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# Shopping Patterns and Preferences of Underwood, ND, Area Residents 

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This study was undertaken at the request of the city of Underwood in order to learn more about the shopping patterns of area residents and their preferences for the types of businesses and services they would like to see available locally. The context of the study is that both Underwood and nearby Washburn grew substantially during the 1970s as the Coal Creek power plant was being built and the Falkirk lignite mine opened. Both towns have lost some population since 1980 (Table 1). The local trade and service sector in Underwood has slipped substantially; taxable sales fell from $\$ 7.3$ million in 2000 to $\$ 2.2$ million in 2004. Pull factors have also dropped substantially for both Washburn and Underwood since $1980^{2}$. Local leaders want to identify what Underwood needs to make it a more attractive and desirable community. This is a particularly relevant issue at this time because substantial numbers of workers and their families are expected to be coming to the area looking for homes. A new ethanol plant co-located with Great River Energy's Coal Creek power plant created about 40 new jobs. In addition, a number of Coal Creek and Falkirk mine workers will be retiring in the near future, so replacements are being hired. Also, it is reported that new workers will be strongly encouraged to live within 30 miles of the facility, which would include Washburn and Underwood but exclude BismarckMandan.

[^0]Table 1. Population, Taxable Sales, and Pull Factors for Underwood and Washburn, 1980-2004

|  | Year |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Item/Town | 1980 | 1990 | 2000 | 2004 |
| Population |  |  |  |  |
| Washburn | 1,767 | 1,506 | 1,389 | 1,302 |
| Underwood | 1,329 | 976 | 812 | 760 |
|  |  |  |  |  |
| Deflated Taxable Sales |  |  |  |  |
| (million 2004 \$) | 18.9 | 11.9 | 14.5 | 13.3 |
| Washburn | 12.1 | 4.0 | 7.3 | 2.2 |
| Underwood |  |  |  |  |
|  |  |  |  |  |
| Pull Factors | 1.04 | 0.78 | 0.94 | 0.77 |
| Washburn | 0.65 | 0.29 | 0.68 | 0.18 |
| Underwood |  |  |  |  |

## Methods

To elicit information regarding residents' shopping patterns and preferences, two questionnaires were developed by the authors, one for area households and a second for high school students. A meeting with the Underwood Economic Development Committee and the City Council enabled the authors to learn about local leaders' perspectives and concerns. The household survey was distributed door-to-door and the youth survey was distributed at the Underwood High School (grades 9-12). Respondents could either return the questionnaire by mail or drop the questionnaire off at one of several drop boxes in Underwood. The numbers of usable questionnaires obtained (130 household and 56 youth surveys) were deemed adequate for subsequent analysis.

## Results

The household survey respondents were generally long-time area residents (Table 2). Only 12 percent reported moving to the Underwood area within the past 5 years, whereas 52 percent had lived in the area 26 years or more. The households responding to the survey represented 417 individuals -- a substantial portion of the Underwood area population. Fortythree percent of respondents indicated their household had at least one child under the age of 18 years. The age distribution of this population is shown in Table 2. Household incomes for this population ranged considerably with 8 percent reporting less than $\$ 25,000$ while 10 percent reported more than $\$ 100,000$. One-third of respondents reported household income of \$50,00079,999.

Underwood households generally reported purchasing groceries (81\%), convenience items (61\%), personal services (58\%), and entertainment (51\%) in Underwood (Table 3).

Bismarck was the major alternative location for each of these categories of purchases. Bismarck was the leading location for purchases of nongrocery personal items (88\%), nongrocery household items (73\%), major purchases like appliances or electronics (83\%), eating out or take out food (61\%), medical care (48\%), and professional services like tax or legal services (31\%). The pattern of obtaining most items either in Underwood or Bismarck was broken only in the case of professional services, where 31 percent reported obtaining these services in Washburn and 14 percent in Turtle Lake (data not shown).

Underwood youth reported that Bismarck was the location where they most often purchased most categories of items (Table 4). The only exception was gas/auto where 67 percent of youth respondents purchase these items in Underwood.

## Table 2. Demographics of Underwood Household Sample

## Item

How long lived in Underwood area:
less than 5 years
5-15 years
16-25 years ---------percent--------

26 years or more1.9
Average ..... 26.9
(n) ..... (106)
Age of persons in households:
$0-5$ years ..... 10.5
6-9 years ..... 8.9
10-14 years ..... 14.4
15-17 years ..... 3.3
18-35 years ..... 17.0
36-50 years ..... 19.2
51-65 years ..... 20.4
Over 65 years ..... 6.2
(n) ..... (417)
Household income:
Less than \$25,000 ..... 7.8
\$25,000-49,999 ..... 29.6
\$50,000-79,999 ..... 33.0
\$80,000-99,999 ..... 19.1
More than \$100,000 ..... 10.4
(n) ..... (115)

Table 3. Where Underwood Households Typically Purchase Various Categories of Items

| Item | Location of Purchase |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Underwood | Bismarck | Minot | Other |
|  |  | --- per | -------- | --- |
| Groceries/food | 80.8 | 16.9 | 1.5 | 0.8 |
| Convenience items | 60.7 | 30.4 | 3.6 | 5.3 |
| Personal services (hair, etc.) | 58.2 | 23.8 | 2.5 | 15.5 |
| Entertainment | 51.0 | 34.6 | 1.0 | 13.5 |
| Medical care | 39.2 | 47.7 | 0.8 | 12.3 |
| Eat out, take out food | 30.3 | 60.7 | 2.5 | 6.6 |
| Nongrocery household items | 23.3 | 72.9 | 3.9 | 0.0 |
| Major purchases (appliance, etc.) | 8.1 | 83.1 | 4.0 | 8.5 |
| Nongrocery personal items | 6.2 | 87.6 | 6.2 | 0.0 |
| Professional services (tax, etc.) <br> (n) | 0.9 | $31.3$ | 2.6 | 65.2 |

Table 4. Where Underwood Youth Typically Purchase Various Categories of Items

| Item | Location of Purchase |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Underwood | Bismarck | Minot | Other |
|  | -------------------- percent -------------------- |  |  |  |
| Gas/auto | 67.3 | 14.6 | 3.6 | 14.5 |
| Eat out | 25.0 | 58.9 | 3.6 | 12.5 |
| Entertainment | 23.6 | 56.4 | 9.1 | 10.9 |
| Personal services | 16.7 | 66.7 | 5.6 | 11.0 |
| Technology items (cell phone, etc.) | 3.6 | 76.8 | 12.5 | 7.1 |
| Nongrocery personal items | 0.0 | 85.7 | 14.3 | 0.0 |
| (n) | ( 56 ) |  |  |  |

When asked about reasons for shopping elsewhere than Underwood, household respondents most often indicated that desired items were not available in Underwood (79\%), that alternative locations had a better selection of merchandise (68\%), and that alternatives had better prices (55\%)(Table 5). Youth respondents also indicated lack of availability in Underwood as the leading reason (86\%), as well as a better selection (82\%) and better prices (62\%). Youth respondents were more likely than households to indicate that higher quality merchandise was a factor ( $22 \%$ vs. $7 \%$ ) as was better selection of merchandise ( $82 \%$ vs. 68\%) (Table 5). The differences were statistically significant.

Table 5. Reasons for Shopping Elsewhere than Underwood, Household and Youth

| Reason | Households | Youth |
| :---: | :---: | :---: |
| Not available in Underwood | 79.2 | 85.5 |
| Better selection of merchandise ${ }^{1}$ | 67.7 | 81.8 |
| Better prices | 55.4 | 61.8 |
| More convenient hours | 14.6 | 20.0 |
| Higher quality merchandise ${ }^{1}$ | 6.9 | 21.8 |
| Close to work | 5.4 | 9.1 |
| Better service | 5.4 | 5.5 |
| ( n ) | (130) | (55) |

${ }^{1}$ Responses significantly different. T-Test $\propto \pm .05$

When Underwood households were asked about grocery shopping, the most popular days for shopping were Friday (37\%), Saturday (37\%), and Monday (32.5\%)(Table 6). The most popular time for shopping was 2PM to 6PM. Fifty-nine percent of respondents indicated shopping between 2 and 6 PM . About 15 percent would prefer to shop at a different time, of which the largest number (43\%) would prefer to shop after 6PM.

Table 6. Grocery Shopping Patterns of Underwood Households

| Item |  |
| :---: | :---: |
| Day typically shop for groceries: ${ }^{1}$ | ----------------percent --------------- |
| Monday | 32.5 |
| Tuesday | 22.8 |
| Wednesday | 23.6 |
| Thursday | 18.7 |
| Friday | 37.4 |
| Saturday | 36.6 |
| Sunday | 21.4 |
| ( n ) | (123) |
| Time Typically Shop: before 11 AM | 4.7 |
| 11 AM - 2 PM | 19.4 |
| 2 PM - 6 PM | 58.9 |
| after 6 PM | 17.1 |
| (n) | (129) |
| Prefer to Shop at Different Time: |  |
| No | 85.1 |
| Yes | 14.9 |
| ( n ) | (87) |
| When Prefer to Shop: before 11 AM | 14.3 |
| 11 AM - 2 PM | 21.4 |
| 2 PM - 6 PM | 21.4 |
| after 6 PM | 42.9 |
| ( n ) | (14) |
| ${ }^{1}$ Values do not sum to total due to multiple responses. |  |
| Both households and youth purchases (Table 7). Among house coffee once a week or more, while percent have dinner out 2-4 times p lunch out at least once a week while week with few respondents reportin and 10 percent respectively. Amon coffee at least once per week, while and 12 percent purchased breakfast | d about eating out and nongrocery food ted purchasing snacks, beverages, or out at least once a week and 11 cent of respondents reported eating ating breakfast out at least once per or lunch multiple times per week, 6 orted purchasing snacks, beverages, or lunch, 33 percent purchased dinner, |

Table 7. Eating Out and Nongrocery Store Food Purchases by Underwood Households and Youth

|  | Meal |  |  |  |
| :--- | :---: | :---: | :---: | ---: |
| Item | Breakfast | Lunch | Dinner | Snacks/coffee |

## Households

Frequency of Purchase:

| Never | 30.3 | 4.0 | 1.6 | 4.1 |
| :--- | ---: | ---: | ---: | ---: |
| Occasionally | 41.2 | 42.1 | 31.5 | 27.6 |
| Every few months | 14.3 | 18.3 | 25.8 | 4.1 |
| Once a week | 8.4 | 25.4 | 29.0 | 30.1 |
| 2 - 4 times per week | 3.4 | 7.1 | 11.3 | 19.5 |
| 5 or more times per week | 2.5 | 3.2 | 0.8 | 14.6 |
| $\quad$ (n) |  |  | $(126)$ |  |
| Youth |  |  |  |  |
| Frequency of Purchase: | 33.9 | 3.6 | 12.5 | 0.0 |
| Never | 41.1 | 25.0 | 30.4 | 14.3 |
| Occasionally | 12.5 | 28.6 | 25.0 | 5.4 |
| Every few months | 8.4 | 25.0 | 30.4 | 21.4 |
| Once a week | 0.0 | 14.3 | 1.8 | 39.3 |
| 2 - 4 times per week | 3.6 | 3.6 | 0.0 | 19.6 |
| 5 or more times per week |  |  | $(56)$ |  |

When asked about the frequency of eating out and nongrocery food expenditures by size of purchase, Underwood households more frequently make purchases of $\$ 4.99$ or less (Table 8). Forty-one percent of respondents reported making a purchase of $\$ 4.99$ or less at least once per week, compared to 10 percent that reported a purchase of $\$ 15$ or more at least once per week. Among youth respondents, this pattern is even more pronounced, as 62 percent reported an expenditure of $\$ 4.99$ at least once per week while only 6 percent would make a single purchase of $\$ 15$ or more on a weekly basis.

When asked about eating out, Underwood household respondents overwhelmingly indicated that they would eat out more often if there were more options locally (Table 9). Eightyseven percent indicated they would eat out more if there were more options and 86 percent indicated they would eat out more often if there were extended hours. The most popular days for eating out were Saturday (69.5\%), Sunday (58\%), and Friday (49\%).

When the two groups of respondents were asked about the frequency of purchases in different categories, responses varied substantially depending on category (Table 10). Almost all respondents reported purchasing groceries at least once per week, with the most frequent response (69\%) being 2-4 times per week. Non-grocery personal items drew a mixed response with about half of respondents indicating once per week or more and the remainder indicating
once every few months or occasionally. Non-grocery household items and convenience items drew a similar response pattern, as did convenience items, although convenience items were more frequently purchased more than once per week than non-grocery personal and household items, 31 percent compared to 5 and 7 percent respectively. Major purchases, by definition, will be made infrequently -- the dominant response was occasionally (75\%). Eating out was an activity most often reported as once a week (41\%).

Table 8. Eating Out and Nongrocery Store Food Purchases by Underwood Households and Youth, by Size of Purchase

| Item | Size of Purchase |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | \$4.99 or less | \$5-\$9.99 | \$10-14.99 | \$15 or more |
| Households |  |  |  |  |
| Frequency of Purchase: |  |  |  |  |
| Never | 8.9 | 4.2 | 10.9 | 22.6 |
| Occasionally | 35.4 | 35.3 | 40.9 | 49.6 |
| Every few months | 14.2 | 26.9 | 31.8 | 17.4 |
| Once a week | 27.4 | 26.9 | 11.8 | 8.7 |
| 2-4 times per week | 9.7 | 5.9 | 4.6 | 1.7 |
| 5 or more times per week <br> (n) | 4.4 | 0.8 | 0.0 | 0.0 |
| Youth |  |  |  |  |
| Frequency of Purchase: |  |  |  |  |
| Never | 7.6 | 1.9 | 7.8 | 30.0 |
| Occasionally | 11.3 | 17.3 | 43.1 | 34.0 |
| Every few months | 18.9 | 32.7 | 31.4 | 30.0 |
| Once a week | 22.6 | 32.7 | 13.7 | 6.0 |
| 2-4 times per week | 28.3 | 15.4 | 3.9 | 0.0 |
| 5 or more times per week | 11.3 | 0.0 | 0.0 | 0.0 |
| (n) |  |  |  |  |

Table 9. Eating Out by Underwood Households

| Item |  |
| :---: | :---: |
|  | ------------percent ------------ |
| Would eat out more if there were more options | 86.9 |
| ( n ) | ( 130 ) |
| Would eat out more if there were extended hours | 86.3 |
| (n) | ( 131 ) |
| Days typically eat out: ${ }^{1}$ |  |
| Monday | 4.7 |
| Tuesday | 2.3 |
| Wednesday | 8.6 |
| Thursday | 6.3 |
| Friday | 48.8 |
| Saturday | 69.5 |
| Sunday | 57.8 |
| ( n ) | (128) |

${ }^{1}$ Values do not add to total due to multiple responses.

Youth respondents most often reported nongrocery personal items, personal services, and entertainment as being purchased every few months (Table 10). Among youth respondents, 42 percent reported eating out once a week, while well over 90 percent reported purchasing snack foods at least weekly.

Table 10. Frequency of Shopping for Various Categories of Items, Underwood Household Survey, 2008

| Item | 5 or more times/week | 2-4 times per week | Once per week | Every few months | Occasionally | Never |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ----------- | -------- | ------ pe | ent ---- |  |  |
| Households |  |  |  |  |  |  |
| Groceries | 8.7 | 69.1 | 19.8 | 0.8 | 0.8 | 0.8 |
| Convenience items | 5.6 | 25.8 | 25.8 | 12.1 | 29.0 | 1.6 |
| Eat out | 4.7 | 14.1 | 41.4 | 16.4 | 21.9 | 1.6 |
| Personal services | 2.4 | 1.6 | 1.6 | 62.7 | 23.8 | 7.9 |
| Nongrocery personal items | 1.6 | 3.1 | 46.5 | 24.0 | 21.7 | 3.1 |
| Major purchase | 1.6 | 0.0 | 0.8 | 3.2 | 74.8 | 19.7 |
| Entertainment | 1.5 | 6.2 | 17.7 | 20.0 | 30.0 | 24.6 |
| Professional services | 0.8 | 0.8 | 0.8 | 4.0 | 56.4 | 37.3 |
| Medical | 0.8 | 1.6 | 3.9 | 57.4 | 31.0 | 5.4 |
| Nongrocery household items | 0.8 | 6.9 | 48.5 | 23.1 | 20.0 | 0.8 |
| ( n ) | ( 126 ) |  |  |  |  |  |
| Youth |  |  |  |  |  |  |
| Snack foods | 35.7 | 41.1 | 16.1 | 1.8 | 5.4 | 0.0 |
| Entertainment | 12.5 | 12.5 | 17.9 | 28.6 | 21.4 | 7.1 |
| Personal services | 3.6 | 1.8 | 7.1 | 42.9 | 23.2 | 21.4 |
| Nongrocery personal items | 1.8 | 5.4 | 10.7 | 46.4 | 23.2 | 12.5 |
| Eat out (n) | (56) |  |  |  |  |  |

To determine interest in various types of businesses in Underwood, respondents were asked to indicate how important it would be to have new or expanded business services for various types of enterprises using a 5 point scale where 1 is very unimportant and 5 is very important. Responses were then averaged to calculate an average score to rank relative interest. When asked about the types of businesses needed in Underwood, a family restaurant received the highest average score of 4.3 (Table 11). Eighty-seven percent of households and 86 percent of youth respondents rated a family restaurant important or very important. Further, 100 percent of households and 91 percent of youth respondents indicated they would patronize such a business. A recreation center for youth with billiards, a gym, and video games had the second highest average score, 3.8 , with 59 percent of households and 91 percent of youth indicated that they would patronize such a facility. A supper club and hardware store were also highly ranked by households, with an average score of 3.7 with more than 90 percent indicating they would patronize each. Among businesses with limited support were laundromat, bookstore/news shop, dry cleaner, walking/biking trails, and tanning beds, each had an average score of less than 3.0. Results for other business types are detailed in Table 11.

Table 11. Types of Businesses Most Desired by Underwood Residents

| Business Type | Mean Percent Important or <br> Very Important |  |  | Would Patronize |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Score ${ }^{1}$ | Households | Youth | Households | Youth |
|  | ----------------------- percent ----------------------- |  |  |  |  |
| Family restaurant | 4.3 | 86.7 | 85.7 | 100 | 90.9 |
| Recreation center | 3.8 | 65.3 | 66.1 | 58.8 | 91.1 |
| Supper club ${ }^{2}$ | 3.7 | 66.7 | -- | 91.5 | -- |
| Hardware store | 3.7 | 68.8 | 51.8 | 96.9 | 58.5 |
| Mini golf ${ }^{2}$ | 3.7 | -- | 62.5 | -- | 75.6 |
| Coffee shop | 3.6 | 55.9 | 67.9 | 82.8 | 88.9 |
| Community center ${ }^{2}$ | 3.6 | 62.1 | -- | 76.8 | -- |
| Bakery | 3.6 | 60.8 | 58.9 | 90.7 | 79.6 |
| Full service pharmacy ${ }^{2}$ | 3.5 | 55.9 | -- | 89.0 | -- |
| Dentist | 3.5 | 54.8 | 47.3 | 74.7 | 55.8 |
| Drugstore | 3.4 | 48.8 | 58.2 | 92.1 | 68.3 |
| Small engine repair | 3.4 | 56.9 | 48.2 | 76.8 | 57.5 |
| Optician ${ }^{2}$ | 3.3 | 51.2 | -- | 72.6 | -- |
| Custom pack ${ }^{2}$ | 3.3 | 38.9 | -- | 82.6 | -- |
| Self serve car wash | 3.3 | 54.4 | 29.6 | 81.4 | 59.5 |
| Lumberyard | 3.3 | 43.1 | 32.2 | 90.9 | 34.2 |
| Bowling alley | 3.3 | 27.4 | 76.8 | 69.6 | 82.2 |
| Hair salon | 3.2 | 44.7 | 35.7 | 71.7 | 47.6 |
| Sporting goods ${ }^{2}$ | 3.2 | 32.3 | -- | 76.1 | -- |
| Stock car track ${ }^{2}$ | 3.1 | -- | 35.9 | -- | 47.6 |
| Country club ${ }^{2}$ | 3.1 | -- | 35.2 | -- | 46.5 |
| Fabric/yarn ${ }^{2}$ | 3.1 | 37.4 | -- | 70.2 | -- |
| Rental store | 3.0 | 20.8 | 44.5 | 55.8 | 62.5 |
| Computer repair | 3.0 | 24.6 | 40.7 | 64.7 | 53.7 |
| Accountant | 2.9 | 29.3 | 25.9 | 46.2 | 25.0 |
| Laundromat | 2.8 | 29.5 | 29.6 | 36.9 | 19.1 |
| Bookstore/news shop ${ }^{2}$ | 2.7 | 13.4 | -- | 62.2 | -- |
| Dry cleaner | 2.7 | 19.8 | 18.2 | 56.0 | 14.3 |
| Walking/biking trails ${ }^{2}$ | 2.6 | -- | 23.2 | -- | 25.6 |
| Tanning beds | 2.5 | 18.6 | 29.1 | 30.1 | 38.1 |
| ( n ) | (184) | (128) | (56) | (128) | (56) |

${ }^{1}$ Mean score (households and youth combined) based on scale of 1 (very unimportant) to 5 (very important.
${ }^{2}$ Question not included on survey for youth or households, respectively.

Household respondents were also asked about several aspects of community infrastructure (Table 12). Moderate income housing was seen as important by more households
(70\%) than low income housing (45\%). Walking, bike, and/or cross country ski trails were seen as important by 69 percent of respondents, while 59.5 percent would like more trees and flowers downtown.

Table 12. Underwood Households' Evaluation of Importance of Selected Infrastructure

| Item | Percent Important or Very Important |
| :--- | :---: |
| Low income housing | 44.9 |
| Moderate income housing | 69.8 |
| More trees and flowers downtown | 59.5 |
|  |  |
| Walking, bike, cross country ski trails | 68.8 |
|  | $(\mathrm{n})$ |

While many households would likely prefer to have a greater variety of businesses and services available at convenient locations, they are not always willing to pay a premium for such convenience. Underwood households were asked about their willingness to pay more to have a good or service available locally (Table 13). The percent of respondents willing to pay more ranged from 49 percent for eating out to 25 percent for professional services. The households that would be willing to pay more were asked how much more. The percentages households would be willing to pay ranged from 10 percent for major purchases to 12.9 percent for convenience items, entertainment, and medical care.

Table 13. Underwood Households' Willingness to Pay More if a Good or Service were Available Locally

| Category | Percent Willing <br> to Pay More | Percentage They <br> Would Pay |
| :--- | :---: | :---: |
| Eating out | 49.2 | 11.9 |
| Convenience items | 44.5 | 12.9 |
| Nongrocery retail shopping | 43.0 | 12.4 |
| Entertainment | 42.2 | 12.9 |
| Major purchase | 38.3 | 10.0 |
| Personal care | 34.4 | 10.5 |
| Medical care | 32.0 | 12.9 |
| Professional services | 25.0 | 11.8 |
| $(\mathrm{n})$ | $(114)$ | $(63)$ |

Youth survey respondents were asked to estimate their weekly spending for various categories of items (Table 14). They reported an average of $\$ 29.32$ for nongrocery items, $\$ 15.11$ for technology items, and $\$ 11.02$ for snack foods.

Table 14. Average Weekly Spending of Underwood Youth for Various Categories of Items

| Category | Average Expenditure |
| :--- | :---: |
|  | ---------- dollars ------------- |
| Technology items | 15.81 |
| Snack foods | 11.02 |
| Personal care | 10.19 |
| Nongrocery items | 29.32 |
| Entertainment | 10.85 |
| Eat out | 10.68 |
| Other $^{1}$ | 3.75 |
|  |  |
|  | (n) |

${ }^{1}$ Other: games (cards), chewing tobacco

The youth survey also asked whether the students were looking for a summer job (64\% were) and whether they were interested in starting their own business ( $17 \%$ were). They were also asked how far they live from Underwood. Half live in town, 21 percent live outside town but within 10 miles, and another 21 percent live 11 to 15 miles away. Thus, only 7 percent live more than 15 miles away from Underwood (data not shown).

Underwood households were also asked about their housing. Almost 94 percent of households own their home (Table 15). When asked about monthly rent or mortgage payments, 53 percent reported their home was paid for. Respondents most frequently reported a mortgage payment of $\$ 401-\$ 600$, 19 percent, with 13 percent that reported mortgage payments of $\$ 601$ $\$ 800$. Thirty-six percent of respondents plan to renovate their home within the next 5 years, while 18 percent plan to build a new home within 5 years. Of the latter group, 95 percent plan to build in the Underwood area. Among household respondents, 95 percent plan to retire in the Underwood area. Of those not planning to retire in Underwood, 82 percent plan to retire elsewhere in North Dakota.

Youth respondents were also asked several open-ended questions about their hobbies and what they like and dislike the most about Underwood. Various sports, specifically football, basketball, swimming, bowling, golf, volleyball, track, tennis, and cheerleading were cited most frequently by students as hobbies (64 repondents). Outdoor recreation activities such as fishing, hunting, biking boating, and snowmobiling were also frequently cited ( 35 respondents). Entertainment such as movies, computer and video games was cited by 21 respondants. A similar number (20 respondents) indicated their hobbies were related to music, theater, and the arts. Specific activities were singing, dancing, band, theater, band, poetry, and art. Trades and crafts such as woodworking, carpentry, auto-mechanic, and welding were identified by 14 respondents. Eleven respondents indicated they enjoyed spending time with friends and family and 6 indicated they liked to read.

Lack of activities was most frequently cited as the quality youth respondents liked least about Underwood and the surrounding communities ( 25 respondents). Lack of business and business hours were cited by 10 and 11 respondents accordingly as qualities they like least. A
few respondents indicated Underwood and the surrounding communities were too small. Alternately the small town feel and quiet atmosphere of the small town were cited by 18 respondents as the quality they liked best about Underwood and the surrounding communities. Seventeen respondents indicated friendly people and the fact that they know everyone in the community was the quality they like best. A few respondents indicated access to outdoor recreation opportunities and the short distance to services in Bismark and Minot as the qualities they liked best. Additional comments by youth respondents echoed the lack of things for youth to do. Every respondent that offered additional comments (12 respondents) cited the lack of activities for youth.

There were also several open-ended questions on the adult survey. Respondent were asked to comment on what they liked best about Underwood and surrounding communities as well as what they like least. Comments about what they like best fell into five major categories. "People" were cited most frequently as what was liked best about Underwood and its surrounding communities. Fifty five respondents commented about friendly caring people as well as just knowing everybody as a positive thing for the community. Thirty-three respondents indicated the smallness of the community was an attractive characteristic of Underwood and the surrounding communities. That Underwood and surrounding communities were "peaceful" and "safe" were cited by similar numbers of respondents. Location considerations such as proximity to larger cities, located on a major highway and access to outdoor recreation opportunities such as hunting and fishing were also cited by respondents. Several respondents also mentioned the new grocery store, the Underwood school and the golf course as what they like best about the area. Other comments included community events, low taxes, churches, clinic, volunteers, pool, and daycare.

Responses for what respondent liked the least about Underwood and surrounding communities fell into six major categories. Lack of recreation and entertainment opportunities was cited most frequently (38 respondents). Many respondents commented on the lack of both adult and youth recreation and entertainment. Specific types of activities/facilities mentioned by the respondents were walking/biking trails, recreation center, year-round activities, place to go meet people/socialize, etc. A similar number of respondents (36) commented on the need for improved customer service and extended hours of operation for local businesses. The need for extended restaurant hours was cited most frequently. The lack of various goods and services was cited by 33 respondents as what they liked least about Underwood and its surrounding communities. The fact that there is no dentist in Underwood was cited frequently. Another motel, evening fine dining, small engine repair and cable TV were also cited as goods and services the area lacks. Twenty-six respondents criticized the area for not being inclusive. Some respondents indicated that they found people to be cliquey, unwelcoming, uncooperative and unsupportive of community events. Several respondents made comments to the effect that Underwood and area communities should "give new people a chance." Comments related to community appearance were cited by 18 respondents. Respondents cited the need to clean up unsightly junk and repair main street buildings as well as the need for additional signage and parks. The lack of available and affordable housing was cited as a negative characteristic of Underwood and surrounding communities by 6 respondents. Other comments included lack of
animal control, lack of job opportunities, need for more people, air pollution, and high prices for local goods and services.

Respondents were also given an opportunity to voice their opinions on any issues not covered in the questionnaire. Respondent comments generally reinforced findings from the questionnaire, and most were very positive. Below are several respondents' comments that that generally represent the tone and substance of positive comments:
"Underwood is a great place to live!"
"The grocery store is great!"
"We have great hunting and fishing!"
"I love that we can know when our neighbor looks like they need a helping hand and in 30 seconds you can be there to lend a helping hand, shovel their drive or just stick their paper in the door so they don't fall on the ice. I love this town and am proud to be a resident!"
"Underwood is a great place to live. We just need to come together (stronger) to make improvements on what is already here. We have it all - just need to make it happen."

There were also some negative comments. Most negative comments pertained to local businesses' operating hours and the lack of availability of goods and services. Other comments covered a wide range of issues. Following are other negative comments not related to local businesses:
"It would be nice to see some more job opportunities in the town. The community needs some up keep."
"If we keep shutting new people out who move here, we're not going to get anywhere."
"We missed out on growth opportunities. The one thing we had going for our community was affordable housing. Since the prospects of expansion at the power plant and mine, people have inflated housing and people have elected to buy or build elsewhere."
"I wish there was more for adults in the way of activities or places to meet people. We moved here a year ago and found it difficult to meet people."
"Semi-trucks parking in town - starting them up at 6:30am, some of us work nights/shift work."
"I also feel that some of the private owned property needs to be cleaned up, not only for scenic reasons but junk is a real fire hazard."

## Table 15. Housing Characteristics of Underwood Households

| Item |  |
| :---: | :---: |
| Housing: | --------percent-------- |
| Own Home | 93.7 |
| Rent | 6.3 |
| (n) | (128) |
| Monthly Rent or Mortgage Payment: |  |
| Paid for | 53.4 |
| \$1-200 | 0.9 |
| \$201-400 | 9.3 |
| \$401-600 | 18.6 |
| \$601-800 | 12.7 |
| \$801-1,000 | 2.5 |
| More than \$1,000 | 2.5 |
| (n) | (118) |
| Home Building and Renovation |  |
| Plan to renovate home in next 5 years | 36.0 |
| Plan to build new home in next 5 years | 18.2 |
| ( n ) | (125) |
| Where plan to build: |  |
| Underwood area | 94.7 |
| Elsewhere in North Dakota | 5.3 |
| (n) | (19) |
| Future Plans: |  |
| Plan to retire in Underwood | 66.4 |
| ( n ) | (104) |
| Where to retire if not Underwood: |  |
| Elsewhere in North Dakota | 81.8 |
| Out of state | 18.2 |
| ( n ) | (33) |

## Implications

The survey provides insights about the types of businesses that Underwood residents and youth would like to see in town. Foremost among these was a family restaurant. More than 85 percent of both groups felt that this type of business would be important to have in town, and 100 percent of household respondents indicated they would patronize a business of this type. These responses are consistent with the fact that 87 percent of household respondents would eat out more if they had more options. Given the reported preferences of households, a family restaurant should plan for extended hours on Friday, Saturday, and Sunday.

A recreation center was the next most highly ranked business type, with about two-thirds of both groups that felt a recreation center was important. A bowling alley and mini-golf were also popular with youth respondents. Perhaps a combination recreation center/bowling alley
with a coffee/snack bar could be a viable business.
Other business types included in the top 10 highly rated businesses or services were a hardware store, a community center, a bakery, a full service pharmacy, and a dentist. These might be good subjects for feasibility analysis.

Underwood residents would support community beautification efforts. Almost 60 percent see a need for more flowers and trees downtown, while 69 percent would support walking, biking, and/or cross country ski trails. More moderate income housing is also seen as a need by 70 percent of household respondents.

The need for more moderate income housing together with respondents’ plans to build new homes or renovate existing ones suggests a future need for planning and zoning, as well as for adequate utilities (sewer and water) and other infrastructure. Future residential development could also mean that the lumber yard could have a potential for growth.

Few respondents indicated a preference for extended hours for grocery shopping. Only $15 \%$ would prefer to shop at a different time than they are currently shopping. Unless there is some unknown bias to the questionnaire, this would suggest most residents are satisfied with hours of business for the grocery store.

## CONTACT INFORMATION

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http://ageconsearch.umn.edu/. Please address your inquiries regarding this publication to the Department of Agribusiness and Applied Economics, North Dakota State University, P.O. Box 5636, Fargo, ND 58105-5636, phone 701-231-7441, fax 701-231-7400 or email ndsu.agribusiness@ndsu.edu.

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[^0]:    ${ }^{1}$ Hodur and Leistritz are respectively research scientist and professor, Department of Agribusiness and Applied Economics, and Tweeten is director, NDSU Extension Center for Community Vitality, North Dakota State University.
    ${ }^{2}$ Pull factors measure the extent a community attracts non-resident shoppers. A pull factor less than one suggests an economic leakage of business activity to larger trade areas, such as Bismarck or Minot.

