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Retail Trade Area Analysis

Beulah
North Dakota

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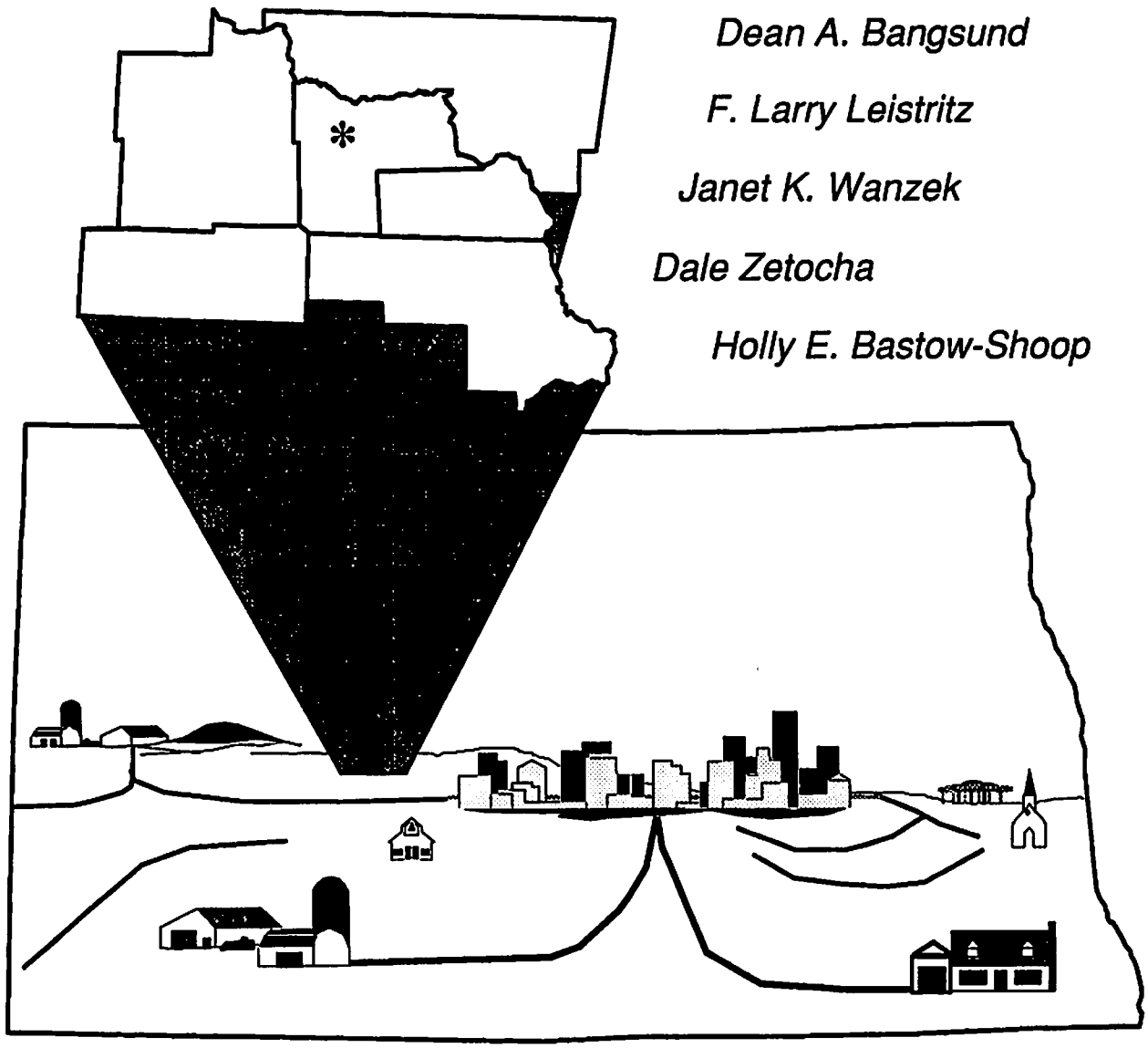

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The authors accept sole responsibility for any remaining errors or omissions.

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HIGHLIGHTS

This report is intended to provide an indepth trade area analysis of Beulah, North Dakota. Specific analyses included determining Beulah's main and greater trade areas, identifying the demographic profile of Beulah shoppers, examining important and less important services for patron shoppers of Beulah, identifying neighboring cities that area shoppers patronize, determining distances area shoppers traveled to Beulah, and listing popular newspapers and radio stations among area residents.

Current trade area information for Beulah was obtained from a statewide trade area survey conducted by the Department of Agricultural Economics at North Dakota State University in 1989.

Recent trends (1980 to 1989) in Beulah population, retail sales, per capita income, and pull factors, and in Mercer County population and employment were identified and discussed. Beulah's population and trade area population, along with Mercer County population have increased throughout the 1980s. Although other demographic and economic measurements have decreased, Beulah has fared as well as other North Dakota cities with similar populations, and has fared favorably compared to smaller competing trade centers. The economic situation found in Beulah and Mercer County are somewhat typical of the problems found in energy dependent North Dakota communities in the 1980s.

Beulah's trade areas were broken down into main and greater trade areas. A main trade area (MTA) was defined as an area where the majority of township residents purchase a majority of selected goods and services in one city. A greater trade area (GTA) was defined as the area beyond the MTA where some township residents purchase some selected goods and services in one city. Beulah's MTA decreased by three townships, compared to MTA boundaries determined in 1971.

The typical household for survey respondents appears to be a middle-aged married couple, who have completed high school, have few children at home, primarily are employed in agriculture and professional/technical professions, and have resided in the area a large portion of their lives.

Main trade area residents traveled an average of 15 and 14 miles to Beulah to purchase selected convenience and specialty goods and services, respectively. Almost half (44 percent) of all respondents who purchased 50 percent or more of convenience and specialty goods in Beulah traveled between 6 and 15 miles to purchase the item.

Beulah appears to be an important provider of most goods and services for MTA residents purchasing items in Beulah; however, Beulah could capture more of the available market for nearly half of the goods and services listed on the survey, with clothing items having the lowest market capture.

Bismarck-Mandan, Hazen, Dickinson, Zap, Golden Valley, and Halliday were the most popular cities for the purchase of goods and services by Beulah MTA residents who did not purchase a majority of the good or service in Beulah.

Outshopping analysis revealed no substantial demographic or socioeconomic differences between Beulah MTA residents purchasing 50 percent or more and those purchasing less than 50 percent of selected goods and services in Beulah. Slight differences between groups were evident in miles traveled and average income.

The Bismarck Tribune *and* The Dickinson Press *were the most popular daily newspapers for both Beulah MTA and GTA residents.* The Beulah Beacon *and* The Hazen Star *were the most popular weekly newspapers for Beulah MTA and GTA residents, respectively. The most popular radio stations for Beulah MTA residents included KFYR of Bismarck and KHOL of Beulah.*

Although economic times have been difficult, Beulah appears to be doing a fair job of retaining most of its past trade area. Beulah has showed signs of an improving retail sector during 1987 to 1989, but will remain sensitive to changes in the energy industry.

RETAIL TRADE AREA ANALYSIS: BEULAH, NORTH DAKOTA

Dean A. Bangsund, F. Larry Leistritz, Janet K. Wanzek,
Dale Zetocha, and Holly E. Bastow-Shoop*

INTRODUCTION

North Dakota has witnessed considerable demographic and economic change in the 1980s. Rural population in North Dakota has continued to decline, due, in part, to instate migration to larger cities and outmigration of state residents. The economic base for many of North Dakota's smaller cities has continued to decline due to economic stress in both the farm sector and the energy industries. The combination of rural economic stress and reduced population has had significant impacts on retail trade for most geographic areas of North Dakota.

In addition to demographic and economic influences on retail activity in North Dakota, relative income levels, improved transportation, and changes in consumer tastes and preferences contribute to changes in retail trade patterns. The number and severity of factors influencing retail activity in North Dakota during the 1980s make trade area information crucial to concerned businesses and policymakers interested in developing effective strategies to cope with changing economic conditions. Dissemination of trade area information to rural cities and towns can help communities meet the challenges of the 1990s.

Purpose

The Department of Agricultural Economics at North Dakota State University has prepared two levels of trade area reports. An overview report was prepared discussing previous trade area work, outlining the methods and procedures used to determine trade areas for all cities in North Dakota, determining trade areas for the 11 largest North Dakota cities, and comparing purchases of services by patrons of different sized trade centers within the state (Bangsund et al. 1991). Other reports have been prepared to disseminate specific trade area information for individual cities.[1] The purpose of this report is to provide specific information about the Beulah trade area.

This report will describe Beulah's main and greater trade areas, provide information on the demographic characteristics of Beulah area shoppers, and identify essential and nonessential services Beulah businesses provide.

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[1] Copies of individual city reports can be obtained from the Department of Agricultural Economics, North Dakota State University, Fargo, North Dakota, 58105, (701) 237-7441.

Methods and Scope

The data for this report were obtained from a statewide trade area survey which the Department of Agricultural Economics at NDSU conducted in 1989. The NDSU Extension Service and the North Dakota Agricultural Experiment Station, through their respective Rural Development Center projects, partially financed the study.

The survey was designed to obtain information about geographic shopping preferences for 37 nonagricultural and 12 agricultural goods and services and selected demographic characteristics of those responding. Although the survey provided information on all North Dakota cities and towns where people purchase goods and services, the material presented in this report primarily covers the Beulah trade area.

This report is organized into four sections: (1) population and other demographic information about Beulah, (2) trade area delineation criteria and boundaries, (3) trade patterns of Beulah area shoppers, and (4) summary and conclusions.

BEULAH AND SURROUNDING AREA PROFILE

Understanding changes in population and economic activity is helpful to businesses and community planners. Much of the prosperity of rural trade areas hinges on the population base. The following briefly highlights the patterns and trends from 1980 to 1989 in Beulah population, retail sales, market share, per capita income, pull factors, and Mercer County population and employment.

Population figures presented in this section are based on the 1980 Decennial Census count, with population estimates for years 1981 through 1989 reflecting adjustments to the 1980 Census count. Population figures from the 1990 Decennial Census count were not available for use in this report. Trade area information in this section is based on trade area boundaries which were determined in the 1970s. Although population and trade area information in this section was not adjusted for current findings (i.e., 1990 Census numbers and new trade area boundaries), the economic information used was current and the general condition of rural communities can be described using this information.

Beulah's population increased about 90 percent from 1980 to 1988 (Table 1). Of the North Dakota cities in the population range 2,500 to 10,000, only three had population increases from 1980 to 1988. If Beulah, the population of which increased almost 90 percent, was removed from the group, the size category would have negative population growth. Beulah's trade area population increased about 59.4 percent from 1980 to 1988, the largest increase for any town in the category. The population of Beulah's competing trade centers (those cities with populations

TABLE 1. CITY AND TRADE AREA POPULATION FOR BEULAH AND SELECTED CITIES, NORTH DAKOTA, 1980 AND 1988

City	County	City Population 1980	City Population 1988	Percent Change 1980-88	Trade Area Population[a] 1980	Trade Area Population[a] 1988	Percent Change 1980-88
Population over 10,000							
Group Total		253,628	274,280	8.14	--	--	--
Population 2,500 to 10,000							
Beulah	Mercer	2,908	5,520	89.82	4,720	7,525	59.43
Hazen	Mercer	2,365	3,350	41.65	4,598	5,893	28.16
Group Total		43,813	45,650	4.19	9,602	9,579	2.52
Population 1,500 to 2,500							
Garrison	McLean	1,830	1,740	-4.92	3,527	3,322	-5.81
Washburn	McLean	1,767	1,740	-1.53	2,129	2,055	-3.48
Group Total		39,095	37,540	-3.98	--	--	--
Population 1,000 to 1,500							
Underwood	McLean	1,329	1,250	-5.94	2,300	2,088	-9.22
Group Total		29,622	27,540	-7.03	--	--	--
Population 500 to 1,000							
Center	Oliver	900	970	7.78	1,623	1,696	4.50
Stanton	Mercer	623	670	7.54	.	.	.
Group Total		32,154	31,200	-2.97	--	--	--
Population 200 to 500							
Group Total		28,746	27,373	-4.78	--	--	--
All Population Categories							
State Total		427,058	443,583	3.87	--	--	--

[a]Trade areas were based on previous work by North Dakota State University Extension Service.

SOURCE: Leistritz et al. 1990.

less than 2,500) and their trade area populations decreased, except for Center and Stanton and the Center trade area.

Since Beulah's trade area covers parts of counties other than Mercer County, population, average annual employment, and per capita income have been identified for surrounding counties (Table 2). Population in Mercer County increased (1980 to 1988) substantially more than in surrounding counties, even though three of the five surrounding counties increased in population during the same time period.

Average annual employment in Mercer County decreased about 1.3 percent from 1980 to 1988. Employment in most counties surrounding Mercer county declined substantially, except Stark and Morton Counties. Real per capita income in Mercer County (i.e., adjusted for inflation) decreased from 1979 to 1987 (-6.8%) while per capita income decreased more in all but one of the surrounding counties.

Beulah's deflated taxable sales (i.e., adjusted for inflation) decreased from 1980 to 1989; however, deflated taxable sales increased from 1987 to 1989 (Table 3). Beulah was one of two cities to have increased taxable sales (1987 to 1989) in the population range 2,500 to 10,000. Although Beulah fared

TABLE 2. POPULATION, AVERAGE ANNUAL EMPLOYMENT, AND PER CAPITA INCOME FOR MERCER AND SURROUNDING COUNTIES, NORTH DAKOTA, 1980 TO 1988

County	1980	1982	1984	1986	1988	1989	Percent Change 1980-88/89
			Population				
Mercer	9,404	11,600	14,700	13,900	13,500	---	43.56
Surrounding Counties							
Dunn	4,627	5,000	5,200	4,800	4,500	---	-2.74
McLean	12,383	12,400	12,900	12,200	11,800	---	-4.71
Morton	25,177	25,500	26,200	26,100	25,400	---	0.89
Oliver	2,495	2,600	2,700	2,700	2,600	---	4.21
Stark	23,697	28,300	27,100	26,100	24,700	---	4.23
North Dakota	652,717	672,000	687,000	679,000	667,000	---	2.19
			Average Annual Employment[a]				
Mercer	5,393	6,910	7,823	5,370	5,395	5,322	-1.32
Surrounding Counties							
Dunn	2,087	2,269	1,999	1,740	1,526	1,602	-23.24
McLean	5,035	5,051	4,550	4,267	4,232	4,175	-17.08
Morton	11,357	11,327	12,691	11,266	11,970	12,160	7.07
Oliver	1,134	1,108	1,040	1,047	1,053	1,004	-11.46
Stark	10,716	12,791	12,086	11,307	11,216	10,888	1.61
North Dakota	288,002	297,002	310,953	313,001	316,000	317,000	10.07

	Per Capita Income[b]		
	1979[c]	1987	Percent Change 1979 to 1987
Mercer	$11,067	$10,310	-6.8
Surrounding Counties			
Dunn	8,841	7,724	-12.6
McLean	9,495	8,815	-7.2
Morton	9,778	8,919	-8.8
Oliver	9,363	9,155	-2.2
Stark	10,080	8,933	-11.4
North Dakota	10,041	9,641	-4.0

[a]Job Service North Dakota. Various Issues. North Dakota Labor Force by County, by Region. Bismarck.

[b]U.S. Department of Commerce, Bureau of the Census, "Current Population Reports," Series P-26 (Spring 1990).

[c]Real Dollars, 1979 dollars inflated to 1987 dollars using Consumer Price Index inflators (U.S. Department of Labor, Bureau of Labor Statistics).

SOURCE: Leistritz et al. 1990.

favorably compared to other cities in the same population category, average taxable sales for the group decreased 5.27 percent (1987 to 1989). Competing cities also suffered large decreases in their adjusted taxable sales for the same time periods. Statewide, taxable sales decreased 17.77 and 0.24 percent from 1980 to 1989 and 1987 to 1989, respectively.

Pull factors measure a community's success in capturing the potential purchasing power of residents in its trade area. Pull factors greater than 1.0 mean a community's retail sales are greater than the purchasing power of its trade area, suggesting the community may be "pulling" customers from outside its normal

TABLE 3. DEFLATED TAXABLE SALES AND PURCHASES FOR BEULAH AND SELECTED CITIES, NORTH DAKOTA, 1980 TO 1989

City	Deflated Taxable Sales and Purchases (1989 Dollars)			Percent Change	
	1980	1987	1989	1980-89	1987-89
	---------- dollars ----------				
Population over 10,000					
Group Total	2,578,781,160	2,337,648,605	2,396,999,678	-7.05	2.54
Population 2,500 to 10,000					
Beulah	21,109,496	13,690,513	13,789,391	-34.68	0.72
Hazen	15,750,869	11,771,841	10,495,380	-33.37	-10.84
Group Total	398,731,612	315,496,552	298,875,168	-25.04	-5.27
Population 1,500 to 2,500					
Garrison	15,231,714	9,777,949	8,063,061	-47.06	-17.54
Washburn	12,428,970	10,210,881	8,432,312	-32.16	-17.42
Group Total	415,612,668	251,583,986	226,276,758	-45.56	-10.06
Population 1,000 to 1,500					
Underwood	7,915,982	4,657,858	3,092,794	-60.93	-33.60
Group Total	222,752,746	141,859,953	130,721,134	-41.32	-7.85
Population 500 to 1,000					
Center	2,235,947	1,563,768	1,602,142	-28.35	2.45
Stanton	743,428	609,934	495,401	-33.36	-18.78
Group Total	197,005,522	124,426,751	123,454,776	-37.33	-0.78
Population 200 to 500					
Group Total	150,696,574	96,258,478	83,084,913	-44.87	-13.69
All Population Categories					
State Total	3,963,580,282	3,267,274,325	3,259,412,427	-17.77	-0.24

SOURCE: Leistritz et al. 1990.

trade area. Conversely, if a pull factor is less than 1.0, the community is not capturing its share of the purchasing power in its trade area.

Beulah's pull factor decreased almost 38 percent from 1980 to 1989 (Table 4). Only Devils Lake and Wahpeton in the population group 2,500 to 10,000 increased their pull factors from 1980 to 1989. Beulah's pull factor is about half the group average, indicating the community does not capture as much of its trade area purchasing power as most of the cities with similar population. Pull factors for competing cities also decreased substantially from 1980 to 1989. Pull factors in 1989 for cities competing with Beulah were similar to Beulah's pull factor, suggesting Beulah does an average job of capturing its available market when compared to neighboring cities.

Both city and county populations have increased in the geographic area near Beulah, except population in Dunn and McLean County decreased from 1980 to 1988. Deflated taxable sales in Beulah and average annual employment in Mercer County have decreased in the 1980s. Real per capita income in Mercer County decreased from 1979 to 1987, and Beulah's pull factor has continued to decrease (1980 to 1989). Changes in economic activity and population for Beulah have been somewhat unique to other North Dakota cities in the 2,500 to 10,000 population range, suggesting Beulah is in a different situation than other cities of comparable size.

TABLE 4. PULL FACTORS FOR BEULAH AND SELECTED CITIES, NORTH DAKOTA, 1980 TO 1989

City	Pull Factor			Percent Change		
	1980	1987	1989	1980-87	1980-89	1987-89
Population over 10,000						
Group Average	1.12	0.96	1.01	-14.20	-9.63	5.32
Population 2,500 to 10,000						
Beulah	0.63	0.33	0.39	-47.36	-37.67	18.41
Hazen	0.48	0.37	0.38	-23.05	-20.91	2.78
Group Average	0.79	0.73	0.64	-8.40	-19.82	-12.47
Population 1,500 to 2,500						
Garrison	0.72	0.61	0.45	-16.18	-38.36	-26.46
Washburn	0.98	1.05	0.76	7.32	-22.91	-28.17
Group Average	0.89	0.65	0.52	-26.93	-42.26	-20.99
Population 1,000 to 1,500						
Underwood	0.58	0.44	0.27	-24.05	-52.80	-37.85
Group Average	0.65	0.53	0.43	-18.35	-34.55	-19.84
Population 500 to 1,000						
Center	0.24	0.19	0.18	-19.24	-24.24	-6.19
Stanton	*	*	*	*	*	*
Group Average	0.60	0.49	0.42	-18.94	-29.78	-13.38
Population 200 to 500						
Group Average	0.41	0.35	0.28	-14.30	-30.65	-19.07

SOURCE: Leistritz et al. 1990.

Although Beulah suffers from decreased economic activity, the city is doing better than most of smaller competing cities. Smaller cities and towns competing with Beulah also face tough economic pressures; however, they appear to be suffering more economic decline than is evident in larger cities.

Beulah has experienced incredible population growth for a North Dakota city (1980 to 1988). However, even with almost a doubling of Beulah's population, deflated taxable sales have decreased nearly 35 percent (1980 to 1989). It appears that Beulah's retail sector has not benefited from the population increase or been able to capture much of its potential market. Although Mercer and surrounding counties' average annual employment and per capita income decreased and partially offset the increase in area population, the city has captured only slightly greater than one-third of its potential retail market.

TRADE AREA DELINEATION

A trade area can be loosely defined as the geographic area from which a business or city draws its customers. Determining a trade area depends heavily on the city size, location of the city with respect to other trade centers, and the criteria used to distinguish the trade area boundaries. Trade area criteria can vary according to trade center classification and type of trade area, and these trade areas can be broken down into primary and secondary trade areas.

Generally, primary (main) trade areas (MTAs) are those geographic regions where a trade center draws a significant portion of its retail activity. Secondary (greater) trade areas (GTAs) are geographic areas outside of the primary trade area where the trade center still extends some retail influence; however, only limited retail or service activity is generated from this region.

A primary trade area (main) was defined as an area where the majority of the people purchase a majority of their goods and services at one location. A secondary trade area (greater) was defined as an area where some of the people purchase some of their goods and services at one location.

Two major criteria were used in determining trade areas in North Dakota. The first criterion was to classify each trade center according to the level of retail activity and use the trade center classification to determine a mix of goods and services, and the second criterion determined how townships were included in the main trade area and greater trade area (Bangsund et al. 1991). The scope of this report does not permit the detailed discussion of all the procedures involved in determining a city's main and greater trade area; however, a brief synopsis is included of the trade area criteria used for Beulah.

North Dakota cities were put in seven size classifications, and the types of services expected to be provided by each size classification were outlined (Bangsund et al. 1991). Each size of trade center was expected to provide a different number of goods and services and different amounts of similar services across trade center sizes. Thus, trade area boundaries were defined by using a mix of goods and services most appropriately provided by a city of that size.

Beulah was classified as a partial shopping center based on average retail sales from 1987 to 1989. The mix included some convenience, specialty, and agricultural goods and services. Convenience goods and services are those that typically have a small unit value, are frequently purchased with a minimum of effort, and are purchased soon after the idea of the purchase enters the buyer's mind. Specialty goods are those nonstandardized goods and services that typically have a large unit value, are purchased only after comparing price, quality, features, and type among stores, and customers are willing to travel and exert more energy to secure the good or service than convenience items.

Convenience Goods and Services

Banking and savings	Groceries
Eating places	Hardware
Gas and diesel service	Prescription drugs

Specialty Goods and Services

Auto repair	Legal services
Beautician	Men's clothing
Furniture	Radios, TVs, VCRs
Hospital	Sporting goods

Agricultural Goods and Services

Farm machinery	Farm supplies

The main trade area for Beulah was defined by townships where 50 percent or more of the residents purchased 50 percent or more of the selected mix of goods and services in Beulah. The greater trade area was defined by townships where 10 percent or more of the residents purchased at least 10 percent of a selected mix of goods and services in Beulah.

Several problems arise when trying to define trade areas using survey information. The most common problems were lack of usable responses from some townships and unclear distinction of purchase behavior in some townships, i.e., respondents diversified their shopping equally among several trade centers. Bangsund et al. (1991) discussed the procedures and criteria for handling townships which did not clearly meet the requirements for the main and greater trade areas.

Beulah's MTA extends exclusively to the west, with only one township to the east of the city. The GTA for Beulah is concentrated to the east and weat, with little influence beyond its MTA to the north or south (Figure 1). Beulah's ability to attract customers from the south appears limited due to competition from other trade centers, primarily Dickinson and Bismarck-Mandan. Beulah's ability to attract patrons from the north appears limited by Lake Sakakawea.

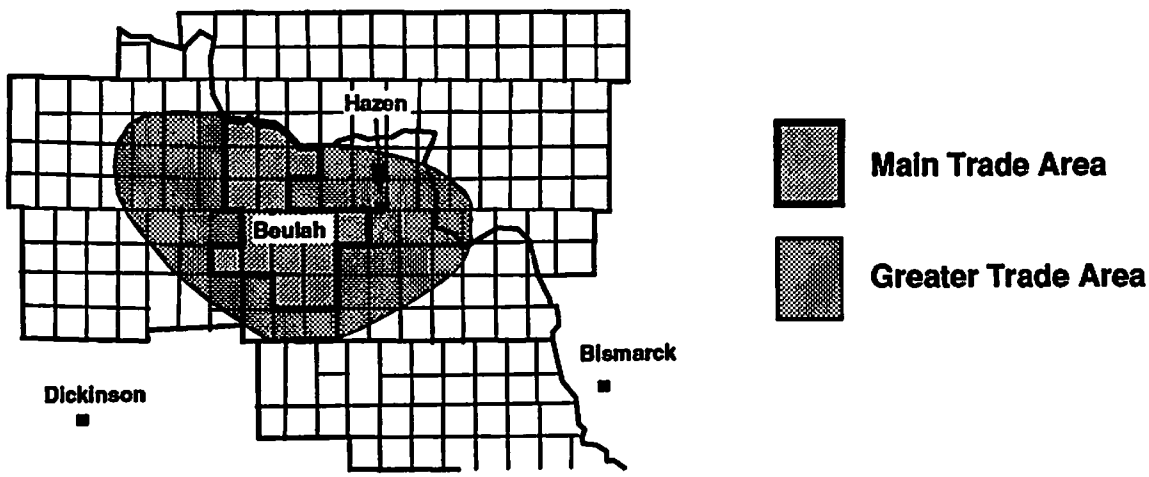

Figure 1. Main and Greater Trade Areas for Beulah, North Dakota, 1989

CHARACTERISTICS OF BEULAH AREA RESIDENTS

Business people and community leaders usually are interested in the characteristics of local shoppers and shopping patterns. The characteristics of Beulah shoppers were analyzed, using 137 survey responses from the Beulah MTA. Other analyses included examination of important and less important services for patron shoppers of Beulah, identification of neighboring cities area shoppers patronize, determination of distances area shoppers traveled to Beulah, and listing popular newspapers and radio stations among area residents.

Demographic Profile of Shoppers in Beulah Main Trade Area

Demographic characteristics of the survey respondents for the Beulah MTA were identified (Table 5). The typical household for survey respondents appears to be a middle-aged married couple who have completed high school, have few children at home, are primarily employed in agriculture and professional/technical professions, and have resided in the area a large portion of their lives.

TABLE 5. DEMOGRAPHIC PROFILE OF RESPONDENTS IN MAIN TRADE AREA, BEULAH, NORTH DAKOTA, 1989

Demographic Characteristic	Average of Survey Responses	
Age (Years)	47.4	
Education (Years)	12.4	
Lived in County (Years)	30.5	
Household Size (People)	2.9	
Average Household Income	$28,945	
Occupation	Respondent	Spouse
	---%---	---%---
Farming	20.3	19.0
Professional	18.0	20.2
Tech/Sales/Admin	14.8	10.7
Retired	14.1	9.5
Craft/Repair	11.7	13.1
Equipment Operator	7.8	6.0
Service Jobs	5.5	7.1
Housewife	5.5	1.2
Other	2.3	1.2
Martial Status	--- % ---	
Single	8.0	
Separated/Divorced	8.8	
Married	74.5	
Widowed	8.8	
Male	57.9	
Female	42.1	

Distance Traveled by Beulah Area Shoppers

Average distances that area residents traveled to Beulah were determined for each convenience and specialty good or service in the 16-item goods and services mix (Table 6). Distances were determined by averaging respondents' estimated miles between Beulah and their home residence. Beulah residents and any respondents who lived one mile or less from Beulah were not included in the analysis. Once the average distance was determined for each township, the number of respondents purchasing 50 percent or more of the 16 items in the service mix in Beulah was multiplied by the average distance to determine total miles of travel for that township (for the specific good or service).

TABLE 6. AVERAGE DISTANCE TRAVELED BY AREA RESIDENTS WHO PURCHASED 50 PERCENT OR MORE OF SELECTED SERVICES IN BEULAH, NORTH DAKOTA, 1989[a]

All Respondents Purchasing 50 Percent or More of the Service in Beulah

Convenience Items		Specialty Items	
Goods and Services	Average Miles Traveled	Goods and Services	Average Miles Traveled
Gas & Diesel Stations	13.3	Auto Repair	14.8
Groceries	15.2	Beautician	16.4
Eating Places	14.0	Radios, TVs, VCRs	10.6
Banking and Savings	15.5	Sporting Goods	15.3
Hardware	15.1	Men's Clothing	12.4
Prescription Drugs	15.7	Hospital	----
		Legal Services	12.3
		Furniture	18.2
Average	15.0	Average	14.0

MTA Respondents Only Who Purchase 50 Percent or More of the Service in Beulah

Convenience Items		Specialty Items	
Goods and Services	Average Miles Traveled	Goods and Services	Average Miles Traveled
Gas & Diesel Stations	12.6	Radios, TVs, VCRs	10.9
Eating Places	14.5	Auto Repair	14.7
Prescription Drugs	15.7	Furniture	15.8
Groceries	14.6	Beautician	16.2
Banking and Savings	16.5	Legal Services	12.8
Hardware	14.9	Hospital	----
		Men's Clothing	12.4
		Sporting Goods	14.4
Average	14.9	Average	13.9

[a]One-way distance to Beulah only.

Townships included in the distance analysis were not limited to those in the MTA; instead distances traveled were included for anyone (living in surrounding counties) who purchased 50 percent or more of the selected good or service in Beulah. Total miles of travel were summed for all townships for that good or service and divided by the total number of respondents who purchased 50 percent or more of that item in Beulah.

The average distance traveled to Beulah to purchase convenience goods and services was more than that traveled for specialty goods and services for all respondents (regardless of residence location). The average distance traveled to purchase convenience goods and services was more than that traveled for specialty goods and services for respondents in the MTA who purchased 50 percent or more of the item in Beulah. For those respondents living in the MTA, the average distance traveled for both types of goods and services was very similar.

Distance traveled by type of good or service (convenience and specialty) was broken down into distance categories. Almost half (44 percent) of the respondents (regardless of residence location) who purchase 50 percent or more of a convenience and specialty good or service travel between 6 to 15 miles to purchase the item in Beulah (Table 7). For those living in the MTA, both the number of respondents per distance category and most common distance traveled were similar.

TABLE 7. MILEAGE BREAKDOWN FOR AREA SHOPPERS PURCHASING 50 PERCENT OR MORE OF A CONVENIENCE AND SPECIALTY SERVICE IN BEULAH, NORTH DAKOTA, 1989

All Respondents Purchasing 50 Percent or More of a Service in Beulah				
	Convenience Goods		Specialty Goods	
Distance (Miles)[a]	Number	Percent	Number	Percent
1 to 5	7	9.9	7	11.7
6 to 10	17	23.9	13	21.7
11 to 15	17	23.9	11	18.3
16 to 20	13	18.3	10	16.7
21 to 25	8	11.3	10	16.7
over 25	9	12.7	9	15.0
MTA Respondents Only Who Purchase 50 Percent or More of the Service in Beulah				
	Convenience Goods		Specialty Goods	
Distance (Miles)[a]	Number	Percent	Number	Percent
1 to 5	7	14.9	7	17.5
6 to 10	7	14.9	6	15.0
11 to 15	9	19.1	8	20.0
16 to 20	11	23.4	9	22.5
21 to 25	7	14.9	5	12.5
over 25	6	12.8	5	12.5

[a]Those living in Beulah or traveling less than one mile to Beulah were not included in the analysis.

Area Shoppers' Utilization of Goods and Services Provided in Beulah

The importance of Beulah as a trade center for those who shop in Beulah and the ability of Beulah to capture the MTA market for selected goods and services were determined (Table 8). The importance of shopping in Beulah was determined by examining the number of respondents who purchased some of their goods and services in Beulah and comparing those responses to the number who purchased a majority of their goods and services in Beulah. A high percentage meant if respondents shopped in Beulah, they likely would purchase a majority of those goods and services in Beulah. A low percentage meant that, although some of the goods and services were purchased in Beulah, the majority of the goods and services was purchased elsewhere.

Goods and services that appear to be most utilized by those shopping in Beulah include mortician, veterinarian (small animals), beautician, florist, optometrist, commercial feeds, and veterinary services (services where 95 percent of those buying the service in Beulah purchase a majority of the service in Beulah). The goods and services that people are less likely to purchase a majority of in Beulah include teenage clothing, women's clothing and coats, shoes, men's clothing, jewelry, furniture, and farm machinery.

The ability of Beulah to capture the potential market within the MTA was determined by comparing those who purchase the good or service (not necessarily in Beulah) to the number of respondents who purchase a majority of the good or service in Beulah. A high percentage meant that Beulah captures a large amount of the potential market for the good or service. A low percentage meant that Beulah does not capture much of the market for that good or service.

Goods and services for which Beulah is capturing a large amount of the potential market (85 percent or more) within the MTA include veterinarian (small animals), florist, hardware, gas and diesel service, prescription drugs, veterinary services, and crop consulting. Goods and services for which Beulah does not capture the existing market (less than 50 percent) include women's coats and clothing, teenage clothing, shoes, men's clothing, jewelry, furniture, hospital, sporting goods, major appliances, radios-TVs-VCRs, auto sales, appliance and electronic repair, chiropractor, computers, farm machinery repair and parts, and farm machinery. Beulah is not capturing much of the potential market (less than 50 percent) for over 40 percent of the nonagricultural goods and services listed on the survey.

Goods and services that are important to Beulah shoppers and those for which Beulah is capturing a large percentage of the market include florist and small animal veterinary services. Computers, chiropractor, auto repair, and accounting services are important to shoppers in Beulah, but few of the potential buyers purchase a majority of those goods and services in Beulah.

TABLE 8. RELATIVE IMPORTANCE OF BEULAH TO SHOPPERS PURCHASING SOME GOODS AND SERVICES AND FOR THOSE PURCHASING A MAJORITY OF THEIR GOODS AND SERVICES IN BEULAH, NORTH DAKOTA, 1989

Goods and Services	Responses in Beulah Main Trade Area: Purchase the Goods & Services Somewhere	Purchase Some of the Goods & Services in Beulah		Purchase Majority of the Goods & Services in Beulah		Measure of Market Capture
		No.	%[a]	No.	%[b]	%[c]
Mortician	66	57	86.4	56	98.2	84.8
Veterinarian (Sm Animals)	89	88	98.9	86	97.7	96.6
Beautician	119	97	81.5	93	95.9	78.2
Florist	120	114	95.0	109	95.6	90.8
Optometrist	133	104	78.2	99	95.2	74.4
Banking and Savings	136	113	83.1	106	93.8	77.9
Heating Fuel/Propane	115	80	69.6	75	93.8	65.2
Hardware	133	127	95.5	119	93.7	89.5
Plumber	87	63	72.4	59	93.7	67.8
Barber	104	91	87.5	85	93.4	81.7
Legal Service	110	80	72.7	74	92.5	67.3
Gas/Diesel Service	132	124	93.9	113	91.1	85.6
Dentist	129	97	75.2	88	90.7	68.2
Accounting Services	75	48	64.0	43	89.6	57.3
Prescription Drugs	136	132	97.1	118	89.4	86.8
Nursery (Plants)	108	97	89.8	86	88.7	79.6
Groceries	137	128	93.4	111	86.7	81.0
Building Supplies	124	119	96.0	103	86.6	83.1
Auto Repair	134	90	67.2	73	81.1	54.5
Drinking Places	73	67	91.8	54	80.6	74.0
Family Doctor	136	112	82.4	90	80.4	66.2
Computers	28	5	17.9	4	80.0	14.3
Chiropractor	73	10	13.7	8	80.0	11.0
Eating Places	132	125	94.7	94	75.2	71.2
Appliance/Elec Repair	104	55	52.9	40	72.7	38.5
Auto Sales	121	42	34.7	30	71.4	24.8
Radios, TVs, VCRs	124	66	53.2	47	71.2	37.9
Major Appliances	125	82	65.6	57	69.5	45.6
Sporting Goods	106	85	80.2	52	61.2	49.1
Hospital	120	5	4.2	3	60.0	2.5
Furniture	117	65	55.6	37	56.9	31.6
Jewelry	94	62	66.0	33	53.2	35.1
Men's Clothing	121	86	71.1	37	43.0	30.6
Shoes	132	82	62.1	32	39.0	24.2
Women's Clothing	127	91	71.7	34	37.4	26.8
Teenage Clothing	51	38	74.5	12	31.6	23.5
Women's Coats	115	38	33.0	12	31.6	10.4
Agricultural Goods and Services						
Commercial Feeds	22	13	59.1	13	100.0	59.1
Livestock Marketing	27	1	3.7	1	100.0	3.7
Veterinary Services	29	28	96.6	27	96.4	93.1
Crop Seeds	24	15	62.5	14	93.3	58.3
Fertilizer	23	21	91.3	19	90.5	82.6
Crop Consultants	9	9	100.0	8	88.9	88.9
Grain Marketing	27	20	74.1	17	85.0	63.0
Other Farm Chemicals	23	19	82.6	16	84.2	69.6
Farm Fuel & Lubricant	29	21	72.4	17	81.0	58.6
Other Farm Supplies	26	18	69.2	13	72.2	50.0
Farm Mach Repair/Parts	29	14	48.3	10	71.4	34.5
Farm Machinery	27	12	44.4	7	58.3	25.9

[a]Determined by dividing number of responses of those who purchase some of the service in Beulah by the number who purchase some of the service anywhere. Number indicates how many buyers of the service are willing to purchase some of the service in Beulah.

[b]Determined by dividing number of responses of those who purchase majority of the service in Beulah by the number who purchase some of the service in Beulah. Number is proxy for relative importance of Beulah as a provider of the service for those purchasing the item.

[c]Determined by dividing number of responses who purchase majority of the service in Beulah by the number who purchase some of the service anywhere. Number is proxy for ability of Beulah to capture potential market for that service.

Some patrons are purchasing a majority of their goods and services in Beulah; however, Beulah could capture much more of the potential market for several items. Beulah appears to have some trade center loyalty for those shopping in Beulah but at the same time a good portion of the market is being lost to other trade centers.

Where Services Are Purchased When Not Purchased In Beulah

For most of the goods and services listed in the survey, some respondents did not purchase any of the good or service in Beulah or purchased more of the good or service in other cities. For people living in the Beulah MTA and not purchasing a majority of the services in Beulah, the cities where the majority of those services were purchased were identified (Table 9). Bismarck-Mandan was the most popular choice for services purchased outside of the Beulah MTA. Other popular trade centers included Hazen, Dickinson, Zap, Golden Valley, and Halliday.

Beulah will always lose some shoppers to surrounding cities and towns for several reasons. First, many shoppers in the Beulah MTA live close to other towns where it may be more convenient to shop for some goods and services (e.g., some agricultural services and convenience items). Second, Bismarck-Mandan and Dickinson, because of their size, will have an image of greater variety and more favorable prices for many goods and services. Thus, many people will travel to Bismarck-Mandan and Dickinson to shop even if the same merchandise is available locally and is competitively priced. Third, some towns have businesses which have a reputation for providing excellent service and/or quality products, often drawing customers from areas not normally considered within its trade area. Finally, when people travel to other towns, primarily for reasons other than shopping, they likely may spend some time shopping (e.g., when parents/students travel to a state basketball tournament in Bismarck, Fargo, Minot, etc., they are likely to shop while in town; also trips to larger trade centers to see medical specialists or attend recreational events can result in considerable outshopping).

Analysis of Outshoppers in Beulah Main Trade Area

Responses were analyzed to determine if those who bought 50 percent or more of selected goods and services in Beulah differed from those who bought less than 50 percent. Differences between the two groups also were analyzed by convenience and specialty services.

According to selected demographic characteristics, little difference exists between those who purchase a majority of their goods and services in Beulah and those who purchase a majority of their goods and services elsewhere (Table 10).

TABLE 9. MOST POPULAR CITIES FOR THE PURCHASE OF GOODS AND SERVICES BY BEULAH MAIN TRADE AREA RESIDENTS WHO DID NOT PURCHASE A MAJORITY OF THE GOOD OR SERVICE IN BEULAH, NORTH DAKOTA, 1989

Goods and Services	Most Popular Cities	Responses Per City	Percent Purchased
Grocery	Bismarck	11	65.0
	Zap	6	91.3
	Hazen	3	76.7
	Dodge	3	73.3
Drinking Places	Zap	5	67.0
	Golden Valley	4	85.0
	Bismarck	3	71.7
Women's Clothing	Bismarck	72	75.3
	Dickinson	9	51.6
	Catalog Sales	3	76.7
Women's Coats	Bismarck	87	79.7
	Dickinson	6	51.7
	Hazen	3	60.0
Jewelry	Bismarck	50	69.6
	Dickinson	4	48.8
	Hazen	3	70.0
Mjr Appliance Rpr	Bismarck	33	79.2
	Hazen	25	73.2
	Dickinson	3	71.7
Auto Sales	Bismarck	50	81.0
	Hazen	21	77.4
	Dickinson	8	75.0
	Minot	4	75.0
Furniture	Bismarck	53	71.1
	Hazen	12	70.8
	Minot	9	67.8
	Dickinson	5	74.0
Auto Repair	Bismarck	26	71.5
	Hazen	18	80.0
	Dickinson	5	86.0
Heating Fuel/Propane	Hazen	14	99.3
	Hebron	9	96.7
	Zap	8	91.3
	Halliday	5	100.0
Beautician	Zap	16	95.3
	Bismarck	5	78.0
	Hazen	4	87.5
Optometrist	Bismarck	18	88.1
	Hazen	7	98.6
	Dickinson	4	100.0
Computers	Bismarck	19	74.7
	Out of State	2	95.0
Major Appliance	Bismarck	54	79.3
	Hazen	5	82.0
	Dickinson	5	66.0
Chiropractor	Hazen	38	86.4
	Bismarck	21	88.0
	Dickinson	6	88.3
Dentist	Hazen	22	89.8
	Bismarck	9	79.4
	Dickinson	4	82.5
Prescription Drugs	Bismarck	11	75.0
	Hazen	4	72.5
Vet (Small Animal)	Three towns w/one resp ea.		
Sporting Goods	Bismarck	46	65.9
	Hazen	4	62.5
Farm Mach. Rpr	Hazen	5	61.0
	Halliday	3	73.3
	Richardton	3	43.3
Farm Fuel	Halliday	6	70.0
	Hazen	3	100.0
Commercial Feed	Dickinson	3	71.7
	Hazen	2	100.0
	Golden Valley	2	65.0
Veterinary Services	Two towns w/one resp ea.		
Eating Places	Bismarck	18	62.1
	Dickinson	6	63.2
	Zap	4	77.5
	Golden Valley	3	78.3
Mon's Clothing	Bismarck	65	78.0
	Dickinson	9	58.9
	Catalog Sales	5	73.0
Teen Clothing	Bismarck	35	74.0
	Dickinson	3	33.0
Shoes	Bismarck	83	77.7
	Catalog Sales	5	98.0
	Dickinson	5	54.0
Radios, TVs, VCRs	Bismarck	63	81.8
	Hazen	4	62.5
	Minot	3	86.7
	Dickinson	3	80.0
Florist	Hazen	4	71.3
	Bismarck	3	80.0
Gas Station	Hazen	6	73.3
	Zap	5	97.0
	Halliday	3	75.0
Plumber	Hazen	17	86.5
	Zap	4	93.8
	Hebron	4	87.5
Nursery (Plants)	Bismarck	14	65.0
	Zap	4	51.3
Legal Service	Hazen	20	94.5
	Bismarck	12	69.5
Accounting Service	Bismarck	16	80.0
	Hazen	9	89.4
	Golden Valley	3	86.7
Barber	Hazen	6	85.7
	Zap	5	90.0
	Halliday	4	75.0
Family Doctor	Bismarck	31	81.8
	Hazen	8	78.1
Banking and Services	Hazen	17	91.2
	Bismarck	5	78.8
Building Supplies	Bismarck	13	71.5
	Dickinson	3	76.7
	Hazen	3	58.3
Mortician	Hazen	5	87.0
	Bismarck	4	53.3
Hospital	Bismarck	65	82.8
	Hazen	46	69.5
	Minot	3	83.3
Hardware	Bismarck	8	55.6
	Hazen	2	95.0
Farm Machinery	Killdeer	4	55.0
	Hazen	4	50.0
Crop Consultant	One city only		
Fertilizer	Hazen	3	71.3
Crop Seeds	Golden Valley	3	58.0
	Bismarck	2	100.0
	Hazen	2	75.0
Grain Marketing	Golden Valley	4	81.0
	Dodge	2	80.0
	Zap	2	65.0
Farm Supplies	Dickinson	6	60.0
	Bismarck	4	48.5
Farm Chemical	Hazen	3	74.7
	Three towns w/one resp ea.		
Livestock Marketing	Dickinson	15	87.3
	Bismarck	8	68.1

TABLE 10. DEMOGRAPHIC CHARACTERISTICS FOR PEOPLE IN THE MAIN TRADE AREA WHO PURCHASE LESS THAN 50 PERCENT AND THOSE WHO PURCHASE MORE THAN 50 PERCENT OF THEIR SERVICES IN BEULAH, NORTH DAKOTA, 1989

	Group Purchasing 50 Percent or More of Goods in Beulah				Group Purchasing Less Than 50 Percent of Goods in Beulah			
Attribute	Groceries	Gas Station	Building Supplies	Major Appliances	Groceries	Gas Station	Building Supplies	Major Appliances
Age	45.8	46.0	47.6	52.3	53.8	50.5	45.5	42.7
Education	12.7	26.7	30.8	40.1	11.3	11.7	12.2	12.5
Years Lived In County	27.9	26.7	30.8	40.1	41.0	43.0	30.4	24.3
Number in Household	3.0	3.0	2.9	2.8	2.7	2.9	3.1	3.0
Number in Grade School	0.6	0.6	0.6	0.5	0.3	0.4	0.5	0.5
Number in High School	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3
Average Miles Traveled[a]	14.6	12.6	14.8	14.6	20.8	17.8	29.2	60.2
Household Income	$29,338	$30,123	$29,919	$26,700	$27,404	$25,568	$29,896	$30,652

[a]Those living in Beulah and those traveling less than one mile to Beulah were not included in the analysis.

The group purchasing less than 50 percent of the four goods and services in Beulah traveled farther (for three of the services) than the group purchasing 50 percent or more of the same goods and services in Beulah.

Both the average age and years resided in county were very high, suggesting either that the survey respondents were older individuals or the MTA is composed of older clientele (providing the survey is a representative sample of the MTA). Other demographic variables suggest that households in the Beulah MTA are small, with few school children. Only slight differences were evident between the two main groups, with no substantial differences appearing between those purchasing 50 percent or more and those purchasing less than 50 percent of the goods and services in Beulah.

Newspaper Subscriptions of Beulah Area Residents

Newspaper subscriptions of respondents in the Beulah main and greater trade areas were identified (Table 11). Newspaper subscriptions were divided into daily and weekly papers for both main and greater trade area respondents. The most popular daily newspapers

for both the main and greater trade areas were *The Bismarck Tribune* and *Dickinson Press*. The most popular weekly papers for the main and greater trade areas were the *Beulah Beacon* and *Hazen Star*, respectively.

Radio Stations of Beulah Area Residents

The most popular radio stations that respondents in Beulah's main trade area listened to were KFYR of Bismarck, followed by KHOL of Beulah, KBMR of Bismarck, and KNDR of Mandan (Table 12).

Comparison of Current and Previous Beulah Trade Area Boundaries

Owens and Vangsness (1971) discussed general information on retail trade and identified both main and greater trade areas for Beulah. Information from the past Beulah retail trade report was based on a different questionnaire; however, some comparisons to information in this report can be made. Probably the most valid and worthwhile

TABLE 11. NEWSPAPER SUBSCRIPTIONS FOR MAIN AND GREATER TRADE AREA RESPONDENTS, BEULAH, NORTH DAKOTA, 1989

Main Trade Area			Greater Trade Area		
Newspaper	Numbers of Respondents	Percent	Newspaper	Number of Respondents	Percent
Daily Newspapers					
Bismarck Tribune	58	89.2	Bismarck	13	86.7
Dickinson Press	5	7.7	Dickinson Press	2	13.3
Minot Daily News	2	3.1			
Total	65[a]		Total	15[b]	
Weekly Newspapers					
Beulah Beacon	98	92.5	Hazen Star	13	48.1
Hazen Star	3	2.8	Beulah Beacon	8	29.6
Others	5	4.7	Dunn County Herald	4	14.8
			Others	2[c]	7.5
Total	106[d]		Total	27[e]	

[a]65 respondents subscribe to a daily paper with no respondents subscribing to more than one paper.
[b]15 respondents subscribe to a daily paper with no respondents subscribing to more than one paper.
[c]AgWeek-Grand Forks, Wishek Star, Dickinson Press, Poland Times, Center Republican.
[d]104 respondents subscribe to a weekly paper with 2 respondents subscribing to more than one paper.
[e]23 respondents subscribe to a weekly paper with 4 respondents subscribing to more than one paper.

TABLE 12. MOST POPULAR RADIO STATIONS FOR RESPONDENTS IN THE MAIN TRADE AREA, BEULAH, NORTH DAKOTA, 1989

Radio Station	Number of Respondents	Percent
KFYR-Bismarck	52	39.4
KHOL-Beulah	44	33.3
KBMR-Bismarck	7	5.3
KNDR-Mandan	7	5.3
KLTC-Dickinson	5	3.8
KQDY-Bismarck	5	3.8
KHIT-Minot	3	2.3
KYYY-Bismarck	3	2.3
Others	6	4.5

comparison is to examine changes in Beulah's main and greater trade areas. Although trade area delineation criteria used in the previous Beulah trade area report differ, enough similarity exists to make comparisons with the trade area boundaries determined in this report.

The main trade area for Beulah has changed little from 1971. Beulah gained one township from Richardton and lost two townships each to Bismarck-Mandan and Hazen. Beulah lost three townships overall since the early 1970s. The greater trade area appears to have diminished substantially to the west of Beulah; however, the GTA appears to have remained constant to the east of Beulah. Some of the differences in trade areas may be attributed to different trade area delineation criteria and to changes in the relative strength of the Bismarck-Mandan, Dickinson, and to a lesser extent, Hazen trade centers.

SUMMARY AND CONCLUSIONS

Trade area analysis was conducted for Beulah based on a statewide trade area survey which the Department of Agricultural Economics at NDSU conducted in 1989. The demographic and economic profile for Beulah was discussed. Beulah has suffered in the 1980s from reduced taxable sales and lower pull factors; however, Beulah experienced tremendous population growth during that period. Changes in economic activity for Beulah have been similar to other North Dakota cities in the 2,500 to 10,000 population range, suggesting Beulah, during the 1980s, fared at least as well as other cities of comparable size. Although Beulah suffers from decreased economic activity, the city is doing relatively better than its smaller competing cities. The depressed economic conditions Beulah experienced in the 1980s were common to most cities in North Dakota that were heavily involved in the coal industry.

Main and greater trade areas were defined for Beulah, using several delineation criteria. Townships where the majority of the respondents purchased 50 percent or more of a mix of goods and services in Beulah were included in the main trade area. Townships where 10 percent of the respondents purchased at least 10 percent of the goods and services mix in Beulah were included in the greater trade area (not including main trade area townships). The goods and services mix contained six convenience, eight specialty, and two agricultural items.

Beulah's main trade area appears to have decreased some since 1971. Beulah lost four townships to neighboring cities but gained one township, for an overall reduction in MTA size of three townships. The greater trade area decreased substantially to the west; however, pull from the east has remained unchanged. The shape of the greater trade area appears to reflect competition from Bismarck-Mandan and Dickinson, with most retail influence inhibited by Lake Sakakawea.

Beulah appears to be doing a fair job of capturing most of the available market (those respondents who purchase a majority of the service in Beulah divided by the total number of respondents in the Beulah main trade area who purchase the service) for at least half of the services listed on the survey questionnaire. Beulah could improve the market capture for a large cross section of the goods and services listed on the survey. Beulah patrons appear to be purchasing a majority of their goods and services in Beulah; however, considerable patronization of other trade centers exists with Beulah's MTA residents.

Bismarck-Mandan, Hazen, Dickinson, Zap, Golden Valley, and Halliday provide most of the shopping locations for area residents who do not purchase the good or service in Beulah. No substantial differences were found in the demographic characteristics of those purchasing less than 50 percent and those purchasing more than 50 percent of selected convenience and specialty goods and services in Beulah. Those purchasing 50 percent or more of one or more convenience or specialty items in Beulah traveled an average distance of about 15 miles.

Even though the 1980s have been difficult for rural North Dakota cities, Beulah appears to have fared as well as other cities of comparable size and somewhat better than smaller neighboring towns. Beulah has experienced tremendous population growth, compared to other North Dakota cities, but has faced decreased county employment and per capita income. Beulah increased its pull factor and retail sales from 1987 to 1989, suggesting Beulah may be turning around the depressed retail activity it experienced in the early 1980s. Although economic times have been difficult, Beulah appears to be doing a good job of retaining most of its past trade area. Beulah shows signs of an improving retail sector, but will remain highly dependent upon energy industries for most of its economic activity.

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APPENDIX

TRADE AREA STUDY
CONFIDENTIAL

- Please fill out both sides of the page.
- Any adult in your household may complete the survey.

BEGIN HERE...

LOCATION OF RESIDENCE

Town: _____

Township Name (or range #): (township information is critical to the survey; please enter) _____

County: _____

To what *daily* newspapers do you subscribe? _____

To what *weekly* newspapers do you subscribe? _____

What are the call letters of the radio station you listen to most for weather, news, and other information?

_____ in _____ (town)

DIRECTIONS:

For each item below indicate up to three towns where you do a great deal of shopping and the percentage of spending made at each town by your household. Totals do not have to add up to 100% across each category.

	TOWN NAME	%		TOWN NAME	%		TOWN NAME	%	
#. EXAMPLE: Groceries	Carson	60		Bismarck	15		Mandan	10	
1. Groceries									
2. Eating places									
3. Drinking places (alcoholic)									
4. Men's clothing									
5. Women's clothing									
6. Women's coats									
7. Teenage clothing									
8. Shoes									
9. Jewelery									
10. Major appliances									
11. Radios, TVs, VCRs									
12. Appliance/electronic repair									
13. Florist									
14. Nursery (plants)									
15. Furniture									
16. Auto sales									
17. Auto repair									
18. Gas or diesel service sta.									
19. Heating fuel/propane									
20. Plumber									
21. Barber									
22. Beautician									
23. Legal services									
24. Accounting services									
25. Computers									
26. Eye doctor									
27. Family doctor									
28. Chiropractor									
29. Dentist									
30. Hospital									
31. Mortician (funeral home)									

Please continue on the next page →

Please continue here

	TOWN NAME	%		TOWN NAME	%		TOWN NAME	%	
32. Prescription drugs									
33. Veterinarian (sm. animal)									
34. Banking & savings									
35. Building supplies									
36. Hardware									
37. Sporting goods									

38. Overall, what are your three main trading centers and the distance to each from your residence?

Town Name	Miles

39. What town do you consider to be your main trade center? _____

40. Are you...
- ☐ single, never married
- ☐ married
- ☐ separated or divorced
- ☐ widowed

41. What is your age? _____

42. What is your gender? ☐ male ☐ female

43. How many years of formal education have you had? _____

44. How many years have you lived in the county? _____

45. If employed (other than farming), in what town do you work? _____

46a. How many people live in your household, including yourself? _____

b. How many of these people are in grade school? _____

c. How many of these people are in high school? _____

Please continue with question 47 →

47. Please check the category that best fits your occupation (and your spouse's):

Respondent	Spouse	
☐	☐	farming (also forestry, fishing)
☐	☐	professional/management (e.g., teachers, registered nurses)
☐	☐	technical, sales, or administrative support (e.g., office workers, salespersons, nurses--LPNs, mail carriers, health care support jobs)
☐	☐	service jobs (e.g., health care aides, policemen, firemen, cooks, barbers, janitors)
☐	☐	precision production, craft, and repair jobs (e.g., mechanics, welders, construction trades)
☐	☐	equipment operators and fabricators (e.g., bus/truck drivers, laborers)
☐	☐	other *(explain)* _____

48. What was your total family net income before taxes last year?

- ☐ under $5,000
- ☐ $5,000-$10,000
- ☐ $10,001-$15,000
- ☐ $15,001-$20,000
- ☐ $20,001-$25,000
- ☐ $25,001-$30,000
- ☐ $30,001-$35,000
- ☐ $35,001-$40,000
- ☐ $40,001-$45,000
- ☐ over $45,000

IF YOU ARE A FARMER, PLEASE COMPLETE QUESTIONS 49-60 TO THE LEFT ←

If you are a farm operator (not strictly a landlord), please continue with question 49 below.

	TOWN NAME	%		TOWN NAME	%		TOWN NAME	%	
49. Farm machinery									
50. Farm mach. repair/parts									
51. Farm fuel & lubricants									
52. Commercial feeds									
53. Crop seeds									
54. Crop consultants									
55. Fertilizer									
56. Other farm chemicals									
57. Veterinary services									
58. Other farm supplies									

WHERE ARE YOUR FARM PRODUCTS MARKETED?

59. Grain								
60. Livestock								