 0.0%
Floodplain-no floods	0 points or 0.0%
<b>Total</b>	<b>94 points or 100.0%</b>

### Issues

The third exercise undertaken with the residents of Syracuse was the identification of issues that needed to be addressed by their community. The first four issues that were ranked all received 9.3% of the total points and were the “need for good jobs,” “continuing need for qualified people to work for the City,” “housing,” and the “drainage problem in and around Syracuse.” Overall, there were 28 issues identified as important to the well being of the residents of Syracuse. Not all of the issues listed received points, but they were still listed in the table below because the residents pointed them out during the meeting.

Identified Issues for Syracuse	Corresponding Points/Percentage
Need for Good Jobs	8 points or 9.3%
Continuing Need for Qualified People to work for the City	8 points or 9.3%
Housing	8 points or 9.3%
Drainage Problem	8 points or 9.3%
Clear Concise Plan for Development	7 points or 8.1%
Elderly Housing	7 points or 8.1%
Land Use Policy versus Market Demand	6 points or 7.0%
Street Widths	6 points or 7.0%
Sidewalks	5 points or 5.8%
Lack of Recreational Facilities	5 points or 5.8%
School Expansion	4 points or 4.6%
Drainage through Town	3 points or 3.5%
Community-Technical Diversity	3 points or 3.5%
Highway Commercial vs. Downtown Commercial	2 points or 2.3%
Loosen Budget Lid	2 points or 2.3%
Expansion of Hwy 50 to 4 lanes	2 points or 2.3%
Zoning Procedures Manual	1 point or 1.2%
Building Heights	1 point or 1.2%
Hospital Expansion with Town Growth	0 points or 0.0%
Subdivision Agreements/Cost Sharing	0 points or 0.0%
Parking	0 points or 0.0%
Railroad Crossing Signals	0 points or 0.0%
Type of Signs to Allow	0 points or 0.0%
Fences	0 points or 0.0%
Mobile Home Parks	0 points or 0.0%
Future Transportation Issues	0 points or 0.0%
Communication	0 points or 0.0%
Police/Public Safety	0 points or 0.0%
<b>Total</b>	86 points or 100.0%

### Projects

The last exercise done with the Syracuse residents that evening was the identification of projects for Syracuse. In all, 8 projects were identified as extremely important for the quality of life for Syracuse residents. Syracuse citizens indicated completing their drainage project as the most important project, with 32.5% of the total points. Building a sports complex with a pool and building an assisted living project both had 15.1% of the total points. One of the items on the list did not receive points but was included in the list because it was brought up in the meeting.

Identified Projects for Syracuse	Corresponding Points/Percentage
Drainage Project Completed	28 points or 32.5%
Sports Complex with Pool	13 points or 15.1%
Assisted Living Project	13 points or 15.1%
Replace old sidewalks downtown by Civic Groups	12 points or 13.9%
Promote Syracuse to attract people	10 points or 11.6%
Library Expanded & Accessible	7 points or 8.1%
Activities to Build Community	3 points or 3.5%
Beautification- extension of streetscape work completed	0 points or 0.0%
<b>Total</b>	86 points or 100.0%

---

This exercise was important in that it allowed the public an opportunity to express specific concerns about the community. The data from the exercise was organized into general categories with goals and objective for each area.

### **Focus Group Meetings** *(Updated 2015)*

On October 15, 2014 the consultant hosted two Focus Group meetings revolving around central issues facing the community. Specific interests in both Housing and Economic Development were sought to participate and provide vested input on these important matters. Invited participants included Realtors, developers, builders, bankers, city staff, chamber of commerce representatives, and members of the economic development committee. The sessions were well attended on the whole, and the input proved to be very valuable. The two focus groups yielded great information regarding community strengths, weaknesses, opportunities, and concerns.

#### **Community Strengths**

The overall community sentiment of the focus groups was very positive for the Syracuse community. Attendees greatly valued the quality of life and opportunities in and around Syracuse. Participants agreed that the geographic location of Syracuse – specifically its proximity to the Omaha, Lincoln, and Kansas City metro areas – provided a lot of economic opportunity for residents and local business.

There are several local amenities that directly contribute to a high quality of life. The hospital, schools, and municipal infrastructure were all highly valued in the focus groups. The participants stressed that these amenities are rare in a community the size of Syracuse. The only concern regarding the community’s infrastructure lied in the age of the comprehensive water system. However, by estimates shared during the meeting the water system is currently operating at just 70% of capacity.

The community’s ag-driven economy was viewed as a strength. A lot of credit for developing a high quality of life and strong economy was given to a “progressive” city government and leadership.

#### **Community Weaknesses**

While quickly identified as a positive, the geographic proximity to larger cities also proves to be a challenge for Syracuse. The larger communities prove to be competition for business, workforce, and public services.

#### **Desired Changes**

The focus of the conversation regarding community-wide desires was centered on housing development. The representation wanted to see additional housing options added to the community. Specifically, the housing focus group identified modern suburban-style housing developments in very high demand within Syracuse. These “2<sup>nd</sup> or 3<sup>rd</sup> homes” would range from \$150,000 to \$300,000 and contain 3-4 bedrooms with at least a 2-car garage and a walkout basement. Housing of this type was desired to be placed on two or three acre parcels. It was felt that the availability of traditional “starter homes” was sufficient and even exceeded demand.

---

Stormwater management and floodplain issues also affect the community. The focus groups indicated a need for grants for flood mitigation activity.

### Development Barriers

The barriers to implement these desired changes and other opportunities were discussed in detail. The cost and availability of developable land was the biggest barrier for residential and economic growth in Syracuse. There are a number of physical barriers that restrict outward growth of the community. Highway 2, running east/west to the north and Highway 50 running north/south within the city serve as access barriers in crossing those corridors. A floodplain bounds Syracuse to the South and Southwest.

The price of farmland on the periphery of the city is another barrier for growth. The market value of developable land is high enough that developers are unable to market lots at a price competitive with neighboring communities and the Metro areas. Infrastructure costs, especially streets, add to development costs and increase the market rate for residential lots.

A limited supply of office space was identified as a barrier for economic growth. The use of Tax Increment Financing has been successful in developing a business center. Participants encourage the continued use of TIF and other incentives for developing additional office space. The biggest challenge for economic development lies in attracting a skilled workforce. The proximity to the Omaha and Lincoln metro areas draws skilled workforce to jobs in the larger cities for higher wages. The economic development group is cautiously aware of the mining developments around Elk Creek. The creation of hundreds of relatively high wage jobs has the potential to draw existing workforce out of Syracuse.

### Economic Development Focus

According to the focus group participants, future commercial and industrial growth should be focused on the Highway 2 and 50 interchange as well as to the southwest of current corporate limits. Focused industry should revolve around manufacturing and value-added agriculture, with the possibility for a data center in the area. A large-scale employer of 100+ employees would replicate the community-success of Headwind Consumer Products. The consensus of the focus groups was that additional housing would be required to attract a major employer to the community. The participants agreed that the immediate priority for development should be on housing.

### Magic Wand

The consultant closed each focus group meeting by asking participants a “Magic Wand” question. Meaning, what would the participants implement in the community if cost were not a factor. A number of ideas were suggested, mostly centered on reducing barriers for development of housing. The first was to increase the capacity of water availability in the community. Directly related to housing was the desire for immediately available 90 X 150 foot lots at a reasonable price. A number of projects were identified to increase the safety of crossing Highway 50 – improving accessibility for residents on the east side of the highway.

Additional attractions and events were discussed as an opportunity to market the community to potential businesses, investors, and residents.

---

All other desires included strategies for lowering the cost of housing development in Syracuse. Receiving the most discussion was the potential for returning to the implementation of paving districts to share the cost of developing street infrastructure in new subdivisions.

For Syracuse, goals and policies are formulated under generalized categories or issues. These issues include:

- Conservation and Environment
- Economy and Economic Development
- Education
- Health and Safety
- Land Use
- Transportation and Energy
- Parks and Recreation

## **CONSERVATION AND ENVIRONMENT**

### **Goal**

Allow development in and around Syracuse while practicing good conservation and environmental sense.

### **Policies**

- Require developers to include good conservation practices when proposing new developments. These conservation practices should include, but not be limited to:
  1. Clustered subdivisions, which preserve existing areas that contain tree clusters, wetlands, floodplain, etc.
  2. Conservation Easements
  3. Preservation and limited development within the flood hazard area
  4. Development of detention and/or retention basins upstream from the Central Business District on Town Branch Creek in order to minimize future drainage impacts downstream.
- Develop Zoning Regulations that reward developers for implementing conservation controls.
- Work with outside public entities to ensure sound environmental quality when new development occurs.

## **ECONOMY AND ECONOMIC DEVELOPMENT**

### **Goal**

Strive to promote a balance of land uses; retail, wholesale, agricultural, commercial and manufacturing which will support the Syracuse residents now and in the future, thereby promoting economic stability.

### **Policies**

- Identify potential areas where an assisted living facility could locate in Syracuse.
- Actively promote Syracuse as a quality place to live near Omaha, Lincoln, and Nebraska City. These activities should take advantage of Syracuse's ability to be a quality Bedroom Community.



- 
- Expand tax base through continued development of new highway commercial developments and diversified industries.
  - Continue to expand the tax base by exercising the City’s Statutory authority of annexing new developments into the Corporate Limits upon approval of the Final Plat.
  - Market Syracuse to potential investors inside and outside the community to establish more commercial development along the Highway Corridor and in the Central Business District.
  - Explore options on constructing “Community Entrances” along Highway 50 and Highway 2.
  - Develop the ability to implement Tax Increment Financing (TIF) to aid in projects that would be beneficial to the entire community.
  - Create economic opportunities through workforce development, prioritizing housing development for workforce needs.

## **EDUCATION**

### **Goal**

Encourage and maintain a viable school and distance learning center in Syracuse.

### **Policies**

1. Cooperate with the school system in expanding public uses of educational facilities.
2. Establish entrepreneurship training and mentoring programs in Syracuse for citizens in and around the City, particularly targeting youth.
3. Utilize the school as a community learning center for all ages.

## **HEALTH AND SAFETY**

### **Goal**

Work with specific uses facing Syracuse regarding the Public Health and Safety concerns of the City.

### **Policies**

1. Continue to explore ways to recruit and keep quality volunteer firefighters and emergency management technicians.
2. Work with the hospital to expand medical services for short-term and long-term care.
3. Continue to support and purchase better fire protection and rescue equipment in order to provide the public the best service. Replacement of equipment should occur, as the existing equipment becomes older.
4. Complete drainage projects throughout the community and plan for future development by requiring detention and/or retention basins in all developments upstream from the older community center.
5. Examine the feasibility of improving the communication system for police and fire protection.
6. Study the possibility of placing an assisted living center within Syracuse.

---

## **LAND USE**

### **Goal**

Syracuse is to develop a set of land use and zoning regulations, which are sensitive to the natural resources of the community.

### **Policies**

1. Utilize development policies and regulations to manage future development so that it occurs in the most efficient and cost-effective manner, thus, spending tax dollars in a fiscally responsible manner.
2. Establish land use development districts that will identify areas of the community best suited for specific uses.
3. Develop a set of regulations sensitive to the environmental and drainage conditions of Syracuse.
4. Maintain and improve necessary amenities in order to attract and keep residents in Syracuse.

### **Residential Policies**

1. Maintain or improve the residential character of existing areas of the community through land use policies and regulations, as well as, assisting in the rehabilitation of older deteriorating structures.
2. Residential development should include a wide range of housing options, including the development of low- and moderate-income housing for the elderly.
3. New residential developments should be accompanied by covenants, which provide for the maintenance of common areas, easements and drainage ways.
4. New residential developments should not be approved without a subdivision agreement first being agreed upon and signed by both the developer and the City.
5. New subdivision developments should promote connectivity with the existing transportation infrastructure and limit the use of dead-end streets and cul-de-sacs. (*Updated 2015*)
6. Residential and other uses should be buffered from each other whenever possible through either distance or physical visual barriers.
7. Encourage the elimination of housing that is in a substandard condition through either restoration or demolition.
8. Establish manageable guidelines and regulate home-based businesses through zoning.

### **Commercial Policies**

1. Encourage the redevelopment of the downtown business district. The redevelopment should first include a comprehensive study that examines infrastructure (streets, sidewalks, water, sanitary sewer, lighting, and drainage), structure conditions, streetscape concepts, economic development opportunities... etc.
2. Discourage the expansion of strip development along major streets in Syracuse.
3. Permit the slow conversion of residential uses along Nebraska Highway 50 to office uses. This conversion should be done in a manner that respects the residential feel of the area. Conversion should make use of the existing residential structures while new construction should be designed to have a residential feel/appearance.
4. Provide the provision of pedestrian and vehicular access to all parts of Syracuse.
5. Actively pursue new professional, commercial and service businesses to locate in Syracuse.

- 
6. Pursue the possibility of expanding the current library of Syracuse. This should be done through either expansion on site of the existing the facility or newly constructed on a site to be determined.

### **Industrial Policies**

1. Pursue industrial businesses to relocate in Syracuse. Land use provisions should be made for this recruitment.
2. Broaden the type and number of industries located in Syracuse.
3. Industrial development shall be located as to minimize the negative impact on the environment and on other less intensive uses, as well as to minimize the costs of development.

## **TRANSPORTATION AND ENERGY**

### **Goal**

Develop, maintain and upgrade an efficient road system to serve current and future circulation and access needs.

### **Policies**

1. Develop policies within the Transportation Plan, as well as the Zoning and Subdivision Regulations that promotes efficient circulation patterns in new developments. New circulation patterns shall be created so to logically link up to existing circulation patterns.
2. New subdivision plats should reflect connectivity not only to existing development but in potential future developments identified in growth areas of the Future Land Use plans. This connectivity includes multiple ingress/egress into subdivisions. *(Updated 2015)*
3. Improve, develop, and maintain well-traveled roads with hard surfacing as identified in the City's One- and Six-Year Plan.
4. Minimize off-site advertising signs along Nebraska Highways 2 and 50.
5. Minimize the height of on-site advertising and pole signs.
6. Repair and improve sidewalk system to encompass major access points and residential neighborhoods.
7. Examine the feasibility of application of wayside horns at highway-railroad intersections to reduce noise near residential areas.
8. Study the parking issues in the downtown area and design standards for new developments to better suit the needs of the residents of Syracuse.

## **PARKS AND RECREATION**

### **Goal**

Continue to provide adequate recreational opportunities and add new developments when necessary for all sectors of Syracuse.

### **Policies**

1. Provide safe and unobstructed pedestrian and bicycle access to parks and fairgrounds.

- 
2. Provide adequate parks and recreational facilities that are accessible to all residents of Syracuse. This should be accomplished through two activities, 1) City development of parks, and 2) requiring developers, in some cases, to set aside land within their development for neighborhood parks.
  3. Utilize and expand existing trail system of Syracuse, as well as connect to the statewide trail system.
  4. Continue to promote the strong recreational activities currently taking place. As needed, increase/upgrade the facilities for these activities.
  5. Study the likelihood of placing a sports/aquatics complex within the community.
  6. Create a Citywide beautification program, which identifies needs for infrastructure (i.e. sidewalks, streets, right-of-ways) and parks and recreational purposes, as well as solutions to these needs.

---

## EXISTING LAND USE

---

## EXISTING LAND USE ANALYSIS

An analysis of the existing land uses is important in understanding potential needs for the future. Existing land uses were determined through visual survey of the community. Figure 15 indicates the existing land uses of Syracuse.

From this survey, the different uses are placed into categories, which are:

- Residential (single-family, multi-family, and mobile homes),
- Commercial (retail, office, etc),
- Industrial and Railroad,
- Public Right-of-Ways and Streets,
- Public/Semi-public,
- Parks/Recreation, and
- Vacant and Agriculture

Table 22 is divided into three columns, including the acres and percentages from the Field Survey conducted by JEO in 2000. Also included, are the percentages of the total corporate limits, as well as, the number of acres per 100 persons. The persons per acres establishes a baseline from which land use numbers can be equally compared from community to community as well as to project future land use needs due to population.

**TABLE 22: EXISTING LAND USE, SYRACUSE, 2000**

Type of Use	2000 Acres (% of total area)	Acres per 100 persons, (1998 estimates)
Residential	165.137 (27.28%)	9.731
<i>Single-family</i>	160.005 (26.38%)	9.428
<i>Multi-family</i>	2.789 (0.50%)	0.164
<i>Mobile Home</i>	2.343 (0.40%)	0.138
Commercial	42.667 (7.03%)	2.514
Industrial/Railroad	9.899 (1.60%)	0.583
Public/Semi-Public	45.814 (7.55%)	2.699
Parks/Recreation	83.118 (13.70%)	4.897
Streets and Alleys	140.017 (23.08%)	8.250
<b>Total Developed Land</b>	<b>486.652 (80.23%)</b>	<b>28.677</b>
Vacant/Agriculture	119.88 (19.76%)	7.064
<b>Total Area</b>	<b>606.532 (100.0%)</b>	<b>35.741</b>

Source: 2000 Syracuse Comprehensive Development Plan Update, JEO Consulting Group, Inc.

Based upon the survey of existing land uses and the base map of Syracuse, it was determined Syracuse had a total of 606.532 acres within its corporate limits. According to the land use survey, developed land within the present Corporate Limits equaled 80.23%. The remaining land was either Agricultural or Vacant and comprised the remaining 19.76% of the total. Table 23 indicates that Residential Uses comprised the largest portion within Syracuse's Corporate Limits with 27.28% of the total. Single-family represented 96.9% of the residential uses or 26.28% of the total. Streets and Alleys consisted of 23.08% of total developed land.

Table 22 also indicates that Syracuse had 35.74 acres of land per 100 persons within the Corporate Limits. This statistical analysis can be used to project future land use needs in Syracuse. Currently, Syracuse has a residential

total of 9.731 acres per 100 persons or approximately 1/10 of an acre per person. These figures can be used to determine existing and future density of land throughout the community.

Table 23 compares the land use components for Syracuse with three other communities of varying populations and land area. The density comparison of acres per 100 persons and the percentage of a use can be viewed as a comparison between the communities. The other three communities are North Bend, Ashland and Albion, all in Nebraska.

**TABLE 23: LAND USE COMPARISONS, SYRACUSE, 2000**

Type of Use	Syracuse <sup>1</sup> Acres (%)	North Bend <sup>2</sup> Acres (%)	Ashland <sup>3</sup> Acres (%)	Albion <sup>4</sup> Acres (%)
Residential	165.137 (27.3%)	125.50 (27.2%)	210.59 (30.5%)	180.15 (35.8%)
Commercial	42.667 (7.0%)	13.90 (3.0%)	15.95 (2.3%)	32.65 (6.5%)
Industrial/Railroad	9.899 (1.6%)	60.87 (13.2%)	41.93 (6.1%)	16.25 (3.2%)
Public/Semi-Public	128.932 (21.2)	54.29 (11.8%)	95.36 (13.8%)	70.06 (13.9%)
Streets and Alleys	140.017 (23.1%)	189.43 (41.0%)	153.60 (22.2%)	181.66 (36.1%)
<b>Total Developed Land</b>	486.652 (80.2%)	443.99 (96.2%)	517.43 (74.9%)	480.77 (95.5%)
Vacant/Agriculture	119.88 (19.8%)	17.92 (3.8%)	173.56 (25.1%)	22.88 (4.5%)
<b>Total Area</b>	606.532 (100.0%)	461.91 (100.0%)	690.98 (100.0%)	503.65 (100.0%)
Total Acres/100 persons	35.74	36.96	30.21	27.54

Source: <sup>1</sup>2000 Comprehensive Development Plan Update- JEO Field Survey

<sup>2</sup>1998 Comprehensive Development Plan Update- JEO Field Survey

<sup>3</sup>1997 Comprehensive Development Plan Update- JEO Field Survey

<sup>4</sup>1998 Comprehensive Development Plan Update- JEO Field Survey

Based upon the information in Table 23, Syracuse can be comparable to the other communities except in a few land use categories. The main items to review are residential, commercial, public/semi-public land use composition, and total acres per 100 persons. Syracuse, as previously mentioned has 27.3% of the land tied to residential uses. The other three communities range from 27.2% to 35.8%, thus Syracuse compares well to the other communities. Land tied to commercial uses in Syracuse equals 7.0%. Albion was the only other community that could be compared to Syracuse because 6.5% of their total land was used for commercial purposes. The other two communities ranged from 2.3% to 3.0%.

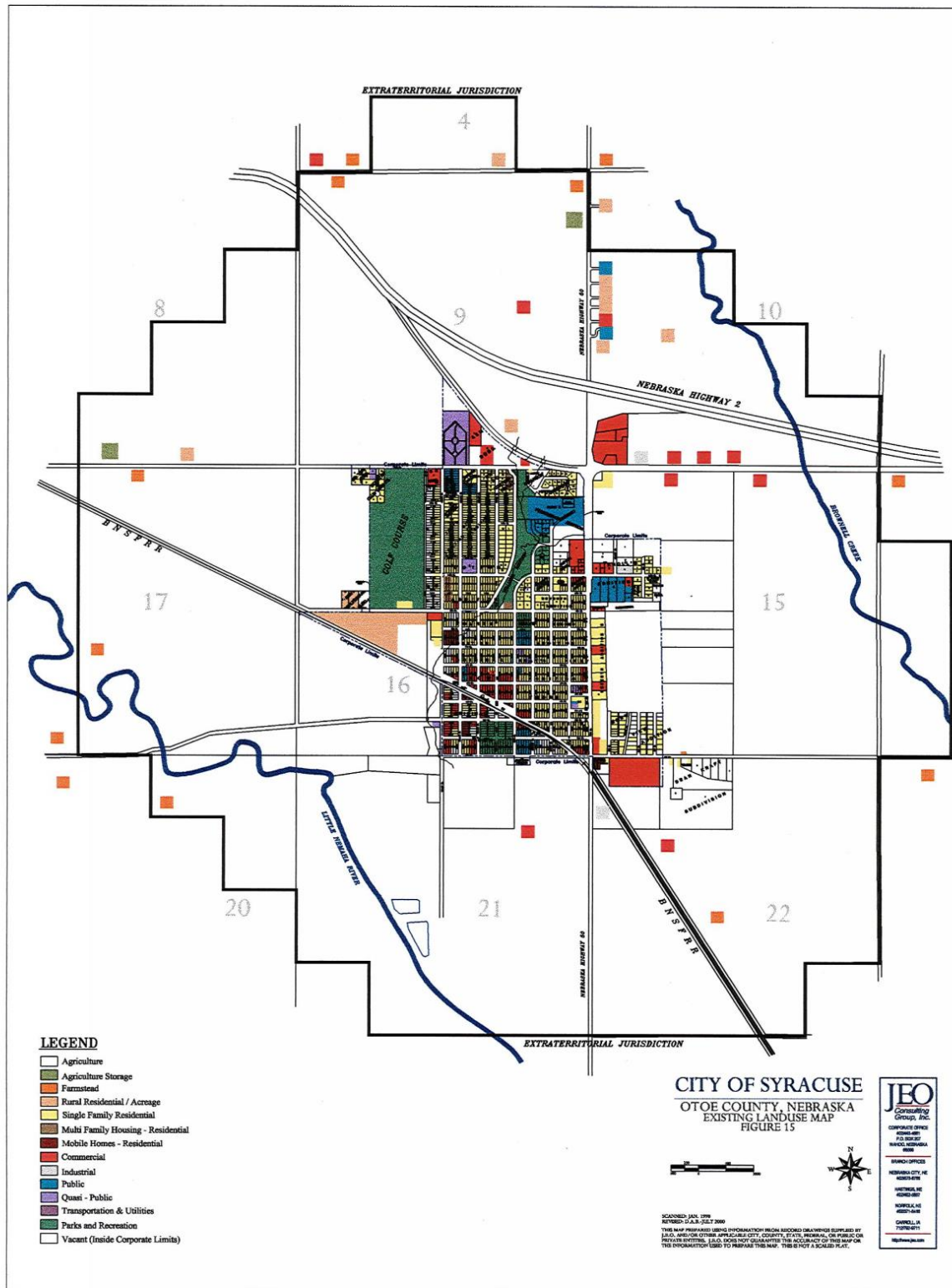
Syracuse had high amounts of public/semi-public land compared to the other communities. Public/semi-public land use also includes parks and recreational land. Syracuse had 21.2%, whereas the other communities ranged from 11.8% to 13.9%. One land use in Syracuse to point out which was much lower than any other community was the acres in industrial and railroads. Syracuse had only 1.6% of their land used for industrial and railroads, and the railroads take up a majority of this land use. Finally, the acres per 100 persons in Syracuse was 35.74 while the other communities ranged from 27.54 acres per 100 persons, in Albion, to 36.96 acres per 100 persons in North Bend.

---

Based upon the total acres per 100 persons, North Bend is the most densely populated of the four communities, while Albion is the least densely populated. Of the four communities, Syracuse was the second most densely populated community.



FIGURE 22: EXISTING LAND USE MAP



---

## PROJECTED LAND USE REQUIREMENTS

The following Table indicates the amount of new land in acres required to adequately satisfy the forecasted population projections for Syracuse that were done in the second chapter of this Plan. Three projections (i.e. Low, Medium and High) were reviewed. Table 24 indicates the amount of land needed to meet projected future land uses by decade. An estimate of land required for each new decade is shown in the far right column. Public/semi-public land use includes parks and recreational land, which is why the percentage for this use is so high.

**TABLE 24: PROJECTED LAND USE REQUIREMENTS (ACRES), SYRACUSE, 2000**

Low Series	2000 (acres)	2010 (acres)	2020 (acres)	Total (acres)
Residential	4.42	4.56	4.77	13.75
Commercial	1.13	1.17	1.22	3.52
Industrial/Railroad	0.26	0.27	0.28	0.81
Public/Semi-Public	3.44	3.54	3.70	10.68
Streets and Alleys	3.74	3.86	4.04	11.64
Other	3.20	3.30	3.45	9.95
New Developed Land	16.20	16.71	17.47	50.38
Medium Series	2000 (acres)	2010 (acres)	2020 (acres)	Total (acres)
Residential	2.05	10.37	11.36	23.78
Commercial	0.53	2.66	2.91	6.10
Industrial/Railroad	0.12	0.61	0.67	1.40
Public/Semi-Public	1.59	8.05	8.82	18.46
Streets and Alleys	1.73	8.78	9.61	20.12
Other	1.49	7.52	8.24	17.25
New Developed Land	7.50	37.99	41.62	87.11
High Series	2000 (acres)	2010 (acres)	2020 (acres)	Total (acres)
Residential	4.49	23.32	27.94	55.75
Commercial	1.15	5.98	7.16	14.29
Industrial/Railroad	0.26	1.37	1.64	3.27
Streets and Alleys	3.80	19.73	23.64	47.17
Other	3.26	16.91	20.27	40.44
New Developed Land	16.45	85.42	102.35	204.22

Source: JEO Consulting Group, Inc., 2000

Table 24 indicates Syracuse will need somewhere between an addition 50.38 acres to 204.22 additional acres by 2020 to meet future population demands. In these projections, it is assumed that the existing density levels will continue through the year 2020. If a greater density is desired, then less additional land will be required. However,

---

if it is desired to lower the density level, then more land than projected will be required. The industrial/railroad land use category is a low percentage of the overall land uses for Syracuse and if the City wants to attract more industrial businesses into the City's tax base, more land will have to be designated for this purpose.

---

# LAND USE PLAN

(*UPDATED 2015*)

---

## FUTURE LAND USE PLAN

The Land Use Plan assists the community in determining the type, direction and timing of future growth.

The criteria established in this Land Use Plan reflect several things, including:

- the current use of land within and around the community
- the desired types of growth including location of growth
- physical characteristics and strengths and constraints to future growth
- current population and economic trends affecting the community

### Land Use Plan Objectives

- Identify past trends in demand for various land use categories (residential, commercial, industrial, public
- Determine which are working and which may need modification.
- Combine community goals with estimated future demands to project future land use needs.
- Establish policies and land use suitability standards to;
  - a. Protect and enhance current and future building/land use;
  - b. Provide reasonable alternatives and locations for various land uses; and
  - c. Promote efficient use of public facilities and utilities

The future Land Use in Syracuse will center around five primary use categories, which are:

- Residential
- Commercial
- Industrial / Railroad
- Public / Semi-Public
- Streets and R.O.W.

However, each use category will be broke down further to provide better detail for future development. The following list illustrates the break down for each Land Use:

<b>Residential</b>	<b>Commercial</b>	<b>Industrial / Railroad</b>	<b>Public / Quasi-Public</b>
Low Density	Downtown Commercial	Industrial	Public
Medium Density	General Commercial	Old Towne	Quasi-Public
High Density	Highway Commercial		Parks, Rec & Open Space
Mobile Home	Residential Transition		
Residential Transition	Old Towne		
Transitional Ag			

Each of these Land Use categories will be discussed in full detail in the following paragraphs. Each section will address the intent of the Land Use District and what general development guidelines should be applied in the future.

---

### ***Transitional Agricultural District (TA)***

This district is reserved for traditional agricultural uses around the perimeter of the community. However, future livestock feeding operations should stay outside the extraterritorial jurisdiction limits of Syracuse.

Allowable uses are as follows:

- As development occurs, all agricultural uses (crops, livestock, etc.) to be eliminated from within the Corporate Limits.
- Existing Agricultural land, within Corporate Limits, to be grandfathered. As development occurs, agricultural uses on that property to be eliminated.
- No new agricultural uses to be established within Corporate Limits.
- Limitations on confined feeding operations
- Mobile Home Parks, when meeting the requirements of the Mobile Home Residential District in both the Land Use Plan and the Zoning Ordinance.

### ***Low Density Residential (LDR)***

The LDR districts are intended to accommodate large lot residential development. This district will accommodate a maximum density of two Housing Units per acre or less. Types of possible uses within this district includes:

- No Apartment Buildings / Structures
- Single-family housing, including accessory uses
- Support services, i.e.: churches, parks, etc.
- Mobile Home parks, when meeting the requirements of the Mobile Home Residential District in both the Land Use Plan and the Zoning Ordinance.

### ***Medium Density Residential (MDR)***

The MDR district represents the typical residential subdivision within a community. The density levels of these districts are to be a maximum of 7 Housing Units per acre or less. Allowable uses within these districts include:

- Some small multi-family units, i.e. Duplexes and Triplexes
- Single-family Units on a minimum 7,500 sq. ft. lots
- No Apartment Buildings / Structures
- Support services, i.e.: churches, parks, etc.
- Mobile Home Parks, when meeting the requirements of the Mobile Home Residential District in both the Land Use Plan and the Zoning Ordinance.

---

### ***High Density Residential District (HDR)***

This Land Use district is intended to accommodate denser residential development. The location of these districts are such that they act as a buffer between more intensive uses, (i.e. Commercial and Industrial) and the Low Density and Medium Density Residential Districts. The developed density of these districts should be 7 to 30 housing units per acre. Allowable uses in this district are:

- Apartment buildings allowed
- Flexibility in density along flood plains
- Single-family Units on a minimum 5,600 sq. ft. lots
- Multi-family dwellings
- Apartment Complexes
- Multiple building complexes
- Include support services similar to Residential District
- Mobile Home Parks, when meeting the requirements of the Mobile Home Residential District in both the Land Use Plan and the Zoning Ordinance.

### ***Mobile Home Residential (MHR)***

This district is designated in order to allow for Mobile Home development within specific locations rather than scattered throughout the community. These residential units have different needs than the typical stick built residential unit. Placing these units in a clustered area (Mobile Home Park) can accommodate these needs.

- Maintain a quality residential living environment
- Intended for the location of Mobile Homes, as defined by Nebraska Statute [NEB. REV. STAT. §71-4621 (RRS 1996)]

### ***Residential Transitional District (RTD)***

This district is intended as a transitional area along Nebraska Highway 50. Within this transitional area, a mixture of residential, commercial retail and office uses are encouraged. This transition is intended primarily for the area between 1st and 11th Streets. The following will be allowable uses within this district:

- Single-family Units
- Small retail, professional office uses, (i.e. Dental Office, Attorney's Office)
- Small retail and office space must make use of existing residential style building
- If new structure is required, construction style must meet neighborhood character
- Density/Acre = 7 Units/Acre

---

### ***General Commercial District (GC)***

This Land Use district is intended to accommodate commercial uses along 1<sup>st</sup> Street at Nebraska State Highway 50 and 11<sup>th</sup> Street at Nebraska State Highway 50 and along old Nebraska State Highway 2 near Midland Street. Allowable uses in this district include:

- Larger commercial developments requiring on-site parking
- Supplying goods and services to residents in need of fast transactions, i.e.
  - Convenience Stores
  - Laundry Mats
  - Small Restaurants

### ***Downtown Commercial (DC)***

The downtown commercial district is intended to provide a location for smaller retail and office uses. This is the original Central Business District and is the heart of the retail community in Syracuse. Allowable uses include:

- Businesses and services supplying retail products
- Offices for professional employment
- Governmental facilities

### ***Highway Commercial (HC)***

This district lies along new Nebraska State Highway 2 north of Syracuse's existing Corporate Limits. This district is intended provide goods and service to the motoring public. The allowable uses include:

- Auto related uses such as:
  - Service Stations
  - Motels
  - Fast Food Restaurants
- Community wide services:
  - Hardware Stores
  - Lumber Yards
  - Nurseries



---

### ***Old Towne Commercial/Industrial (CI)***

This Land Use district is intended to accommodate commercial and light industrial type of uses in the older commercial areas of Syracuse on the south side of town near and south of the railroad. This district provides an area of mixed uses that provide a buffer between commercial districts and industrial districts.

Allowable uses in this district include:

- Governmental facilities
- Commercial uses requiring on-site parking
- Storage facilities
- Small scale production

### ***Industrial (I)***

This district is intended to accommodate smaller less intensive manufacturing companies. These facilities will act as a buffer between high intensity industrial plants and the remaining community. Allowable uses included the following:

- Small scale production
- Production with minimal odors, noise and other pollution and water usage
- Full scale wholesaler / distributors

### ***Public and Quasi-Public Use Districts (P)***

This district is located at areas where a large amount of land is required for public uses. These areas include the Public School's building sites, City facilities, NPPD's service center and the Cemetery. There are other public facilities scattered around the City and these will be accommodated in the particular land use districts. Future allowable uses in this district include:

- Continuation of existing Public uses: Syracuse – Dunbar – Avoca Public Schools, Municipal properties, etc.

### ***Parks, Recreation and Open Space (OS)***

This district accommodates the existing Parks, Recreational and Open Space facilities and expands these facilities. The development of new parks and open space are greatly encourage within future developments within the City's Extraterritorial Jurisdiction.

---

## LAND USE SUITABILITY CRITERIA

How will this plan be implemented? The major assumption of this plan is:

*“specific development criteria will be adopted  
to help guide builders, investors and community  
leaders in making good decisions concerning  
Syracuse’s future.”*

These criteria will be specific statements that:

- Describe the relationship between/among land uses
- Establish criteria or design standards that new development must meet.

## LAND USE TRANSITIONS

New development should provide, if needed, any screening, buffers, or extra setback when located next to existing uses. Screening or buffers can be plant material, low earthen berms, solid fences, or any combination of the above. Boundaries between different land uses are done along streets, alleys or natural features (streams, railroads, etc.) whenever possible.

## COMMUNITY GROWTH

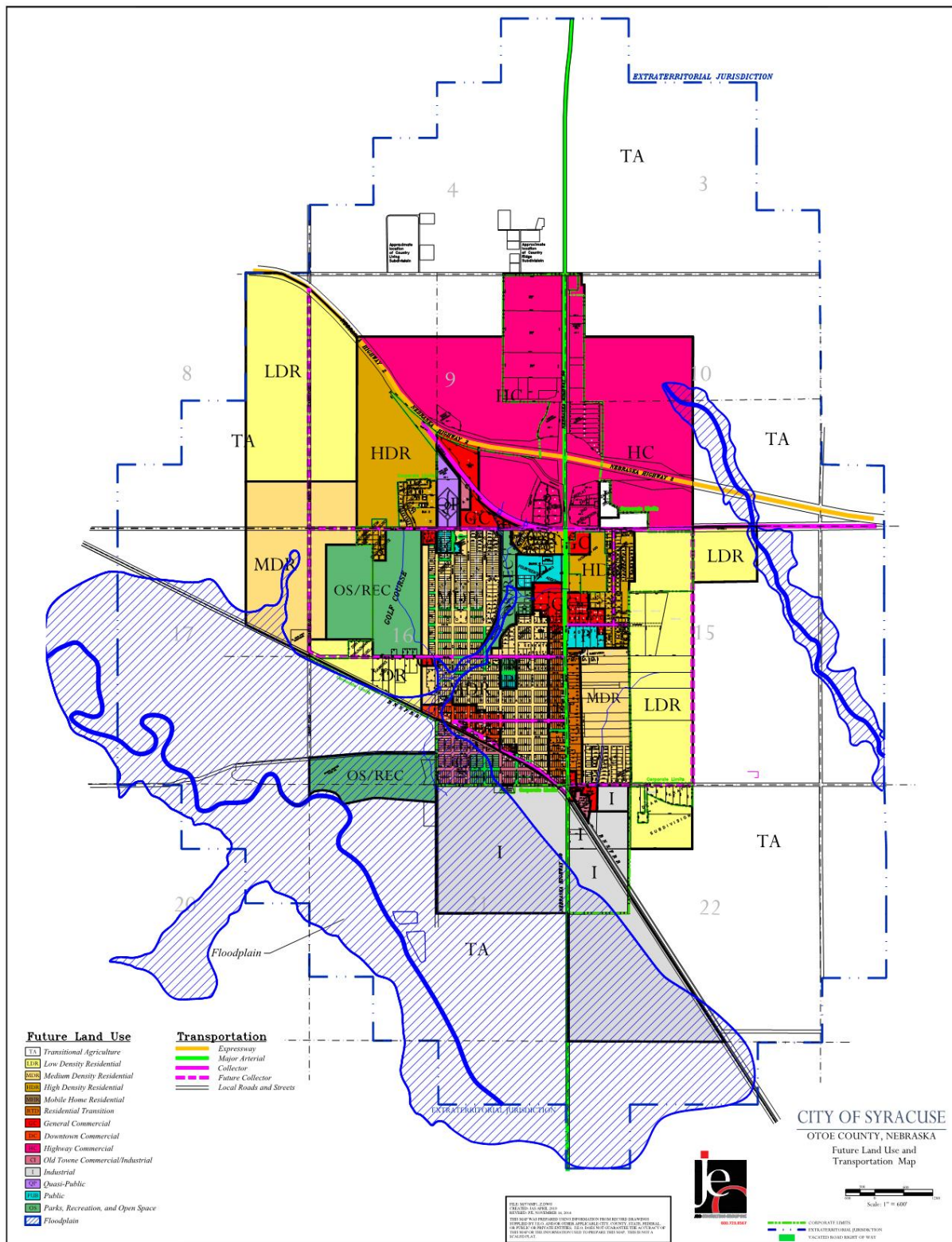
New development should, to the greatest extent possible, be contiguous to existing development or services. This would allow for the logical and cost effective extension of streets and utility services. The city may authorize non-contiguous development if:

- The developer pays for the “gap” costs of extending services from the existing connections to the proposed development.
- The extension would open up needed or desirable areas of the community for additional growth.
- Issues related to adjacent/transitional agriculture are properly addressed.

The Future Land Use Plan is one of the statutory requirements of a Comprehensive Development Plan, as stated in the Nebraska State Statutes. The Land Use Plan, along with the Transportation Plan, provides the necessary tools to direct future development in and around Syracuse. The City’s Land Use Plan is based on existing conditions and projected conditions for the community.

The need for residential uses will be driven by the future population, the ratio of owner-occupied to renter-occupied housing units, and the projected number of future dwelling units needed. New residential development can drive the need for additional commercial development, additional streets, public and park facilities, and industrial development. Therefore, decisions regarding future residential development will have a direct impact on other uses throughout the entire community. Conversely, commercial and industrial development in a community will lead to further economic development and the need for more residential units and overall growth and expansion of the city.

**FIGURE 23: FUTURE LAND USE PLAN MAP**



---

### **COMMUNITY ENTRANCES**

First impressions of the community are made at the entrances. These impressions are critical to a community's overall image. This is true for both communities and individuals. New development should have larger set backs and higher landscaping standards when located at any of the entrances to the community. For example, all new development along Nebraska State Highway 2 and Nebraska State Highway 50 might be required to provide an extra three to five feet (3' to 5') of front yard set back to be developed into ground cover or lawn. Also, signs, storage areas or parking lots might be regulated to reinforce the quality of life in Syracuse.

### **EXTRATERRITORIAL JURISDICTION**

The extraterritorial area beyond the City limits will play a major factor in Syracuse's future growth. The land uses in the extraterritorial area will include all the Land Uses except Public. Agricultural activities should be limited (i.e., no animal confinement or major feeding operations).

### **ANNEXATION POLICY**

As Syracuse grows, it must look for opportunities to extend its borders and continue to provide a high quality of life for its residents. To do this, the State of Nebraska has established a process for communities to expand their municipal boundary via annexation so as to include any contiguous or adjacent lands, lots, tracts, streets, or highways as are urban or suburban in character and in such direction as may be deemed proper.

There are three ways annexation can be pursued. These include:

- Property owners can request annexation.
- The municipality can annex any contiguous or adjacent lands, lots, tracts, streets, or highways that are urban or suburban in nature.
- At the time land is platted adjacent to Syracuse's Corporate Limits it could be annexed at the time of approval of the final plat with a pre-annexation agreement.

In the case of the first method, the property owner must submit a plat prepared by a licensed surveyor. The plat must be approved by the city engineer and filed with the clerk along with a written request signed by the majority of the property owners and inhabitants in number and value of the proposed annexation properties. Annexations must be approved by both the Planning Commission and City Council.

In order to adopt an annexation ordinance, a majority of affirmative votes are required by the governing body at each reading of the ordinance. Then the certified map is filed with the County Assessor, County Clerk, and Register of Deeds along with a certified copy of the ordinance. The city then shall provide substantially the same services as the other inhabitants of the city as soon as practicable. Adequate plans and necessary city council action to furnish such services shall be adopted no later than one year after the date of annexation.

---

The City of Syracuse should annex newly developed areas, within the guidelines of the Nebraska State Statutes. This should occur, as development becomes urban in nature rather than rural. The City of Syracuse, when providing services (water and sewer) to residents in newly developed areas, outside of the corporate limits, should charge a higher rate for these services. State Statutes allow for the immediate annexation of subdivisions, which develop, contiguous to a City or Village.

Also, the City should establish subdivision improvement agreements and non-contested annexation agreements with future Sanitary Improvement Districts (SID's). This agreement gives the SID a financing vehicle. In return the City gets an agreement that states that the SID can be annexed, at the discretion of the City, and the SID will not contest the annexation action.

#### *Areas for Potential Annexation for Syracuse*

There are a number of areas surrounding the city's current corporate limits that may be eligible to consider for annexation in the future. The qualifications to be met for an area to be included in the city's corporate limits are requirements imposed by state statutes. The matters to be considered when any area is being evaluated for inclusion in the city's corporate limits include: the requirements of state statutes, the conditions of the infrastructure, the existing and available services, the maintenance of existing services, the extension of city services, the method of finance for the extension of city services, the time for extension of city services, population, taxes and revenue, the area's debts, obligations and assets, land uses and valuation, and the interests of the city.

---

# TRANSPORTATION PLAN

(*UPDATED 2015*)

---

## **TRANSPORTATION PLAN**

### **INTRODUCTION**

Across the country, cities are becoming actively involved in enhancing the connections between transit and local quality of life. Local governments are implementing transit supportive policies such as mixed-use zoning, parking management and traffic calming. Additionally, special attention is being given to creating accessible transit for people with disabilities and the elderly.

Transportation networks tie a community together and link a community to the outside world. Adequate circulation systems are essential for the safe and efficient flow of vehicles and pedestrians, and accessibility to all parts of the community. The implementation of this Plan during the planning period will result in the continued safe and efficient movement of vehicles and pedestrians within the City of Syracuse.

### **TRANSPORTATION PLANNING AND LAND USE**

Land use and transportation create the pattern for future development. An improved or new transportation route generates a greater level of accessibility and determines how adjacent land may be utilized in the future. In the short term, land use shapes the demand for transportation. However, new or improved roads or county and state highways may change land values, thus altering the intensity of which land is utilized.

The adequacy of a community's transportation and circulation system will have a substantial impact on the rate and pattern of its future growth and development. To ensure the circulation system is able to expand efficiently and remains consistent with the Land Use Plan requires careful, long-range planning efforts. The transportation and circulation needs depend upon how closely the street network can be matched to the existing land use patterns. As the City of Syracuse grows, the demand made upon the street network will change. It is important that the future land use pattern be considered along with the existing pattern when decisions regarding street classification are determined. The street system consists of an ordered hierarchy of roads based upon purpose and traffic demand, which in turn, forms the basis for a classification system and appropriate design standards.

In general, the greater the transportation demands for a particular land use, the greater its need for a site near major transportation facilities. Commercial activities are most sensitive to accessibility since their survival often depends on the ease potential buyers can travel to their location. In this case, accessibility refers not only to the distance, which must be driven, but also to the ease with which the particular site can be found and convenient parking. Thus, commercial land uses are generally located near the center of the market area along highways or at intersections of arterial streets. The clustering of commercial uses is also an advantage because it creates an image, which is easier to remember and because it allows for the joint use of parking facilities (i.e. strip malls, business downtown). Industrial uses are also highly dependent upon transportation access, but in a different way. For example, visibility is not a great concern for an industry compared to a retail store. Industrial uses often need access to more specialized transportation facilities, such as railroad lines or highways.

---

## TRANSPORTATION AND CIRCULATION FINANCING ISSUES

The primary sources of information utilized in the maintenance and development of the transportation and circulation system are (1) the City of Syracuse's "One and Six Year Program for Street Improvements," (2) the State of Nebraska Department of Roads "One and Five Year Highway Program," and (3) community input. These state and local improvement plans should only be viewed as a planning tool, which are subject to change depending on financing capabilities of the governmental unit.

Municipal "One and Six Year Program for Street Improvements" are reviewed and adopted by the local unit of government to address the issue of proposed road and street system improvements and development. Upon approval of these plans by the Board of Public Road Classifications and Standards, the governmental units are eligible to receive revenue from the Nebraska Department of Roads and the State Treasurers Office, which must be allocated to municipal road improvement projects.

The "One and Five Year Highway Program," developed by the Nebraska Department of Roads, establishes present and future programs for the development and improvement of state highways. The One-Year Program includes highway projects scheduled for immediate implementation, while the Five-Year Program identifies highway projects to be implemented within five years or sooner if scheduled bids and work for one-year projects cannot be awarded and constructed.

## STREET AND ROAD CLASSIFICATION

Nebraska Highway Law (Chapter 39, Article 21, Revised Reissue Statutes of Nebraska 1943) proposes the functional classification of both rural and municipal roads and streets and public highways, see Figure 23 for Syracuse's transportation map. Chapter 39, Article 21.03 lists rural highway classifications as:

1. **Interstate:** federally-designated National System of Interstate and defense highways;
2. **Expressway:** second in importance to Interstate. Consists of a group of highways following major traffic desires in Nebraska and ultimately should be developed to multiple divided highway standards;
3. **Major Arterial:** consists of the balance of routes that serve major statewide interests for highway transportation in Nebraska. Characterized by high speed, relatively long distances; travel patterns;
4. **Other Arterial:** consists of a group of highways of less importance as through-travel routes. Serve places of smaller population and smaller recreation areas not served by the higher systems;
5. **Collector:** consists of a group of highways that pick up traffic from local or land-service roads and transport county centers or to the arterial systems. Main school bus routes, mail routes, and farm-to-market routes;
6. **Local:** consists of all remaining rural roads, generally described as land-access roads providing service to adjacent land and dwellings; and
7. **Bridges:** structures crossing a stream twenty feet or more in width or channels of such a stream having a combined width of three hundred feet or more.



---

It is noted in Section §39-2103, the combined rural highways classified under subdivisions (1) and (3), should serve every incorporated municipality having a minimum population of at least one hundred inhabitants or sufficient commerce; or in part by stubs or spurs, and major recreational areas of the state.

#### **SYRACUSE'S PROPOSED IMPROVEMENTS**

On December 8, 1999, the Syracuse City Council adopted the City's proposed "One and Six Year Plan." According to this plan, there were no projects slated in the six-year plan. Before June 30, 2001, there were 2 projects scheduled. Since this portion of the Comprehensive Plan was written in 2000, it should be noted that the transportation plan of a Community does change yearly. Annual examination of this section should occur and amended if necessary.

The total proposed budget in Syracuse's "One and Six Year Plan" was \$249,000. The following is a list of the three projects that should be done by June 30, 2001.

1. On various streets in the City, general maintenance will take place. In all, the length of the maintenance is considered to be 1.5 miles. The estimated cost of this project is \$103,000.
2. On Swanson Drive and Charlie Circle, certain areas of the existing concrete pavement and subgrade will be replaced. The estimated length of the project is 0.5 miles and will cost approximately \$86,000.
3. On 6<sup>th</sup> Street from Mohawk Street to Nebraska Highway 50, new asphalt, as well as utility adjustments will be placed on 0.4 miles. The cost of this project is estimated at \$60,000.

#### **NEBRASKA DEPARTMENT OF ROADS' IMPROVEMENTS**

The Nebraska Department of Roads publishes an annual list of proposed projects for the current fiscal year, for fiscal years one to five years from the present, and six years and beyond. Syracuse is not listed, currently, to receive any assistance from the Nebraska Department of Roads in the planning period.

#### **FUTURE ROAD DEVELOPMENT**

As Syracuse grows in population and traffic flow, the roads identified in the City's "One and Six Year Plan" will be sufficient according to what can be seen at the time. However, the City should closely monitor the growth and development in order to determine if any additional roads or road maintenance would be necessary.

---

## **FUTURE TRAILS DEVELOPMENT**

Recent years have seen an increase interest in another form of transportation, hiking/biking trails. There is a large demand for such entities in Cities and rural areas because the trails improve the overall quality of life for the residents of the community. Trails offer an alternative to motorized vehicles, connecting homes with schools, offices, and shopping areas, and contribute to a healthier environment, with cleaner air and less traffic congestion.

There are several benefits of a trail system which include:

- Recreation and Fitness
- Economic Development
- Improved Community Image and Quality
- Environmental Education and Preservation

## **EXISTING TRAILS IN SYRACUSE**

Syracuse has a trail system, which encompasses parts of the City.

## **FUTURE TRAILS DEVELOPMENT IN SYRACUSE**

The following is a list of proposed trail routes that affect Syracuse. These routes were proposed in the Nebraska Trails Plan entitled, “A Network of Discovery: A Comprehensive Trails Plan for the State of Nebraska,” which was completed in 1994. These trails will either pass through Syracuse or connect Syracuse to different parts of the State.

1. **Nebraska City to Syracuse to Lincoln-** This would be a “Rail-with-Trail” system that would go through Otoe County to connect with the Lincoln/Lancaster County trail system. This trail would encompass roughly 50 miles and be a multi-use trail.
2. **Nebraska Highway 50 Syracuse to Pawnee City-** This trail would pass through Otoe County on Nebraska Highway 50 to connect to Pawnee County, specifically Pawnee City. The trail would primarily be the shoulders of the highway to connect the two communities and would span 39.4 miles.

---

## PLAN IMPLEMENTATION

*(UPDATED 2015)*

---

## **PLAN IMPLEMENTATION**

### **INTRODUCTION**

In order to solve community problems or concerns, successful city comprehensive plans have the key ingredients of consensus, ideas, hard work, and the application of each of these. This section of the plan contains the inspiration of the city officials and Syracuse residents who participated in the planning process. However, the ultimate success of this plan remains in the dedication offered by each and every resident and its implementation.

Successful comprehensive plans are ones that are implemented. Developing plans is relatively easy compared to the implementation of one. What happens with the plan, how it is used in daily decision-making, and the extent to which it is followed over time all influence its overall success.

Implementation refers to the objectives, policies, actions and timeframes that have been identified to carry out the comprehensive plan. This section of the plan includes implementation tools, actions designed to achieve the long-range planning process, links between the plan and capital improvement budgeting, and a process to monitor and update the comprehensive plan. Numerous goals and objectives are presented in this plan. It is recommended to review relevant goals during planning and budget setting sessions each year. Selected elements of the plan or goals of highest priority should be identified for immediate action. Prioritization provides clarity between city procedures and its residents as well as a good jump start on implementing the new comprehensive plan.

### **IMPLEMENTATION TOOLS**

The city of Syracuse has a number of tools that can be utilized to help implement the comprehensive plan and to help shape development patterns, protect natural resources, protect public infrastructure, and to protect the quality of life for its residents. Rarely will a single tool be sufficient to achieve the goals in a comprehensive plan. Most policies and most of the preferred land uses require the use of several tools from different categories in order to be realized, obtained, and sustained. The following tools will play a vital role in the success of Syracuse's plan and in achieving identified goals and objectives:

1. Capital Improvements Financing--an annual predictable investment plan that uses a six to ten-year planning horizon to schedule and fund projects integral to the plan's implementation.
2. Zoning and Subdivision Regulations--establish regulations for land development and criteria for dividing land into building areas, utility easements, and streets. Implementing the Transportation Plan is a primary function of subdivision regulations.
3. Design Guidelines—create standards for the design and continuity of development. Design guidelines protect the city's aesthetic appeal and can enhance property values for both new and existing development.

---

4. Plan Maintenance--an annual and five-year review program will allow the city flexibility in responding to growth and continuous program of maintaining the plan's viability.

5. Strategic Plan—the city should consider developing a Strategic Plan that identifies the specific projects of most importance along with a set of action items.

The following section pulls specific goals and objectives from the plan and/or those identified (or re-identified) during the focus group meetings of the plan update and places them into the appropriate support program. The result of this identification and prioritization is implementable projects in short, medium, and long term planning periods.

### **Capital Improvements Financing**

Fiscal responsibility determines the effectiveness of a comprehensive plan. The ability to strategically finance and implement projects stems from conclusions of the planning process. By identifying projects as either short, medium, and long-term, Syracuse can ensure the best utilization of public resources.

The focus of the public comments received during the public participation process of the 2014 comprehensive plan update centered on promoting the most efficient use and development of public infrastructure possible. Infrastructure projects including roads, water and sewer should be planned, funded, and constructed in a manner that maximizes the public benefit and minimizes public cost. Well-planned and implemented infrastructure projects should utilize and preserve the natural environment while minimizing any negative impact to environmentally sensitive areas.

The actual investment in implementation projects should take consideration of external and internal forces and opportunities. Public investments include the time and effort that go into management decisions for infrastructure, public services, public lands, and public processes. Such investment or decisions can include:

- Coordinating capital improvements planning throughout all departments to meet the comprehensive plan goals and remain consistent with plan policies.
- Investments and improvements in water, wastewater, and transportation infrastructure made by the City.
- The acquisition, sale, or exchange of land for the purpose of preservation or development.
- Decisions on expenditures for public resources such as streets, parks, and trails, property management and the provision of public services.

---

The following categories provide general guidance for the city's investment in capital improvement projects and plans:

## Transportation

### Short Term (0-5 years)

Subdivision regulations should be reflect the community desire to support connectivity. Future developments should limit dead-end streets and cul-de-sacs whenever possible.

### Medium Term (6-10 years)

Sidewalks and crosswalks should be further developed and maintained. ADA accessibility should be prioritized in these areas. Implementation should be prioritized to allow for safe access to schools and across highways.

### Long Term (Over 10 years)

To support connectivity for new and existing development, a safe crossing of Highway 50 is desired in the community. The feasibility of a pedestrian over/under pass should be considered by community leaders.

## Public Utilities

### Short Term (0-5 years)

During the participatory process, citizens expressed concerns about drainage and the prevalence of floodplain in the community. Syracuse leadership should consider investing in a comprehensive watershed study to better understand regional water issues and their impact on development.

### Medium Term (6-10 years)

The cost of extending infrastructure was identified as a top barrier for new development in Syracuse. The city should consider and implement specific financing and incentive programs to offset development costs that will yield beneficial development in the long-term.

### Long Term (Over 10 years)

The age of the current water system drew concern for its ability to support new and existing development in the long-term. The cost of corrective maintenance will increase through time for the current infrastructure. The capital improvement plan should not only reflect excess maintenance costs but plan for the update and replacement of infrastructure as well.

## Parks and Recreation

### Short Term (0-5 years)

The connectivity and accessibility of parks will encourage their active use. Sidewalks and crosswalks adjacent to parks should be prioritized for improvements for quality and ADA accessibility.

### Medium Term (6-10 years)

---

Recreation opportunities for adults was expressed as a desire during the public participation process of this comprehensive plan. Trails offer both recreational and transportation benefits for a community. A community-wide trail system should be considered and implemented.

**Long Term (Over 10 years)**

A regional trail system should be considered and studied for feasibility to benefit Syracuse families. Work with Otoe County, other communities in the county, and the Nemaha Natural Resources District to develop a regional trail system.

**Zoning and Subdivision Regulations, including Design Guidelines**

Zoning regulations are a means to shape the physical development of the city to ensure attractive, functional, and compatible uses of public and private space. The strategic phasing of regulations will ensure quality development throughout the community.

The public participation process identified sustainability and proper utilization of the environmental and existing cultural amenities of the surrounding landscape. It will be a challenge to minimize environmental impact while developing a built environment that reflects the culture of the community, but one that will set Syracuse apart and enhance its appeal.

**Residential Environment**

Facilitating growth in a manner that is sustainable and minimizes negative impacts on existing development and the environment ensures the best utilization of public and environmental resources. The approval of new development must be contingent on compatibility with the existing community in both use and design.

An existing community experiencing external development pressures faces the challenge of properly incorporating new development with design elements of the existing built environment. A community can influence its sense of place with a combination of zoning regulations and design guidelines. These measures can ensure that new development and redevelopment effectively complements existing uses and aesthetics.

**Short Term (0-5 years)**

*The connectivity and walkability of Syracuse were identified as characteristics that should be improved and integrated into new development. Subdivision regulations should reflect that streets should interconnect neighborhoods with limited dead-end and cul-de-sac streets. Connected streets best facilitate multi-modal transportation, reducing the number of automobile trips and conserving energy by reducing the length of automobile trips. Public safety is also enhanced by increased connectivity. Emergency response times and proficiency is optimized with multiple points of ingress and egress within a subdivision.*

**Medium Term (6-10 years)**

---

*Modern subdivision development with large lots and wide streets were emphasized as a community need to continue to attract families into the community. Community design guidelines should be considered as a measure to regulate and incentivize attractive and functional development along the community's periphery.*

*Long Term (Over 10 years)*

*Rapid and/or non-contiguous community growth can overextend an infrastructure network and create capacity and maintenance issues for the city; negatively affecting both new and existing residents. Subdivision regulations should be strictly enforced to prevent over-extending community facilities. New growth should be guided to areas most able to support new development. This strategy also encourages infill development and redevelopment.*

## **Programming and Plan Maintenance**

### Annual Review of the Plan

A relevant, up-to-date plan is critical to sustain the planning success. After adoption of the comprehensive plan, opportunities should be provided to identify any changes in conditions that would impact elements or policies of this plan. An annual review of the comprehensive plan is recommended to evaluate the accuracy and appropriateness of the plan. The annual review should occur during the city's budgetary time periods to make the most efficient use of funds.

The annual review process needs to involve regularly monitoring trends and changes in the local, regional, state and federal landscape. Such trends and changes may include changes in development activity and use, trends in development regulation amendments, and changes in planning and zoning law. Each year at the annual review, a report should be prepared by the Comprehensive Plan Steering Committee and/or the Planning Commission that provides information and recommendations on whether the plan is current in respect to population and economic changes and if the recommended policies are still valid for the city and its long-term growth.

The Planning Commission should hold a public meeting or hearing on this report in order to:

1. Provide citizens and/or developers with an opportunity to present possible changes to the plan;
2. Identify any changes in the status of projects called for in the plan; and
3. Bring forth any issues, or identify any changes in conditions that may impact the validity of the plan.

### Coordination with Others

The collaborative view of Syracuse brought different people together with similar visions of Syracuse. This momentum can continue at the local, regional, and statewide levels through coordination with other entities to provide opportunities within Syracuse. Continuing this participatory process may align a Syracuse project on the wish list to another organization's budget or plans.

### Participate and Attend Area Meetings



---

Syracuse leadership should strive to maintain the partnership with other municipalities and the county and continue to participate and attend regional meetings.

Changing needs and conditions will necessitate future review, evaluation, and updating of the comprehensive plan and its supporting documents. Intergovernmental coordination of all planning activities affecting land uses within the city is necessary to assure an integrated, comprehensive plan for Syracuse. The following policies establish a framework for the future utilization and evaluation of the comprehensive plan.

#### *Policies*

- Syracuse will continue to implement an ongoing citizen involvement program that provides residents opportunity to be involved in all phases of the planning process.
- Syracuse will review any development concepts or proposals, which conflict with the future land use map, and goals or policies, in light of changing needs and conditions and in keeping with established procedures of Plan evaluation, amendment, and update.
- Syracuse will undertake a major update of the comprehensive plan and review of all supporting documents at least every ten years to ensure that an adequate factual basis for planning decisions.
- Syracuse will undertake a major review of the Future Land Use Plan at least every five years in order to measure and identify shifts in development and requirements for suitable use of the land within the community.

#### *Plan Amendment Procedures*

It is anticipated that from time to time individuals and groups may come forward with proposals to amend the comprehensive plan. It is recommended that those proposals be compiled and reviewed once a year at the annual review. By waiting to review all proposed amendments at the same time, the effects of each proposal can be evaluated for conflicts of other proposals and their net impact on the comprehensive plan.

#### *Conditions for Plan Amendment*

Comprehensive Plan amendment procedures are necessary to determine what constitutes conformity or non-conformity with the plan. It is impossible to set hard and fast rules for such decisions but consistent criteria should be used when making this determination. The following criteria are recommended:

- A request for increases in residential density or non-residential floor area in excess of the guidelines established in the plan, depending upon the degree of increase, may require a plan amendment.
- Land use request involving minor differences in boundaries from those shown in the plan should be considered in conformity with the plan unless precedent would be set for more extensive and non-conforming changes in adjacent areas.

- 
- Requests for variations or changes in the alignment of designated roadways should be considered in conformity if the continuity of the roadway is maintained, the alignment does not result in traffic safety problems or reductions in needed capacity, does not constrain the proper development of contiguous properties, and does not conflict with or preempt other planned uses or facilities.
  - Requests to deviate from plan-specified requirements such as open space and traffic reduction measures generally should not be permitted in order to ensure equitable treatment of all property owners and to avoid arbitrary decisions which would undermine the legal foundations of the plan. If changes are to be made, they should be done through a plan amendment process.
  - The final criteria must always be whether the request, whatever its nature, will set a precedent for cumulative changes which are not consistent with the plan. Therefore, in those instances where the implications of the request are not easily observed or detected, a request for a plan amendment should be required.

#### *Unanticipated Opportunities*

If new or innovative development opportunities arise which impact several elements of the plan, a plan amendment may be proposed and considered separate from the Annual Review and other proposed Comprehensive Plan amendments. The city should compile a list of the proposed amendments received during the previous year; prepare a report providing applicable information for each proposal, and recommend action on the proposed amendments. The comprehensive plan amendment process should adhere to the adoption process specified by Nebraska law and provide for the organized participation and involvement of citizens.

#### *Methods for Evaluating Development Proposals*

The interpretation of the Comprehensive Plan should be composed of a continuous and related series of analyses, with references to the goals and policies, the land use plan, specific land use policies, and the transportation plan. Moreover, when considering specific proposed developments, interpretation of the comprehensive plan should include a thorough review of all sections of the comprehensive plan.

If a development proposal is not in conformance or consistent with the policies developed in the comprehensive plan, serious consideration should be given to making modifications to the proposal. Otherwise, the following criteria should be used to determine if a comprehensive plan amendment would be justified:

- the character of the adjacent neighborhood
- the zoning and uses on nearby properties
- the suitability of the property for the uses allowed under the current zoning designation
- the type and extent of positive or detrimental impact that may affect adjacent properties, or the community at large, if the request is approved
- the impact of the proposal on public utilities and facilities
- the length of time that the subject and adjacent properties have been utilized for their current uses

- 
- the benefits of the proposal to the public health, safety, and welfare compared to the hardship imposed on the applicant if the request is not approved
  - comparison between the existing land use plan and the proposed change regarding the relative conformance to the goals and policies
  - consideration of city staff recommendations

### **Strategic Planning**

The identification and achievement of goals and objectives of highest priority will ultimately lead to the success of other goals and objectives. It will be critical to earmark the specific funds to be used and the individuals primarily responsible for implementing the priority goals, objectives and actions in Syracuse. These goals can be identified more specifically through a city strategic planning process and should be consistent with the general goals and objectives identified within the Comprehensive Plan.

---

## **PUBLIC EDUCATION**

In addition to the implementation tools, broad public support and involvement is necessary in the development and use of any implementation policy or program. If adequate support is to be developed, a program educating residents is necessary. People who understand the needs and ways of meeting those needs of the community must take the initiative to stimulate the interest and the understanding required to ensure action is taken. The Syracuse City Council should annually strive to implement an active public participation process by creating an educational process on land use issues. The city should continue to use its website and make the comprehensive plan and development regulations available online. The use of web based social media will also be useful in going valuable feedback. Ongoing education and promotion will be an important factor in sustaining interest and motivation from community members. Some of the objectives of the comprehensive plan cannot be achieved unless the actions of two or more public agencies or private organizations can be coordinated. Frequently, constraints prevent organizations from working with one another (i.e. financial resources, legal authority, restriction of joint uses of facilities, etc). Efforts should be made to bridge this gap with open communication, cooperation and the realization that the issue at hand could benefit the health, safety, and general welfare of the residents in Syracuse.

## **SPECIAL STUDIES AND PLANS**

Additional studies and plans can be helpful to further explore and define a vision of a certain area, corridor, or development site. Conducting studies and making decisions area by area can enhance the Comprehensive Plan.