SERVING DISLOCATED WORKERS FROM THE PORT EDWARDS PAPER MILL: A RETURN ON INVESTMENT STUDY

A report commissioned by the
North Central Wisconsin
Workforce Development Board

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WIPPS
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BACKGROUND

Introduction

The closure of the Domtar Paper Mill in Port Edwards in 2008 dislocated over 500 workers living in and around the communities of Port Edwards, Nekoosa, and Wisconsin Rapids in Central Wisconsin. The Port Edwards plant was one of several paper mill operations to shut its doors in the state over the last decade, the result of decreasing demand for paper products and rising global competition.

Even before the mill layoffs took effect, the North Central Wisconsin Workforce Development Board set up a Dislocated Worker Transition Center at the mill to begin offering career counseling, education, and training to assist workers in positioning themselves to re-enter the workforce as soon as practicable. Some workers took advantage of the job training, others did not. The current study was commissioned to understand the long-range impacts on these mill workers; how they have fared in the job market; whether or not public investment in worker retraining has impacted re-employment; and to what extent the former mill workers are satisfied with their current life situation.

> ***"Although I enjoy the job I have now, I miss the mill and the people at Domtar. The years I spent there were some of the best of my life and I have many fond memories."***
>
> **Former Port Edwards mill worker**

Dislocated Worker Program . . . "There is life after the mill"[1]

Funded by the federal Workforce Investment Act (WIA), the Dislocated Worker program provides services to those who have lost their job due to company layoffs and closures, and are unemployed through no fault of their own. The North Central Wisconsin Workforce Development Board contracts with the Labor Education Training Center (LETC) to deliver Dislocated Worker Program services in the North Central region.

The announcement to close the Port Edwards mill was made just before Christmas 2007. Soon thereafter, Domtar agreed to provide LETC staff with office space and meeting room facilities. The co-location of this "transition center" increased the effectiveness of the outreach effort to affected workers during the months leading up to the mill closure. LETC began providing on-site Rapid Response services to impacted workers in January 2008.

Workers attended group orientation sessions and group workshops. The orientation sessions included specific information on WIA program and services, unemployment insurance, health insurance, and local community resources. All workers completed an initial status survey. Those workers choosing to enroll in the Dislocated Worker Program for more intensive services and/or re-training completed a WIA program application. Then, each worker was assigned to a

[1] Quote from a former mill worker survey respondent.

specific LETC case manager to begin the process of identifying barriers to and setting goals for reemployment.

Program enrollees attended on-site workshops which provided them with basic skills needed to re-enter the workforce. Workshop topics included resume development, interviewing skills, and effective job search strategies. Dislocated Worker case managers also offered guidance and support during workshop attendance and the job search process. Many of the dislocated workers had never executed a job search or created a resume prior to this event.

Based upon individual interests and skills, participants who chose the path of retraining were guided into training programs in high-demand occupations. Dependent on individual resources and needs, those who chose to enter a training program were eligible for tuition assistance and "support services" (mileage reimbursement, child care reimbursement, etc.) necessary to ensure completion. Additional economic support was available to workers via the Trade Adjustment Assistance program (TAA), a federal program designed to assist workers who have lost their jobs due to foreign competition. Workers also had access to unemployment insurance, which allowed them some financial cushion and time to participate in training programs.

> ***"I don't think the community will ever recover, but I am very grateful for the opportunity I was given to go back to school and get a degree. It showed me as an individual I could do something else."***
>
> **Former Port Edwards mill worker**

Of the mill workers who chose the path of retraining, the majority entered their selected training programs in the fall of 2008, and then finished by December 2010. Due to the challenging labor market during that time, most continued working with their WIA case managers for another year. By June 2012 most were exited from the WIA program, with the exception of a select few who needed additional guidance re-entering the workforce.

The Dislocated Worker Survey

In 2013, the North Central Wisconsin Workforce Development Board commissioned the Wisconsin Institute for Public Policy and Service to design and carry out an original survey of former mill workers to gain an understanding of how job retraining services and other variables have affected their current economic situation. Support for the project was also provided by Incourage Community Foundation. A paper copy of the survey was mailed to 516 former mill employees in November 2013. An electronic survey was also created for those who preferred to respond online. In total, 209 usable surveys were returned.

METHODOLOGY

A paper copy of the survey instrument, along with a postage paid return envelope, was mailed to 516 workers previously employed at the Port Edwards mill until its closing in 2008. Surveys were mailed on November 1, 2013. A follow-up post-card reminder was sent on November 21, 2013, which also provided an option to take the survey online. All completed surveys were returned by the first week in December 2013.

A random code number was assigned to each potential respondent both to enhance privacy and ensure the integrity of received surveys. The respondent name and code number list was accessible to only one Workforce Development Board employee and not revealed to the survey analysis team.

209 individuals completed the survey (196 returned hard copies and 13 took the online survey) for an overall response rate of **40.5%**, an exceptionally high response rate for this type of survey. The survey consisted of six sections, including demographics, job training services received, current employment situation, continuing education, geographical information, and personality and life outlook.[2]

The dislocated mill worker survey was conducted by the Wisconsin Institute for Public Policy and Service (WIPPS), a component of the UW Colleges and UW-Extension, at the request of the North Central Wisconsin Workforce Development Board and with supportive funding from Incourage Community Foundation. Principal investigators of the survey included Marlowe Embree, Associate Professor of Psychology, UW Colleges; Jim McCluskey, Associate Professor of Geography, UW Colleges; and Eric Giordano, Associate Professor of Political Science, UW Colleges, and Director of WIPPS.

Research, technical support, outreach, and other assistance was provided by Ali Konkel, and Rene Daniels from the North Central Wisconsin Workforce Development Board; Corey Anfinson, Gus Mancuso, Rick Merdan, and Jenny Riggenbach from Incourage Community Foundation; and Emily Schreiner, Bennett Javenkoski, Luke Rudolph, and Zach Nikolai from WIPPS.[3]

[2] For copy of complete survey instrument, see Appendix C.
[3] Additional methodological notes can be found in Appendix A.

KEY FINDINGS

In addition to general demographic and geographic data, this report focuses on six main themes that emerge from the survey results:

1. **Dislocated mill workers fared remarkably well given the difficult economic situation throughout Wisconsin and the nation.** Over 90% of those under age 63 found new employment with only modest decreases in income. The time required to find new work was generally consistent with national averages.

2. **Workforce training programs were particularly helpful for under-skilled mill workers seeking re-employment.** Specifically, participation in Dislocated Worker training programs significantly enhanced the probability that individuals would find new work. Participation also enhanced respondents' overall optimism and resilience.

3. **Age had a significant impact on economic outcomes for dislocated mill workers.** Older workers took longer to find new work, experienced more dramatic economic losses, and were not as successful on average transitioning to new employment. This result follows national trends.

4. **Willingness to commute longer distances to work improves economic outcomes.** Workers generally stayed in the region, including those who found new employment after the mill closure. Dislocated workers generally, and especially those with the least amount of formal education, are notably place-bound. Willingness to commute was associated with better economic outcomes, but many individuals were not willing to make this tradeoff.

5. **Sector re-employment impacted economic outcomes of dislocated mill workers.** Dislocated workers re-employed in new sectors, particularly non-manufacturing jobs, suffered greater economic loss on average.

6. **Attitudes of survey respondents remained generally positive despite the challenging nature of their transition experience.** While younger workers were more optimistic generally, most respondents exhibited high levels of resilience. Positive attitudes were correlated with overall positive outcomes.

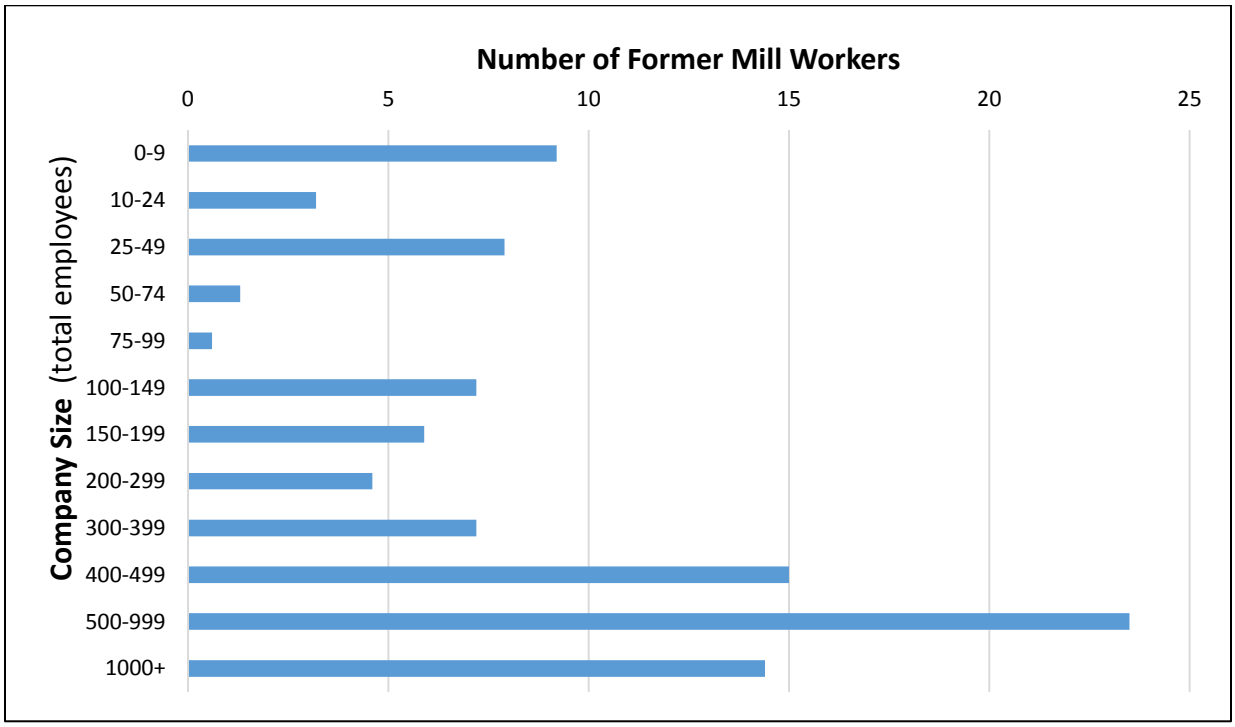
RESEARCH SAMPLE DEMOGRAPHICS

Demographic Results

- **209** out of **516** individuals returned a completed survey (**40.5%** return rate).
- **76.9%** of respondents were male.
- **99.0%** of respondents were white.
- For those responding, the average (mean) age was **54.4 years**.[4]
- The average number of years that respondents spent working at the mill was **21.9**.
- The average annual earnings from employment at the mill were **$55,026.** (Mean household income for responding mill employees was **$66,090**.)
- **93.2%** of respondents are homeowners (**40.7%** outright, **52.5%** with a mortgage).
- **41.0%** of respondents had no education beyond high school, while an additional **33.6%** had taken some college or technical school courses but had not completed a degree.
- **25.4%** of respondents have some degree (AA, BA/BS, or more) beyond high school but only **8.3%** had a bachelor's degree or higher.
- **95.6%** of respondents had health insurance.
- **90.4%** of respondents attended the initial group meeting after the mill closure.
- **70.7%** of respondents recalled having an employment case manager.
- **58.2%** of respondents completed one or more skills workshops offered upon news of the mill closing.
- **38.8%** of respondents participated in career retraining.
- **78.2%** of respondents found new employment.
- **2.5%** of respondents are currently in business for themselves.
- The average number of minutes respondents were willing to commute was **44.5**.
- **80%** of respondents live within **15 miles** of the mill.
- The average company size for re-employed mill workers consists of **555 employees**.

[4] All references to age in this report refer to the *current* age of former mill workers at the time they took the survey (late 2013).

Figure 1. Number of former mill workers re-employed by company size.



Comparative Demographic Characteristics

The survey showed that mill employees were more likely to be male and white than the average population in Wood and nearby counties. They were less likely to be college educated and more affluent than residents in nearby counties, in the state, and across the nation. They were also more likely to have spent a longer time working for a single employer.[5]

Table 1. Comparative demographic characteristics.

Population	Mill Workers	Wood County	Portage County	Marathon County	Wisconsin	U.S.
% White	99.0	95.6	94.9	91.9	88.2	77.9
% Male	76.9	49.3	50.1	50.2	49.6	49.2
% With BA/BS	8.3	18.7	27.2	21.9	26.4	28.5
Avg. Commute (mins.)	42.6[6]	18.3	19.2	18.7	21.6	25.4
Avg. Household Inc.	$66,090	$46,999	$51,422	$53,762	$52,627	$53,046

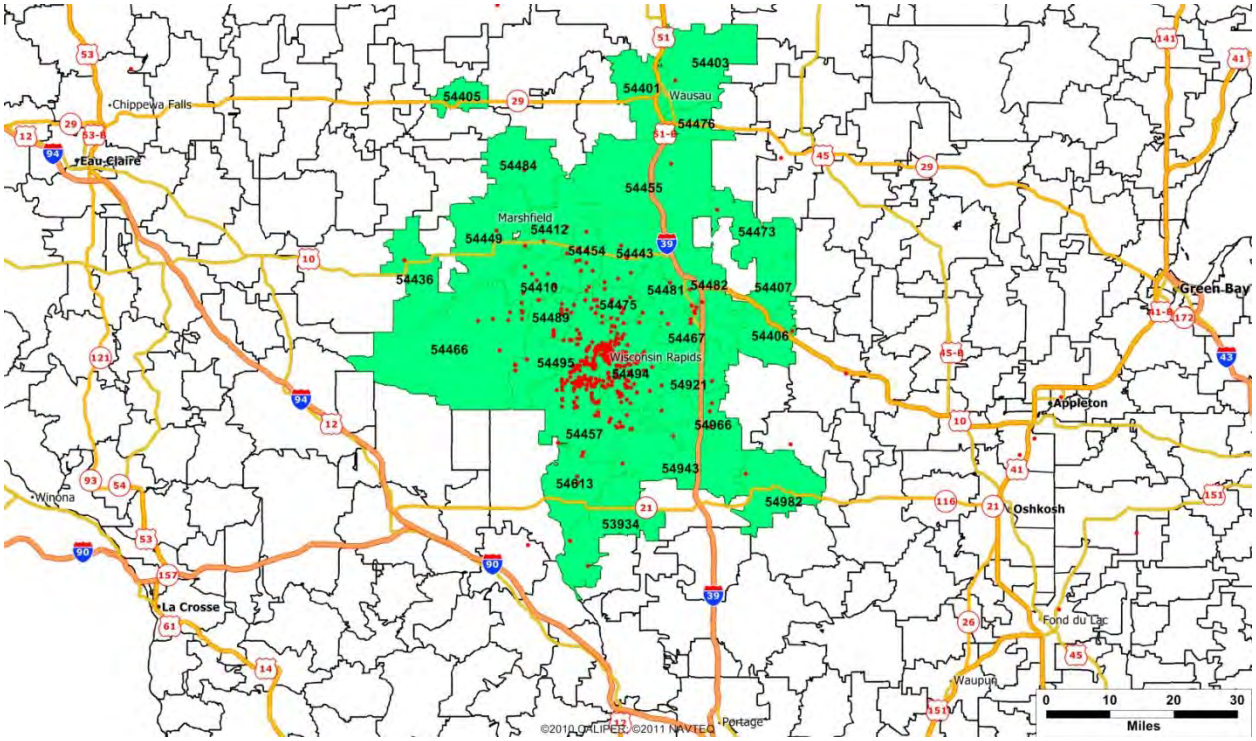
[5] According to the Bureau of Labor Statistics, since 1996, workers average between 3.5 and 4.6 years in a single job.
[6] This reflects the average *willingness* of respondents to commute, not actual average commute time.

GEOSPATIAL OVERVIEW[7]

Regional Characteristics

The Domtar Paper Mill was located in the Village of Port Edwards in Wood County, Wisconsin. Though surrounded by the small cities of Wisconsin Rapids and Nekoosa, this area of Central Wisconsin is generally rural in character with a population density of **57 per square mile** in Wood and surrounding counties.[8] The Wisconsin Rapids area remains a significant center for manufacturing, with the percentage of workers employed in that sector significantly higher than the state average. Given long term systemic trends and consequent challenges for U.S. manufacturing generally (including trade liberalization, automation, disparate labor costs, and the declining balance of trade),[9] it is not surprising that the area has suffered from chronic structural unemployment (between 8%-12%, which is significantly higher than the state rate).[10]

Figure 2. Geographic distribution of dislocated mill employees.



[7] A more thorough Geospatial analysis is included in Appendix E.

[8] Population density is calculated using 2010 census data from Wood and five contiguous counties: Adams, Clark, Jackson, Juneau, Marathon and Portage. According to US Census Bureau definitions, central Wisconsin is predominantly rural, punctuated by "urban clusters" (i.e., areas of population "of at least 2,500 and less than 50,000 people"). See http://www.census.gov/geo/reference/ua/urban-rural-2010.html.

[9] Studies show a negative correlation between import competition and manufacturing employment. See Borjas, Freeman, and Katz (1991); Revenga (1992); Sachs et al. (1994); Bernard and Schott (2006); Autor, Dorn, and Hanson (2012); and Pierce and Schott (2012).

[10] According to the Bureau of Labor and Statistics, Wisconsin's unemployment rate stood at 7.0% in February 2014 and 5.8% in April 2014. Until just recently, Adams, Clark, Jackson, Juneau, Wood and Portage counties experienced unemployment rates above 7% for over ten years.

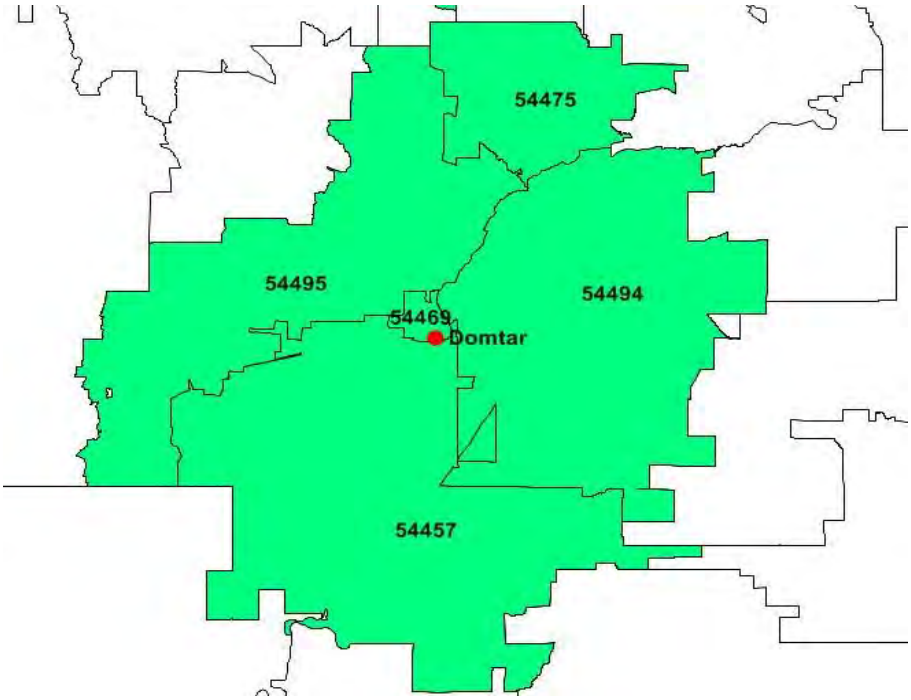
Core Area and Labor Shed

Nearly 80% of the dislocated mill workers live within approximately **fifteen miles** of the former mill, primarily within five Zip Code Areas as reflected in Table 2 and Figure 3 below. This is referred to as the Core Area.[11] The total population of the Core Area consists of **46,777** persons living in a rural area with two urban clusters: Nekoosa (population 2,580) and Wisconsin Rapids (population 18,367).

Table 2. Core Area of dislocated mill workers.

Zip Code	Place Name	Number of Workers	% of Dislocated Workers	Cumulative %
54494	Wisconsin Rapids	166	33.4	33.4
54457	Nekoosa	127	25.6	59.0
54495	Wisconsin Rapids	54	10.9	69.9
54469	Port Edwards	34	6.8	76.7
54475	Rudolph	16	3.2	79.9

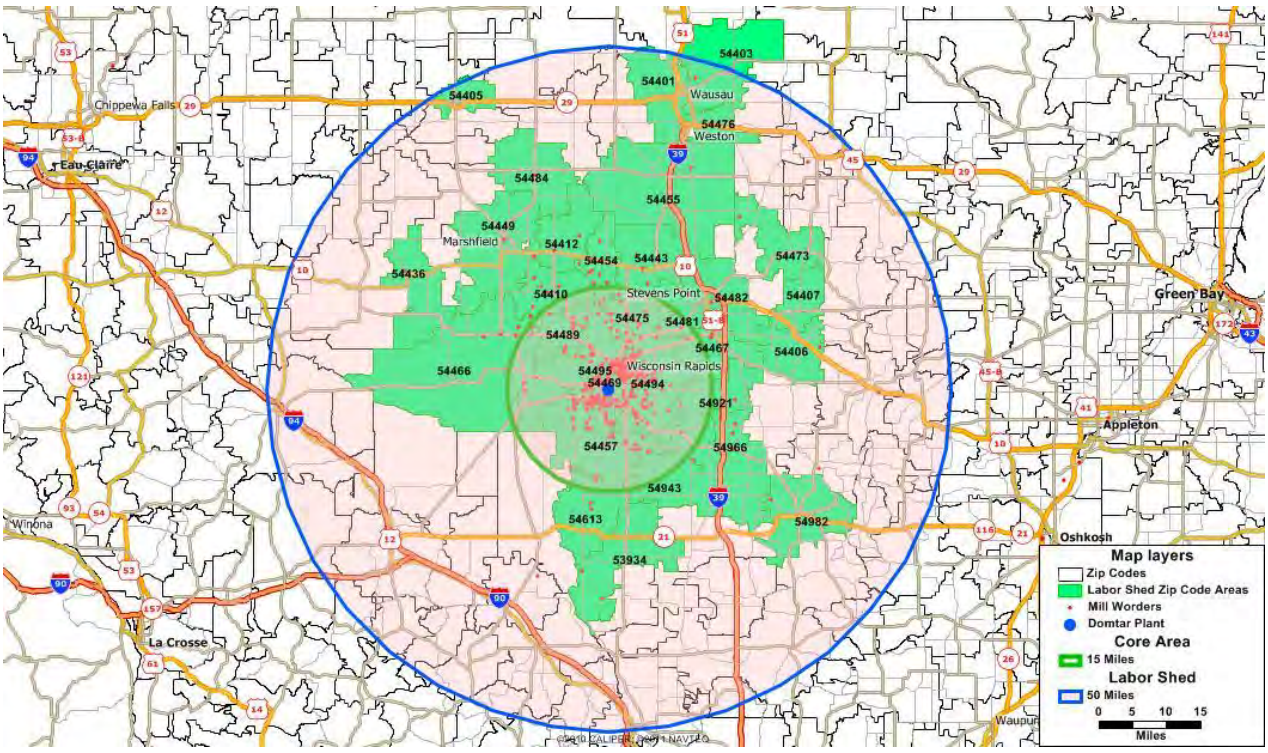
Figure 3. Approximate boundaries of the geographic Core Area by Zip Code.



[11] The Core Area in this study is the geographic area in which key survey features—in this case residency of former mill workers—are present in the first 80% of a cumulative frequency distribution. For more information on the Core Area, see Appendix E.

The Labor Shed is a region consisting of 31 contiguous Zip Code areas within a **fifty mile radius** of the former mill (see Figures 4). The total population of the Labor Shed is **264,639** persons. This area, which includes the Core Area, contains the current addresses of 96.3% of the total number of former mill employees. Conceptualizing this broader geographic area as an extension of the dislocated worker community provides insight into the interdependence between the Port Edwards/Wisconsin Rapids population centers and the broader region. It also suggests the significant impact that the mill closure had on regional socioeconomic conditions.

Figure 4. Labor Shed and Core Area of former mill employees.



Key Core Area and Labor Shed Characteristics[12]

Median age. The median age of the state is **37.3 years**, while the median age of the Core Area is **43.8 years**, a significant difference of **6.5 years**. Nekoosa (54457) has the highest median age at 47.8 years and Wisconsin Rapids (54494) has the second highest median age at 44.8 years. The median age of the Labor Shed is slightly lower at **41.7 years**.

Median income. The median household income of the Core Area is **$45,877** as compared to the median household income for Wisconsin at **$52,627**, a significant difference of **$6,750**. The median income household income for the Labor Shed is **$49,840**, which below the state level but above the Core Area.

[12] Additional Core Area and Labor Shed characteristics can be found in Appendix E.

Educational attainment.[13] Among Core Area residents 25 years or older, **91.3%**, graduated from high school, which is higher than Wisconsin's overall percentage of **89.4%**. The situation is significantly reversed with regard to baccalaureate degrees. The overall percentage of degree holders in Wisconsin is **25.9%,** while the average percentage in the Core Area is **15.4%.** The average percentage of the population 25 years or older in the Labor Shed that are high school graduates is **88.2%**, which is lower than both the state and Core Area. The average percentage of the population 25 years or older in the Labor Shed that hold a bachelor's degree or higher is **17.8%**, which still significantly below the state level but above the Core Area.

Summary

Communities in the Core Area and Labor Shed face significant challenges, including an aging workforce population that is significantly older than the rest of Wisconsin; a lower than average median income; a lower percentage of adults counted as part of the labor force; and a higher proportion of the population living below the poverty level. While the region boasts a high rate of graduation from high school compared to the state average, the percentage of those with college degrees or post-secondary training is below the state average.[14]

[13] For more information and analysis on educational attainment, see Appendix F.

[14] These trends are not unique to Wisconsin or the region. See Carr and Kefalas (2009). For complete bibliographic reference, see Appendix B.

1 KEY FINDING

Dislocated workers fared reasonably well despite a difficult economy

Positive Outcomes

Despite the potentially devastating impact of the mill closure, dislocated workers proved remarkably resilient. Overall, most individuals appeared to land on their feet, even after experiencing weeks of transition and uncertainty. Consider the following outcomes:

- Among mill workers **62 years old** or younger, **90.5%** found new employment.[15] While the **9.5%** unemployment rate among those presumed to be seeking work is higher than the average for the Core Area, it is not substantially greater.
- The average employed respondent's new income was **91.1%** of previous income. Given the circumstances, this represents a relatively minor loss in individual income. This is noteworthy due to the relatively high wages of mill workers prior to their dislocation compared to average wages in the Core Area.
- **95.6%** of respondents reported having health insurance, suggesting that for most former mill workers, important benefits were not permanently lost as a result of the mill closure.[16]
- Despite the challenge of personal economic loss and time out of work, most respondents reported relatively high levels of life satisfaction and overall optimism.

> ***"It was a long road and a lot of paper work going back to school but I am forever grateful for the opportunity to positively impact my career with a degree completion."***
>
> **Former Port Edwards mill worker**

Challenges of Dislocation

This does not imply that the transition was seamless or easy. The average individual in the sample took **19.8** weeks to find new employment.[17]

Table 3. Work sector and time comparative time to re-employment.

Work Sector	Time to Find New Job
Paper Industry	8.8 weeks
Other Manufacturing	20.9 weeks
Non-Manufacturing	25.8 weeks
Total Subgroup	**19.8 weeks**

[15] It is likely that many of the oldest respondents chose to retire rather than seek new employment.
[16] This was reported before mandatory insurance requirements for the Affordable Care Act went into effect.
[17] This excludes workers who participated in retraining, which intentionally delayed their re-entry into the workforce.

Career experts usually advise dislocated workers to expect job searches to last four to six weeks for every $10,000 of desired annual income. Applying this formula, the average survey respondent should have expected to spend about 25 weeks looking for a new job. The actual survey results are consistent with this expectation.

In addition, **53.6%** of employed respondents experienced a decrease in their income. Among those experiencing a loss, the average individual's new income was **66.1%** of their previous (mill) income.

Table 4. Economic gains/losses of currently employed workers.

New Income as % of Prior Income	% of Employed Respondents
0 - 25%	2.0%
26 - 50%	10.7%
51 - 75%	23.3%
76 - 90%	10.7%
91 - 99%	6.7%
100%	6.0%
101 - 110%	12.0%
111 - 125%	16.0%
126 - 150%	10.0%
151% or more	2.7%

Who Was Negatively Affected?

A number of statistical analyses were conducted to assess the difference between those who lost income and those who remained steady or gained. Major findings are as follows:

- Workers who experienced income loss were slightly older on average (**53.6**) than those who did not (**50.0**).
- Among those who experienced loss, **74.1% were male**. Among those who did not experience loss, **82.6% were male**. Put differently, 21 of 33 re-employed females experienced a loss, while only 60 of 117 re-employed males experienced a loss.
- The decision to accept a lower-paying job or not may have been driven in part by the income level of one's spouse or partner. Among workers who experienced a loss, average spousal/partner income was **$22,905**. Among workers who did not experience a loss, average spousal/partner income was **$18,315**. This suggests that if one's spouse or partner contributed less to the household income, there was more pressure on the former mill employee to find a higher paying new job even if other sacrifices, like a longer commute, were involved.

> ***"Because of my age in 2008 when the mill closed (58) finding a new job was difficult. Finally found a low wage job after 14 months . . ."***
>
> **Former Port Edwards mill worker**

- Workers who experienced a loss had spent more years at the mill (**22.6 years**) than those who did not (**17.5 years**). Those with more years of work at the mill may have failed to diversify their skill sets, which is generally a liability within the "new world of work."
- Workers who experienced loss were measurably less willing to commute (**40.7** minutes) than those who did not (**53.0** minutes).
- Those who experienced a loss spent more weeks without work (**56.3**) than those who did not (**51.8**). There are at least two competing explanations for this difference. First, it is possible that those who spent longer time looking for work had fewer marketable credentials or faced other more challenging constraints. Second, it is reasonable to think that unemployment insurance provided former workers with some financial cushion, permitting them more time to obtain new degrees or certificates before re-entering the workforce. These hypotheses require further investigation.
- There was only a slight difference in income among those who reported having a post-high school degree prior to the mill closure (with a loss: **24.1%;** with no loss: **24.6%**).

> ***"[I] started over at the bottom . . . lost pay and vacation rights. After 35 years it sucks. Can't wait to retire."***
>
> **Former Port Edwards mill worker**

Comparing Best and Worst Outcomes

Of those re-employed, the 20% of respondents with the most negative economic outcomes were contrasted with the 20% who had the most positive economic outcomes. This type of analysis helps highlight significant differences among respondents most greatly affected by the mill closure. Table 5 reveals best and worst outcomes across selected key variables.

Table 5. Best and worst outcomes for key variables.

Variable	Most negative outcome group	Most positive outcome group
Prior income mean	$56,113	$50,731
New income mean	$24,957	$68,517
Mean age	56.1	49.5
Percent male	66.7	89.7
Mean years at mill	25.2	13.2
Mean maximum commute	44.1	47.5

Workers' attitudes were also measured in this study using a 0-100 normalized scale with the lowest (most pessimistic) score being zero, and the highest (most optimistic) score being one hundred (See Table 6 below). Not surprisingly, when comparing attitudes of workers with the most positive and negative economic outcomes, the largest difference between the two groups was manifested in the subjective comparison of their new job versus their old job. In making this evaluation, workers undoubtedly focused most strongly on their economic outcomes as opposed to other factors such as general quality of life.

Table 6. Best and worst outcomes for attitude measures.

Attitude Measure	Most negative outcome group	Most positive outcome group
Satisfaction with new job	47.5	64.8
New job compared to old	35.0	58.3
Job security at new job	50.8	55.8
Advancement opportunities	33.3	45.8

Summary

It is not surprising that the closing of a key employer in the region created a difficult transition for many dislocated workers. As already noted, some workers fared better than others. Age, gender, spousal income support, time and previous income at the mill, and willingness to commute were related to differences in economic outcomes. What is remarkable, however, is that many dislocated workers successfully rebounded in terms of finding new employment and recapturing substantial earning power. Workers also proved to be highly resilient in terms of their outlook on the future (addressed in more detail in Key Findings 2 and 6 in this report). Naturally, workers who ended up the worst off economically were less satisfied overall with their new jobs and overall economic outlook.

2 KEY FINDING

Positive impact of Dislocated Worker training programs

Who Participated in Re-Training?

Overall, **38.8%** of respondents participated in career retraining. There were notable statistical differences between those who chose to participate in training and those who did not.

Table 7. Sample characteristics: training versus no training.

Variables	Training	No Training
Mean Age	51.9	56.1
% Male	62.3	87.0
Years at mill (mean)	20.1	23.0
Prior income (at mill)	$52,360	$56,802
% with post h.s. degree	29.7	23.8
Max commute (mean)	49.9	40.7
% employed	85.9	75.5

Survey analysis suggests that job transition and training programs hold less appeal for older males with little prior interest in education who previously made a good income, possibly because they perceive their career attributes to be sufficient in the new world of work.[18] On the other hand, training is more attractive to younger workers, females, those with interest in more education, those naturally more "entrepreneurial," and those seeking to improve their economic condition.[19]

Benefits of Training

The most obvious benefit to former mill workers who participated in career transition and training programs is that they were more likely to obtain new employment (**85.9%**) compared to those who did not participate in training programs (**75.5%**).

"I am thankful for the training that was available. It opened doors for me to be able to have the career I have now."

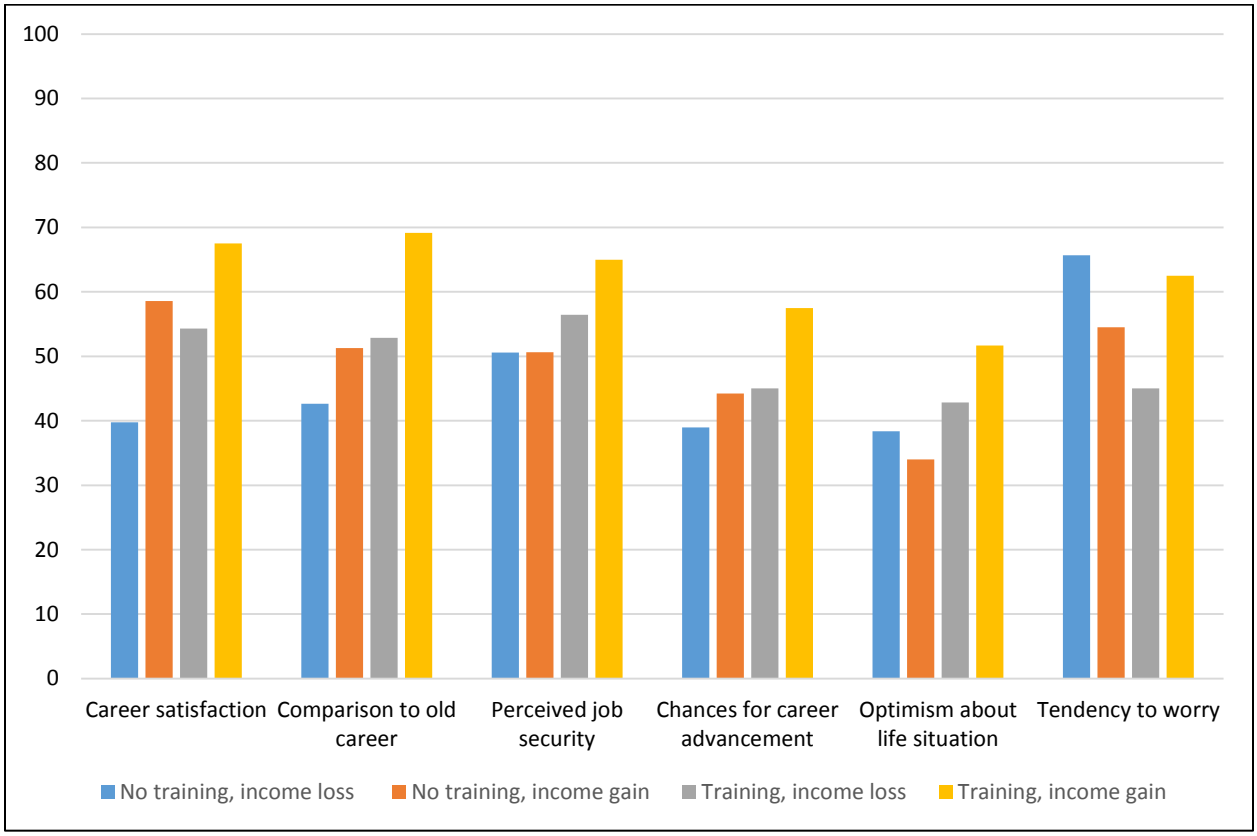
Former Port Edwards mill worker

[18] A statistical technique called discriminant function analysis was used to try to predict, based on demographic factors that existed prior to the decision to accept career training or not, who would take advantage of the training programs. Using the four predictor variables of age, gender, seniority, and previous income, 68.9% of respondents could correctly be classified in this way.

[19] A temperament analysis of respondents also shows that dislocated workers who participated in job training were more likely to be "entrepreneurial" than workers who did not participate in training. See Appendix G for more detailed analysis.

In addition, survey respondents were asked to share their views on six variables related to their outlook on career and life, including their overall sense of career satisfaction; perceptions of economic prospects (pre- and post-dislocation); perceived job security; prospects for career advancement; sense of optimism about life in general; and propensity to worry. In Figure 5 below, the vertical axis represents average scores (self-ratings on a 0-100 scale range) in each of these six life and career outlook categories.

Figure 5. Dislocated worker income and key life outlook indicators.



The results show broadly positive impact on life outlook among those who participated in job transition and training programs, including:

- **Higher levels of life and career satisfaction**
- **More favorable views of new career situation**
- **Greater levels of overall optimism**
- **Perception of greater job security**
- **Improved chances for career advancement**
- **Less tendency to worry about life and the future**

"I am much better off now than I was when I worked at the mill. I love my job now, it is 100% better than the job I had at the mill."

Former Port Edwards mill worker

Many of these benefits exist even for those who experienced a financial loss as a result of the mill closure. While training could not completely make up for the economic impact of the mill closure, it significantly cushioned individuals from feeling a sense of hopelessness and despair about their new economic and vocational situation.

Summary

Those participating in career retraining (**38.8%** of the total sample) were more likely to obtain new employment and indicated higher levels of life satisfaction and overall optimism. Thus, willingness to participate in training significantly ameliorated the negative impact of the mill closure.

3 KEY FINDING

Age significantly impacted economic outcomes

Demographics: Age

The median age of respondents was **55.0 years** (mean = **54.4 years**). The youngest respondent was **38 years old**, and the oldest was **72 years old**. The following table shows the distribution of age across the sample population.

Table 8. Age distribution of research sample.

Age range	% of total sample
38-42	6.3
43-47	15.9
48-52	19.3
53-57	21.3
58-62	19.8
63 or more	17.8

This is in contrast to the average age of non-student workers in the US, which is **42.3 years**, and in Wisconsin, which is **41.7 years**. The respondent group is skewed heavily towards an older workforce and is therefore not representative of the local, state, and national labor force generally. The relative older age of former mill employees is not surprising given that the paper mill (and manufacturing sector employment culture generally) rewards seniority. Employed workers have little incentive to engage in the kinds of career transitions that are common nationwide, especially given the high levels of compensation in manufacturing relative to other sectors of employment.

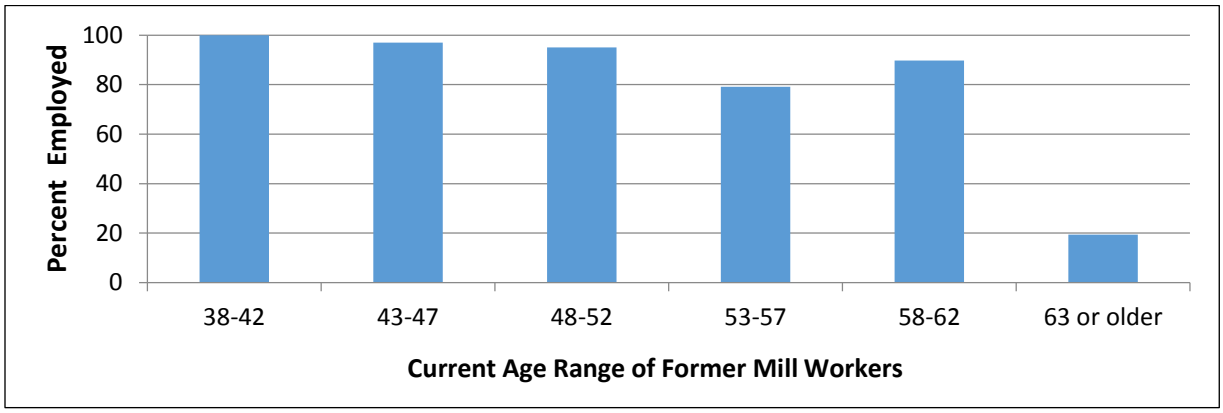
Age and Re-Employment

> ***"I would have preferred to retire at my full retirement age, as my social security would have been higher."***
>
> **Former Port Edwards mill worker**

The percentage of displaced workers who successfully obtained new employment after the mill closure varied by age. Overall, **78.2%** of respondents found new work. **100%** of dislocated workers under age 42 and **90.5%** of those under age 63 found new employment. Less than 10% of those above age 63 found new employment. In other words, younger individuals were more likely to find new employment, with the percentage of workers who obtained new employment dramatically decreasing around age 63. Though the Social Security Administration strongly discourages individuals from accepting early benefits, it appears that many individuals in this sample may have done so. This is consistent with national trends.[20]

[20] See Fichtner, Phillips, and Smith (2012).

Figure 6. Employment rate by age.



An apparent exception exists for those in the oldest non-retiree group (age 58-62). Anecdotal evidence suggests that workers in upper age brackets are more willing to accept "bridge" employment (i.e., part-time or lower-paying work) in order to transition to eventual retirement once they reached the age of eligibility for Social Security benefits. This would account for the rise in employment compared to other age brackets. Apart from this subset, the steady decline in employment with age is striking and suggests that, overall, older respondents chose to retire rather than to seek new employment. This drop-off in employment among older populations might result in part from age discrimination, which career experts agree is a widespread national concern.

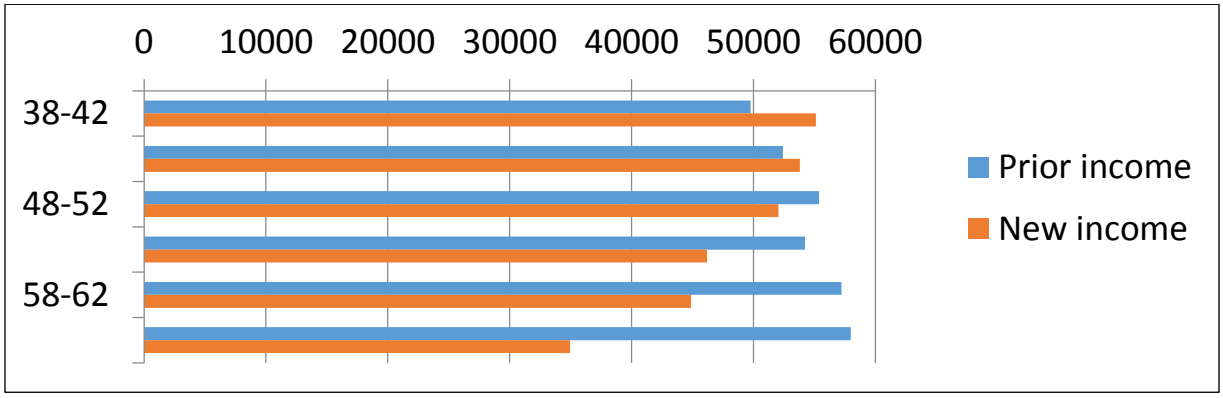
> ***The reality is that all the training in the world will not change a person's age. Age discrimination is very evident amongst employers. This should be made clear to anyone considering 'additional schooling to change to a new career.' . . . . [I]n most cases employers will not be willing to pay more than minimum wage."***
>
> **Former Port Edwards mill worker**

Scientific surveys of perceived age discrimination consistently indicate that displaced workers over the age of 40 frequently believe that their age has been a factor in their work transition and has impeded their ability to find new suitable work, due to a perceived employer fear that hiring older workers will not lead to a sufficient return on the investment in these individuals. However, it is difficult if not impossible to determine empirically the extent to which these perceptions are grounded in reality.

Income and Age

Income also varied widely by age. Figure 7 below shows that, in general, older workers had higher incomes before job displacement (presumably due to seniority) but experienced the most dramatic income declines afterwards.

Figure 7. Age and income comparisons.



Note that around age 47, the average dislocated worker experienced a decline in salary upon re-employment. This may reflect a national trend in which companies seek to reduce costs by investing in younger workers, particularly in times of economic downturn when the labor supply is plentiful in relation to available jobs. Whereas employee loyalty, experience, and seniority are often viewed as a valued asset in the insular workplace environment, older workers are often at a disadvantage in the wider job market which tends to favor flexibility, ongoing skill diversification and development, and lower wages.[21]

> ***"I find myself struggling day-to-day. I thought I would retire from the mill and was really disappointed that I put half of my life into a job and to have it abruptly pulled out from under me."***
>
> **Former Port Edwards mill worker**

Age and Willingness to Commute

Willingness to commute longer distances to find new employment, as well as overall attitudes about the mill closing and its aftermath, also varied widely by age. Younger workers indicated a willingness to commute longer distances as a necessary condition of employment. Predictably, as the average age rises, workers become less likely to commute longer distances. However, the data suggest that around age 55, dislocated mill workers showed an increased willingness to commute longer distances. This may be driven by a combination of factors, including an increasing unwillingness of older workers to re-locate combined with a strong need to maintain employment (i.e., to maintain income and prepare for retirement). This also reveals the realities of the geographic Labor Shed, suggesting a population that is closely connected to place and less willing to uproot for economic reasons.

> ***"The mill closure was not a 'golden' opportunity for me. I drive longer, make much less money. Pay more for insurance and have less insurance coverage than before."***
>
> **Former Port Edwards mill worker**

[21] See Delorese Ambrose (1996), *Healing the Downsized Organization*; William Bridges (1994), *Job Shock*; Harry Dent (1994), *Job Shift*; and Tom Jackson (1993), *Not Just Another Job*.

Summary

The results of the Port Edwards mill worker study confirm national trends indicating that the underlying work paradigm has shifted out from under many workers in the manufacturing sector. The old work paradigm that emphasized rule-bound, role-bound, and place-bound labor—with an emphasis on company loyalty—has given way to a new work paradigm that emphasizes lifelong learning, mobility, and transferability of skills and roles. Workers unable or unwilling to invest in new skills are at a comparative disadvantage. This becomes all too clear in cases like the mill closure. Older workers tend to be particularly vulnerable, giving rise to the potential for (and perceptions of) age discrimination.

This also raises fundamental questions about the role of employers in providing ongoing training and development opportunities for employees. Similarly, it is worth asking what role institutions of higher learning, such as technical colleges, and other governmental and non-governmental organizations might play in providing continuing education and skill development that is timely and affordable.

Finally, the results indicate that individuals unwilling to commute (or re-locate closer to new employment opportunities) often find themselves at a disadvantage. The costs of travel and re-location can be cost-prohibitive, thus forcing dislocated workers to make difficult choices.

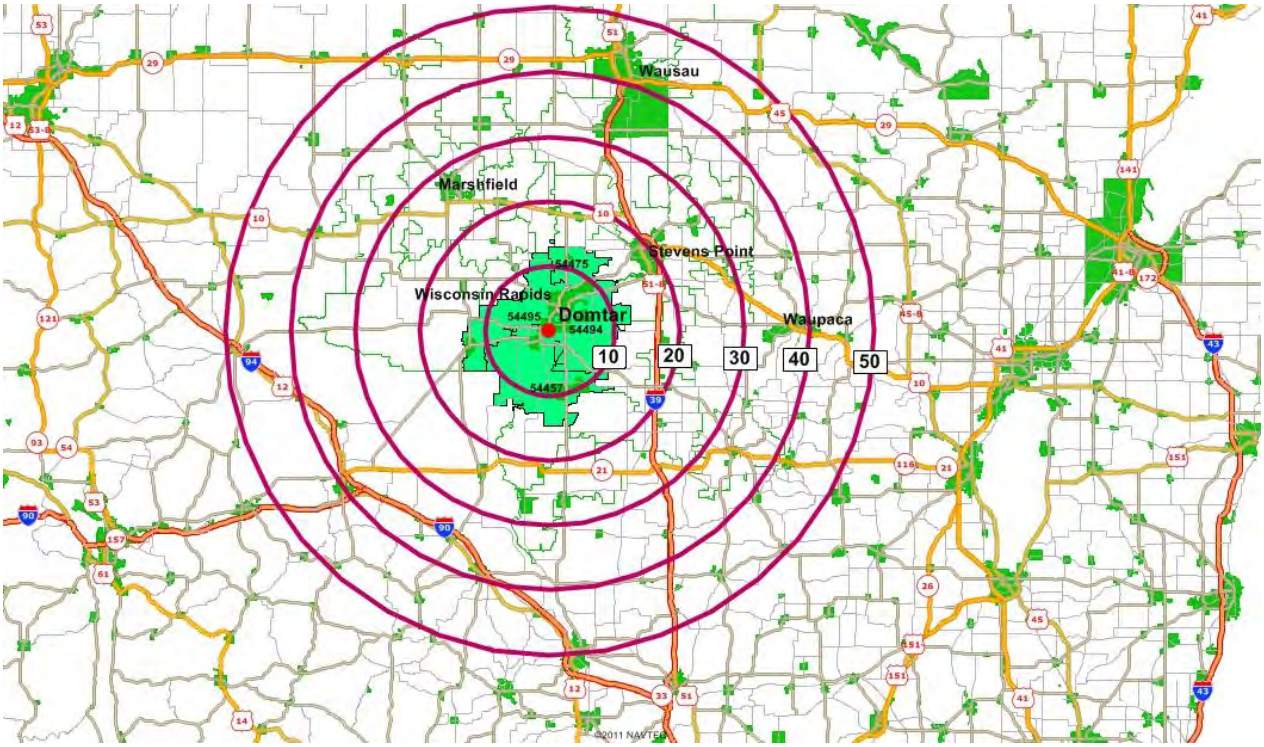
4 KEY FINDING

Willingness to Commute Matters

Geographic Mobility

Anecdotal evidence provided by those working in the career management industry suggests that residents of central Wisconsin, typical of the rural Midwest, are not particularly willing to engage in a lengthy commute to find new work. This is a tendency noted in nationally regarded sociological studies of rural America such as *Hollowing Out the Middle*. In a recent analysis by the Pew Forum, 72.6% of those living in Wisconsin today were born in the state, and it appears that individuals are willing to pay a high price, economic and otherwise, to retain desired low levels of geographic mobility. The average (mean) length of time a survey respondent in this sample was willing to commute to a new job was **42.6 minutes**. There are relatively few population clusters within this preferred commute area, thus limiting employment prospects.

Figure 8. Distance from Port Edwards mill in ten-mile bands.

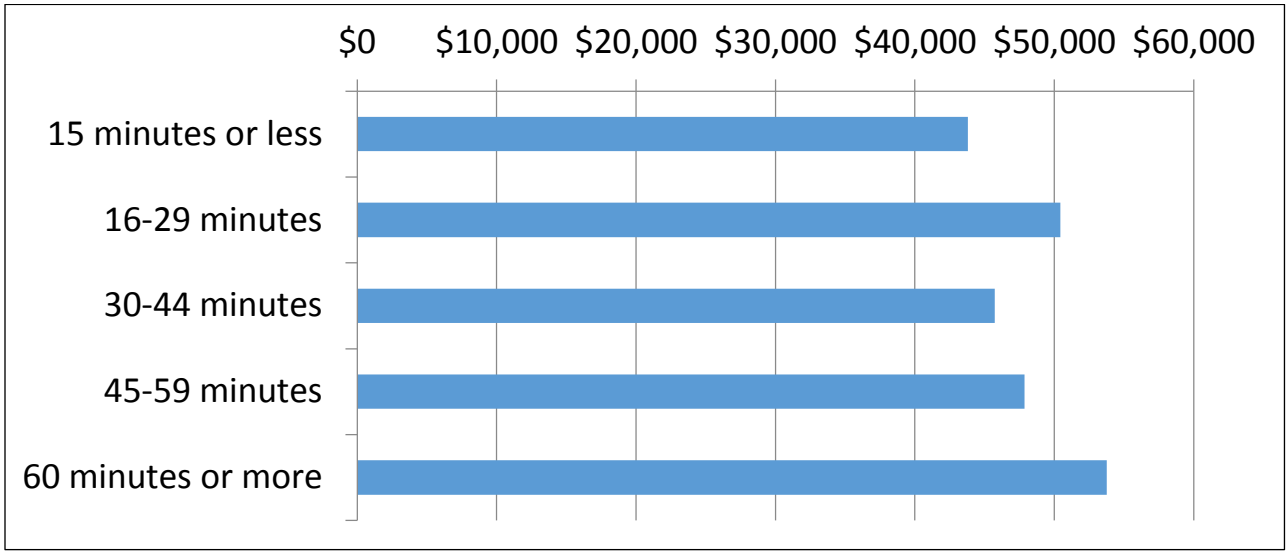


Income and Commute Time

For those re-employed, mean new income is strongly related to willingness to commute. Except for the anomalous 16-29 minute group, mean income rises in a linear fashion as workers become more willing to accept a longer commute. It appears that there is a decision tradeoff

to be made between time (a lifestyle consideration involving the investment of time spent commuting each day) and money (mean annual income).[22]

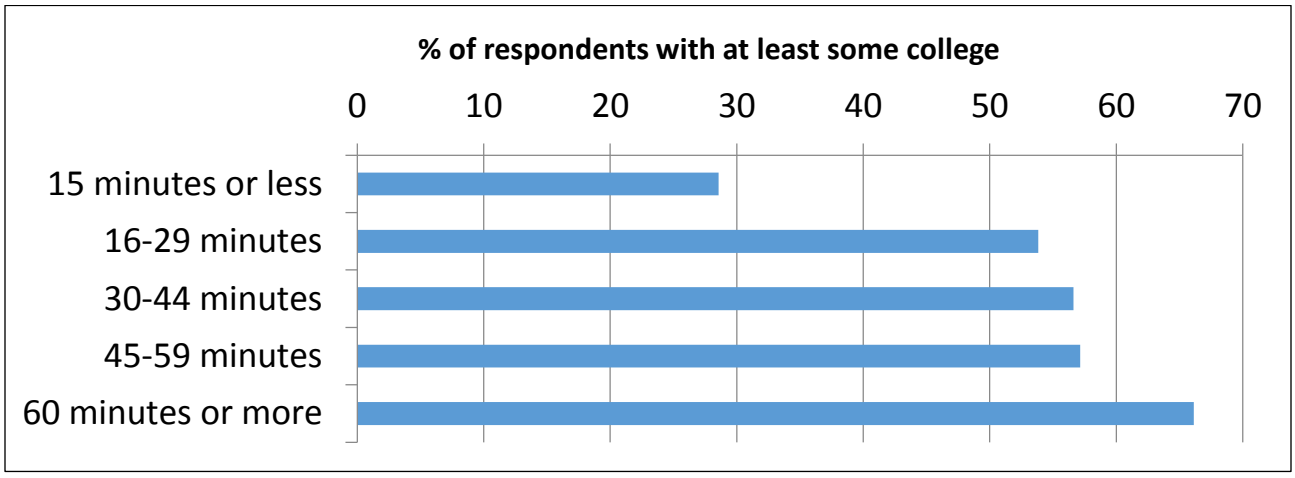
Figure 9. Willingness to travel and current income.



Education and Commute Time

Education might be a confounding factor.[23] Those with at least some college are notably more willing to commute longer distances. There are two possible reasons for this: 1) higher education promotes a different (less geographically localized) mindset, and/or 2) there exists a lower availability within the local community of the kinds of jobs that more educated individuals seek.

Figure 10. Willingness to commute as a function of possessing some college education.



[22] As Andrea Gross noted as early as 1992 in her book *Shifting Gears*, "Time is the new money."

[23] A confounding factor can cause researchers to draw faulty conclusions by suggesting that the presence of one variable (e.g., education levels) causes change in another variable (e.g., commute time) when in fact it is caused by some completely different variable.

5 KEY FINDING

Sector re-employment influenced economic outcomes

Work Sectors and Re-Employment

Of those dislocated mill workers who were re-employed, **24.8%** found new work in the same work sector (paper manufacturing). In contrast, **33.5%** found work in a related work sector (other manufacturing entity), while the remaining **41.6%** found work in an unrelated (non-manufacturing) sector such as agriculture, financial services, or health care.[24]

The data suggest several trends. First, paper manufacturing is still relevant in the geographic Labor Shed. In fact, Domtar still operates a plant in the region and a segment of the sample was re-hired at the Nekoosa paper mill or went to work for New Page, which operates mills in Biron, Stevens Point and Wisconsin Rapids. Re-employment by a third of the respondents in other manufacturing jobs is also not surprising given the region's larger than average employment rate in manufacturing generally in comparison to the state. Conversely, this may also suggest that the region has a hard time attracting new major employers. However, the fact that over **40%** found jobs outside of these two sectors indicates a dearth of available manufacturing jobs for dislocated workers as well as a need for such workers to be creative and flexible about the kinds of new work they considered. These factors, in turn, highlight the strategic importance of career retraining opportunities now and likely into the future.

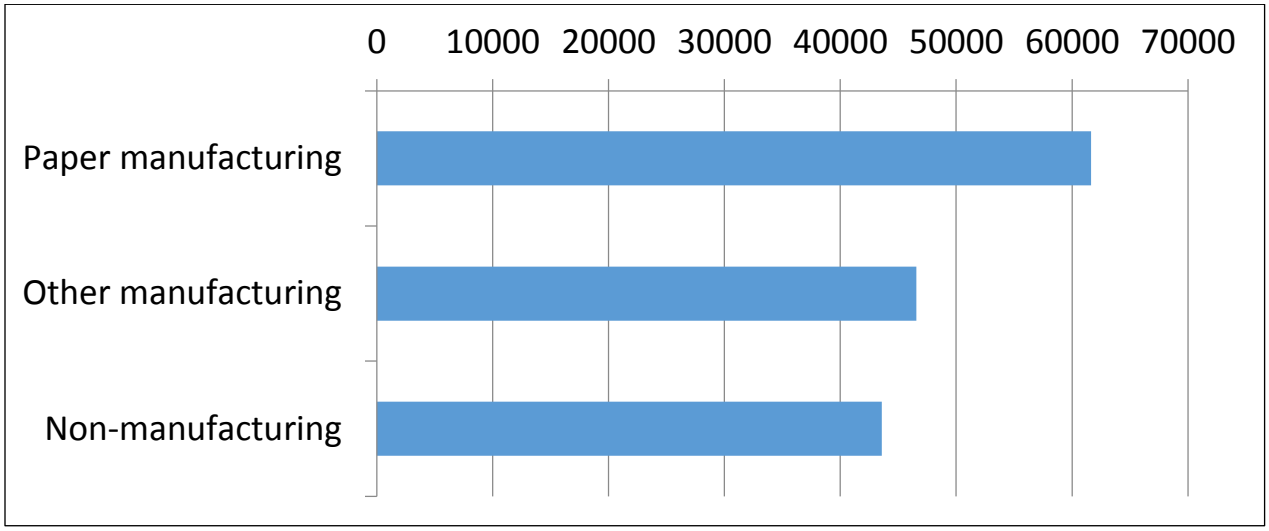
Work Sectors and Income

Work sectors had a strong relationship to income. Specifically, dislocated workers who were re-employed in the paper manufacturing industry receive higher wages on average than other manufacturing and non-manufacturing sectors. It should be considered that employers who have to train workers without industry-specific experience incur considerable, and sometimes unsustainable, sunk costs that make it harder for them to achieve a sufficient return on their investment in the new hire. Thus, employers understandably seek applicants with inside knowledge of a given industry and can consequently afford to pay these individuals more. Be that as it may, those who had to transition to new industries and roles (who tended to be slightly older as well) paid an economic price for so doing.

> ***"I was lucky to bump over to the Nekoosa Mill. The jobs that were there were on the bottom where younger people usually do the work so the adjustment physically took a while along with adjustment in loss of pay."***
>
> **Former Port Edwards mill worker**

[24] For analytical purposes, ten distinct work sectors were collapsed into three convenient categories: 1) paper manufacturing; 2) other manufacturing; and 3) non-manufacturing. For a technical treatment of work sectors, see Appendix D.

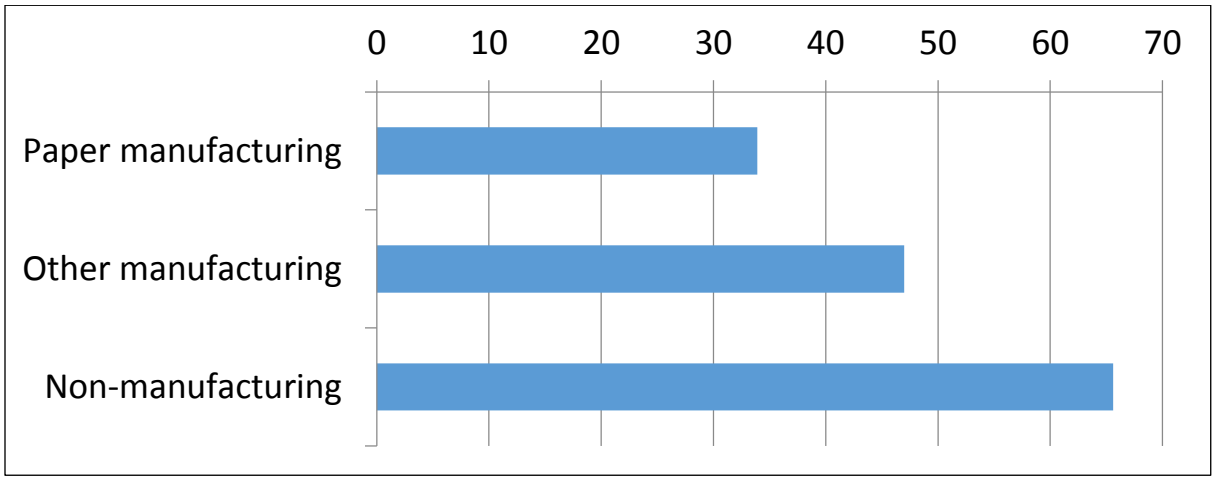
Figure 11. Average income by sector.



Job Sector and Time to Re-Employment

The length of the job search was also related to work sectors. Dislocated mill workers who re-entered the paper manufacturing sector were re-hired in about **34 weeks** on average while those who landed jobs in other manufacturing jobs took nearly **47 weeks** before finding new work. Those who ended up in non-manufacturing jobs required over **65 weeks** on average to be re-hired.[25]

Figure 12. Weeks to re-hire by sector.



It is possible that more desirable workers (from the standpoint of an employing organization) were quickly re-employed by other paper mills in the area, leaving less marketable workers to seek work for a longer period of time and to accept lower paying jobs. Not surprisingly, workers re-hired in the paper industry were also slightly younger on average than those hired in other sectors.

[25] It cannot be determined from the data whether these longer periods represent an *inability* to find new work or a *deliberate decision* to search more thoroughly and wait for "better" work before finally giving up or "settling".

Table 9. Average age by sector.

Work sector	Mean age
Paper manufacturing	50.79
Other manufacturing	52.64
Non-manufacturing	52.58

Summary

Taken together, the data suggest a segmentation of the labor market, which has significant public policy implications. Notably, large scale worker displacements of the kind exemplified by the Port Edwards mill closing will be hardest on older workers. More desirable (younger) workers are likely to be re-employed in similar sector jobs, while less marketable (older) workers will spend significantly longer time looking for work, have a harder time finding jobs in the same sector, and end up on average with much lower incomes. In addition, policy-makers should expect that it will take significant time to train and prepare workers for careers in new, less familiar job sectors.[26]

It appears that the most at-risk dislocated workers are those in the upper age ranges, not only because of the potential for age discrimination, but because they also may require specialized modalities of assistance. For example, research suggests that younger people tend to utilize fluid intelligence (flexibility) while older people mostly utilize crystallized intelligence (contextualized "wisdom") when engaged in problem-solving. Fluid intelligence is the capacity to solve problems in novel situations, independent of acquired knowledge. It is closely correlated with abstract reasoning and logical extrapolation. Crystallized intelligence, which seems to be more operative as people age, is the ability to use acquired skills, knowledge, and experience to address issues. It is correlated with problem-solving abilities that depend on acquired knowledge and experience over time.[27] The implications are important for workforce re-training as certain types of learning may be more conducive to support the needs of aging job-seekers than others.

[26] This is true despite educational attainment. Even with higher education levels on average, older workers still took more time to find jobs in new sectors. See Appendix F for additional analysis.

[27] Cattell (1987); Lee et al. (2005); Cavanaugh and Blanchard-Fields (2006); and Ferrer, O'Hare, and Bung. (2009).

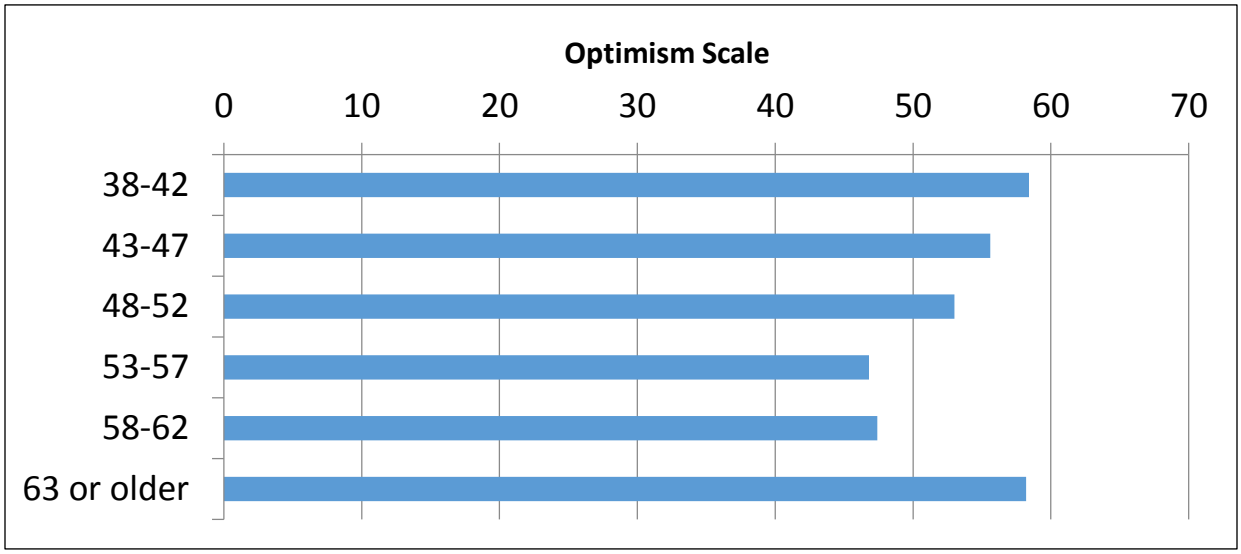
6 KEY FINDING

Worker Attitudes Make a Difference

Optimism and Age

Survey respondents were asked how optimistic they were, in retrospect, about their life situation. According to Figure 13 below, optimism about life prospects after the mill closure was strongly related to age (optimism scores are on a 0-100 scale with a mean optimism of **52.4** for the entire sample).

Figure 13. Optimism and age.



Predictably, younger workers were the most optimistic, likely reflecting their actual or perceived prospects of finding a new job and realizing long term work and income goals. Optimism also rose dramatically among those old enough to retire. Those in their early fifties were the least optimistic, perhaps caught between the realities of an age-biased work environment on the one hand and the need to find new employment (being too young to retire) on the other.

Given the substantial transition that dislocated workers had to endure, however, these optimism scores seem generally high, suggesting that people are quite resilient even in the face of a dramatic life upheaval. Those who participated in career retraining were generally more optimistic than those who did not, after other factors are controlled. In other words, even factoring in economic gain/loss and differences in age, the correlation between training and optimism was large and positive.

> ***"I enjoyed my job in Port and I was good at it. The shut[down] of the mill took me about 5 years to recover from mentally but thank [G]od [I did]."***
>
> **Former Port Edwards mill worker**

These findings are consistent with a growing body of work on positive psychology.[28] Psychologist Martin Seligman, for example, argues that a specific identification of one's cognitive and emotional assets can strongly facilitate life success across a range of domains.[29]

> ***"I am very glad to have had the opportunity to go to school and change my career path. If I hadn't done that I could very well be working at . . . another factory, working shift work and dreading every minute of it. In my [new] job I am not bored, I don't dread going to work and I enjoy what I do and NO MORE SHIFT WORK!"***
>
> **Former Port Edwards mill worker**

As people gain skills and confidence, they begin to feel tangible changes in their outlook. Recent research suggests a strong link between personality differences and an individual's tendency to rely heavily on different personal strengths.[30] It would be interesting to study how such personality differences might influence the decisions dislocated workers make when faced with an unexpected or unwanted transition. Conversely, how skills training is received and incorporated by different personality types begs further investigation.

Summary

Not surprisingly, those who are younger and can conceive of brighter economic prospects—or those who are near retirement and can expect to achieve desired economic goals, are more optimistic than those who are older and whose economic futures are less certain. Participation in Dislocated Worker training programs is also correlated with greater optimism. While it is difficult to say which causes the other, it does appear that worker training is associated with a more positive outlook on life. Studies suggest that as new skills are developed, so too are perceptions of individual strength and self-worth.

[28] See Martin Seligman's work in *Authentic Happiness* (2002).

[29] Seligman's influential model suggests six categories of personal assets, which he styles wisdom, courage, temperance, transcendence, humanity, and justice.

[30] See Embree (2011).

APPENDIX

Methodology Notes

SPSS software was utilized to engage in a comprehensive multivariate analysis of the survey data. In addition to the descriptive and cross-tabulation analyses that form the bulk of the main report, a range of other more complex procedures and techniques were utilized to confirm the hypotheses presented herein, including multiple regression, factor analysis, cluster analysis, and discriminant function analysis. Interested readers may contact the authors of this report via email for additional details about the methods and results of these more complex analyses.[31]

[31] Contact the authors at info@wipps.org.

B APPENDIX

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C APPENDIX

Survey Instrument

Domtar Dislocated Worker Survey

The purpose of this survey is to follow up with former employees of the Domtar paper mill in Port Edwards. Your individual responses will **NOT** be shared publicly. Your responses will be collected and combined with responses from other former Domtar employees. Your full participation will provide valuable information to policymakers at the local, state, and federal levels to help improve worker retraining programs. Please answer all questions unless the instructions direct you otherwise. **Your participation is deeply appreciated**. For more information, please contact Ali Konkel at 715-204-1648 or akonkel@ncwwdb.org.

Section 1. The following questions relate to basic elements of your identity and work background.

1. What is your current age in years? _____ years old

2. What is your gender?

   ( ) Female
   ( ) Male

3. What category best describes your race?

   ( ) Black or African American
   ( ) American Indian or Alaskan Native
   ( ) Hawaiian Native or Pacific Islander
   ( ) Asian
   ( ) Hispanic
   ( ) White (other than Hispanic)
   ( ) Other (please specify): _____

4. How many years were you employed at the Domtar Port Edwards mill? _____ years

5. What position did you hold at the time of the plant closure? (Examples: Backtender, Chip Plant Operator, Millwright, Laborer, Utility) _____

6. What was your annual income before taxes for the last full year that you worked at the Port Edwards mill? Include all sources of earned income, but NOT income from other household members. (Make as good an estimate as you can.) _____

7. Do you currently have health insurance?

   ( ) Yes, health insurance that my employer provides for me
   ( ) Yes, health insurance that I purchased on my own
   ( ) Yes, health insurance from some other source (such as being carried on a spouse's policy)
   ( ) No

8. At the time of your job dislocation, what was your highest level of education?

   ( ) Less than ninth grade
   ( ) Some high school, but no diploma
   ( ) High school graduate or equivalent (GED, HSED)
   ( ) Some college, but no degree
   ( ) Associate's degree
   ( ) Bachelor's degree
   ( ) Graduate or professional degree

9. Thinking back to the time of your job dislocation, were you willing to move to another community to find work?

   ( ) Definitely not
   ( ) Probably not
   ( ) Not sure
   ( ) Probably would
   ( ) Definitely would

10. Thinking back to the time of your job dislocation, how many minutes were you willing to commute one way from home to work? _____

11. After your job dislocation, did you receive any unemployment insurance benefits?

    ( ) Yes

    ( ) No

12. How long (**in weeks**) did you receive unemployment insurance benefits?

    (Please make as good an estimate as you can.) _____ weeks

Section 2. These questions relate to services provided to employees during the closure of the mill.

13. Did you attend the initial group meeting held at the Domtar Administration Building in Jan/Feb of 2008 to discuss resources available to dislocated workers?

    ( ) Yes
    ( ) No
    ( ) Not sure or don't remember

14. Did you attend any workshops at the on-site Transition Center or Job Center on such topics as resume writing, interviewing skills, and job search services?

    ( ) Yes
    ( ) No
    ( ) Not sure or don't remember

15. Were you assigned to a case manager in the dislocated worker program?
    ( ) Yes
    ( ) No
    ( ) Not sure or don't remember

Section 3. These questions are related to your current employment situation.

16. Are you currently employed? (If self-employed or working part time, check "Yes".)

    ( ) Yes (**continue to question 17**)
    ( ) No (**skip to question 30**)

Questions 17 through 29 should only be answered by individuals who are currently employed. If you are currently unemployed, skip to question 30.

17. What is your current job title? (Examples: sales clerk, truck driver, nursing assistant. If you hold more than one part-time job, list the job from which you get the largest share of your overall income.) _____

18. Do you work for yourself or for someone else?

    ( ) For myself (small business owner, entrepreneur, consultant, or independent contractor)
    ( ) For someone else (a company or organization that lists me as an employee on their payroll or that has hired me as a temporary worker)
    ( ) Both (I have a conventional job but also make some money "on the side" by means of self-employment)

19. What kind of company do you work for (or, if self-employed, what kind of business do you run)?

    (Examples: retail store, metal fabricating, food service) _____

20. How many individuals, including yourself, work as employees for the organization where you work?

    (Please give as good an estimate as you can.) _____

21. Which item below best describes your current employment situation?

    ( ) Full time permanent position (includes full time self-employment)
    ( ) Full time temporary, time-limited, contingent, or seasonal position
    ( ) Part time permanent position
    ( ) Part time temporary, time-limited, contingent, or seasonal position
    ( ) A combination of more than one part time position (may include part time self-employment)
    ( ) Other (please describe): _____

If you are employed full time, skip to question 23.
If you are <u>NOT</u> employed full time, continue to question 22.

22. If you are <u>NOT</u> employed full time, are you seeking full time employment? (Please check the box that best describes your situation.)

    ( ) Yes, I am actively seeking full time employment
    ( ) No, I am retired
    ( ) No, I am currently in school or retraining
    ( ) No, I am satisfied with my current employment situation as it is
    ( ) No, I have given up on the possibility of full time employment
    ( ) No, for some other reason (please specify): _____

23. When did you begin work in your current situation? (If you have more than one job, choose the one that provides the largest share of your income.) Month: _____ Year: _____

24. What is your current annual income before taxes? Include all sources of earned income, but <u>NOT</u> income from other household members. (Make as good an estimate as you can.) _____

25. What is your current annual <u>HOUSEHOLD</u> income before taxes? Include earnings from all members of your household combined, including yourself. _____

26. Overall, how satisfied are you with your current work situation?

( ) Very unsatisfied
( ) Moderately unsatisfied
( ) Neutral
( ) Moderately satisfied
( ) Very satisfied

27. Thinking about your situation today, how would you compare your current work situation to the work you had at the Port Edwards mill?

( ) Much worse
( ) Somewhat worse
( ) About the same
( ) Somewhat better
( ) Much better

28. What level of job security do you feel in your current work situation?

( ) Much less than most people have
( ) Somewhat less than most people have
( ) About as much as most people have
( ) Somewhat more than most people have
( ) Much more than most people have

29. How would you rate your chances for career advancement at your present place of work?

( ) Much less than most people have
( ) Somewhat less than most people have
( ) About as much as most people have
( ) Somewhat more than most people have
( ) Much more than most people have

Section 4. These questions relate to training you may have received to help you find a new job or career.

30. Did you decide to return to school to pursue training in a new career or to upgrade your current skills?

( ) Yes, I began a training program as a result of the mill closing **(continue to question 31)**
( ) No **(skip to question 38)**

Skip to question 38 if you did NOT participate in any training or education to help you find a new job.

31. Was your training or education paid for, at least in part, by the dislocated worker program or TAA?

    ( ) Yes
    ( ) No
    ( ) Not sure or don't remember

32. What was the name of the school or institution that provided your training or education? (Examples: Mid-State Technical College, Northcentral Technical College, UWSP.)
    _____

33. What field did you study or receive training in? (Examples: health care, food service, computer technology.) _____

34. How long (**in months**) did you spend in training or school? _____ months

35. How many course credits did you earn? (Please make your best estimate.) _____ credits

36. How satisfied are you with your training or education?

    ( ) Very dissatisfied
    ( ) Somewhat dissatisfied
    ( ) Neutral
    ( ) Somewhat satisfied
    ( ) Very satisfied

37. Did you successfully complete the training program, receiving a certificate or diploma?

    ( ) Yes (skip to question 39)
    ( ) No (continue to question 38)
    ( ) Not sure or don't remember (skip to question 39)

Skip to question 39. Question 38 is only for those who did NOT complete their training or education.

38. If you did NOT complete a training program, which option below best describes your reason for not completing such a program? Check as many boxes as apply to you.

    ( ) I obtained a job that did not allow me to continue with the training (due to scheduling or other issues)
    ( ) I obtained a job that was satisfactory to me, so additional training seemed unnecessary.
    ( ) I was dissatisfied with the training program.
    ( ) I was dissatisfied with my progress in the program.
    ( ) Other (please specify): _____

Section 5. These questions relate to geographical information.

39. What is the ZIP Code of your current primary residence? _____

40. Which best describes your housing situation?

( ) Own a home outright (no mortgage)
( ) Make monthly mortgage payments on a home
( ) Rent a home or apartment
( ) Other (for example, stay with relatives or friends) – please specify: _____

41. If you are currently working, how many minutes do you commute one way to work? (If you are not currently employed, write "not employed" in the space.) _____

Section 6. Questions about your learning style preferences.

These questions are designed to measure individual personality and learning style preferences. We intend to use this information to improve worker training at Job Centers. For example, research shows that people with different personality and learning style preferences benefit from different types of training experiences.

The following questions should be answered with a number from **0 to 4**, using the following scale:

0 = Strongly disagree
1 = Moderately disagree
2 = Neutral or not sure
3 = Moderately agree
4 = Strongly agree

42. _____ Being with other people energizes me.

43. _____ I am a detail-minded individual.

44. _____ I am naturally aware of the flaws in other people's thinking.

45. _____ I keep my belongings organized at all times.

46. _____ I worry less than most people I know.

47. _____ I work best alone.

48. _____ I enjoy coming up with new, creative ideas.

49. _____ I am aware of other people's needs and feelings.

50. _____ I am a flexible, spontaneous person who likes to go with the flow.

51. _____ I struggle with low moods more than I would like.

52. _____ Life would be better if people were more serious and responsible.

53. _____ Life would be better if people would think things through rationally.

54. _____ Life would be better if people would have more fun and enjoy themselves more.

55. _____ I am optimistic about the future.

56. _____ The mill closure has provided the community with unforeseen opportunities.

57. _____ The mill closure helped me to come to terms with my needs and skills.

58. _____ The local community will never really recover from the mill closure.

59. _____ I am more aware now than I used to be that I have options for my life.

SURVEY CONTINUES ON THE NEXT PAGE.

60. If you have any comments or remarks, please indicate below.

THANK YOU FOR YOUR PARTICIPATION.

To be eligible for the random drawing for three cash prizes ($500, $300, and $200), please send your completed survey in the pre-addressed and postage-paid return envelope by November 22.

By completing the survey, you will also help the Dislocated Worker Program ensure that public funding designated to assist dislocated workers is being used effectively. The individual information you provide on the survey is confidential. Only the summary data from the former Domtar group will be shared with workforce development partners.

D APPENDIX

Employment Categories

The current employment status by occupation for the dislocated workers was classified into groups that best coincided with categories used by the US Census Bureau. In order to facilitate analysis, dislocated workers who found new jobs in the paper industry sector were included in a category labeled herein as "Paper Manufacturing"; those who found jobs in other manufacturing sectors were placed in a single category labeled "Other Manufacturing;" finally, all workers who found jobs in sectors other than paper manufacturing or manufacturing generally were placed in the category of "Non-Manufacturing Employment." A detailed breakdown of job categories for the civilian workforce in Wisconsin and in the Core Area follows.

Figure D1. Employment categories.

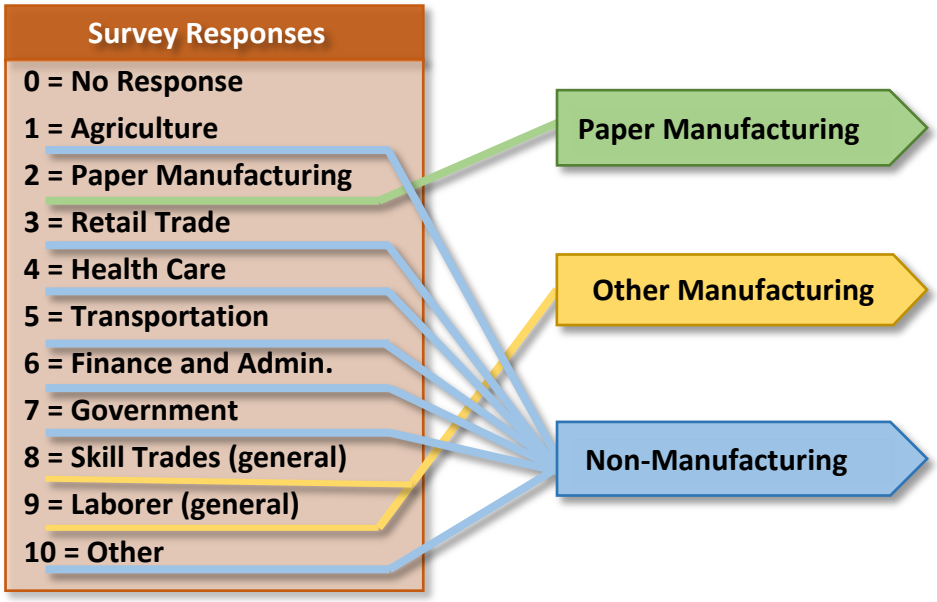


Table D1. Labor Force by Industry in Wisconsin and Core Area Zip Codes.

Civilian Labor Force Employment by Industry	Wisc.	54494	54457	54469	54495	54475
Agriculture, forestry, fishing, hunting, and mining	2.5%	1.9%	3.8%	1.1%	5.4%	7.4%
Construction	5.4%	5.8%	5.9%	3.1%	3.8%	8.0%
Manufacturing	17.9%	22.3%	23.2%	23.9%	23.7%	29.3%
Wholesale trade	2.9%	2.3%	1.4%	1.1%	1.6%	0.8%
Retail trade	11.6%	10.5%	9.6%	10.9%	13.0%	10.0%
Transport, storage, utilities	4.4%	5.6%	7.3%	4.3%	4.5%	5.2%
Information	1.7%	1.7%	1.9%	3.6%	3.3%	1.7%
Finance, insurance, real estate, rental and leasing	6.1%	4.8%	4.6%	4.2%	4.3%	5.4%
Professional, scientific, admin/management	7.9%	4.9%	3.3%	5.7%	6.3%	3.1%
Educational services, health care. social assistance	23.0%	22.8%	19.3%	27.1%	16.9%	19.8%
Arts, entertainment, recreation; accommodation, food services	9.1%	8.1%	10.7%	5.7%	10.1%	4.6%
Other services	4.0%	5.0%	5.6%	3.9%	4.9%	3.5%
Public administration	3.6%	4.3%	3.3%	4.6%	2.1%	1.1%

Source: Adapted from Bureau of the Census, American Community Survey (2008 to 2012)

E APPENDIX

Complete Geospatial Analysis

Introduction

The purpose of this section is to provide a more detailed overview and analysis of the demographic and socioeconomic conditions for the *Labor Shed* and *Core Area* of the dislocated workers from the Port Edwards mill in the form of maps and tables. Comparisons are made among state, regional and local data to provide a portrayal of the existing conditions since the closure of the Port Edwards plant.

Data and Methodology

The geographic data for the analysis uses the TIGER boundary files from Census 2010. Boundary files provide the base maps for the study while attribute files provide for the data associate with the boundary files. The study uses the Zip Code areas established as of October 2011 as the unit of analysis. The attribute data for the study are derived from the Domtar Dislocated Worker Survey, Census 2010 and the American Community Survey from 2008 to 2012. The data from Census 2010 represents statistical data collected in April of 2010. Information from the American Community Survey 2008 to 2012 (ACS) provides multiyear estimates of the data being examined. The use of five-year for sixty months of collected data provides for the largest sample size, most reliable, but least current as compared to one-year and three year estimates. Five-year estimates are best used when precision is more important that accuracy, when analyzing very small populations, and examining smaller geographies such as Zip Code areas when one-year estimates are not available. Comparisons between variables are made using dimensionless parameters, such as percentages, whenever possible so that data sets can be directly compared. The attribute data and sources used in the analysis include a variety of statistical indicators provided by the US Census Bureau (2000 and 2010 Censuses) and the Bureau's American Community Survey. Comparisons between variables are made using dimensionless parameters, such as percentages, whenever possible so that data sets can be directly compared. The analysis was conducted using Caliper Corporation's GIS software, Maptitude 2012, and IBM's SPSS statistical package.

Delineation of the Study Area

Two levels of analysis are used for the study: A Core Area and a broader Labor Shed area. The Core Area consists of 5 Zip Code areas that are roughly contiguous to the Port Edwards facility within roughly a fifteen mile radius. The area accounts for 79.9% of the dislocated mill workers. The Labor Shed is defined by the regional characteristics within 31 Zip Code areas within a roughly fifty mile radius of the Port Edwards plant.

A. Core Area

The Core Area contains 5 Zip Code areas that are contiguous in extent around the Port Edwards facility. The area accounts for 79.9% of the former 497 dislocated workers from the mill (see Table E1). It is common practice to use those features contained in the first 80% of a cumulative frequency distribution as a threshold to define a Core Area.

Table E1. Number of dislocated workers by Zip Code area within the Core Area.

Zip Code Area	Place Name	Respondents
54457	Nekoosa	127
54469	Port Edwards	34
54475	Rudolph	16
54494	Wisconsin Rapids	166
54495	Wisconsin Rapids	56

B. Labor shed

The Labor Shed is a contiguous region consisting of 31 Zip Code areas within a fifty mile radius of the Port Edwards plant. The Zip Code areas include all known former mill employees who were mailed the Dislocated Worker Survey (and who live in Wisconsin). This represents 497 of the original 516 or 96.3% of the surveys mailed. Table E2 provides a complete list of Zip Codes and corresponding place names for the Labor Shed.

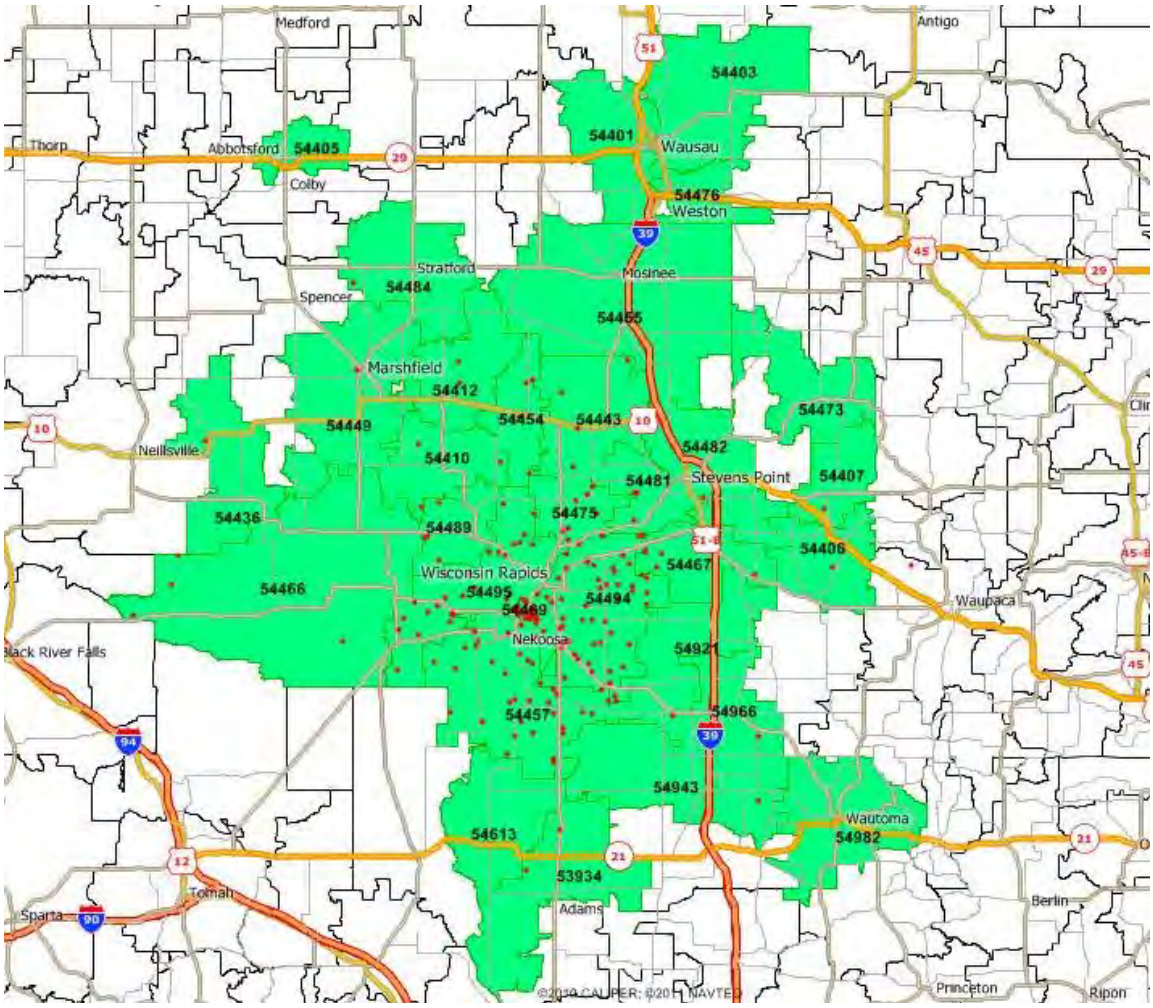
Table E2. Zip Code areas and place names within the Labor Shed.

Zip Code	Place Name	Zip Code	Place Name	Zip Code	Place Name
53934	Friendship	54454	Milladore	54482	Stevens Point
54401	Wausau	54455	Mosinee	54484	Stratford
54403	Wausau	54457	Nekoosa	54489	Vesper
54405	Abbotsford	54466	Pittsville	54494	Wisconsin Rapids
54406	Amherst	54467	Plover	54495	Wisconsin Rapids
54407	Amherst Jnctn	54469	Port Edwards	54613	Arkdale
54410	Arpin	54473	Rosholt	54921	Bancroft
54412	Auburndale	54475	Rudolph	54943	Hancock
54436	Granton	54476	Schofield	54966	Plainfield
54443	Junction City	54481	Stevens Point	54982	Wautoma
54449	Marshfield				

C. Returned Surveys

A total of 209 or 40.5% of the mailed surveys were returned. Figure E1 below provides the geographic extant of the residences of the former Port Edwards mill employees who returned surveys.

Figure E1. Residences of former employees who returned surveys by Zip Code area.



Key Variables

A. Population

The total population of the labor shed is 264,639 people. The average population by Zip Code area is 8,536. Areas with the highest population in the Labor Shed:

- 54401 – Wausau - 30,644
- 54481 – Stevens Point - 29,220
- 54494 – Wisconsin Rapids - 26,991
- 54449 – Marshfield - 25,989
- 54403 – Wausau - 24,390

Zip Code areas with the lowest populations in the Labor Shed:

- 54407 – Amherst Junction - 1,729 persons
- 54489 – Vesper - 1,592 persons
- 54475 – Rudolph - 1,577 persons
- 54921 – Bancroft - 1,505 persons
- 54454 – Milladore - 1,325 persons

The populations of the Zip Code areas in the core area:

- 54494 – Wisconsin Rapids - 26,991
- 54457 – Nekoosa - 8,861
- 54469 – Port Edwards - 1,821
- 54495 – Wisconsin Rapids - 7,523
- 54475 – Rudolph - 1,577

Figure E2. Population by Zip Code area within the Labor Shed.

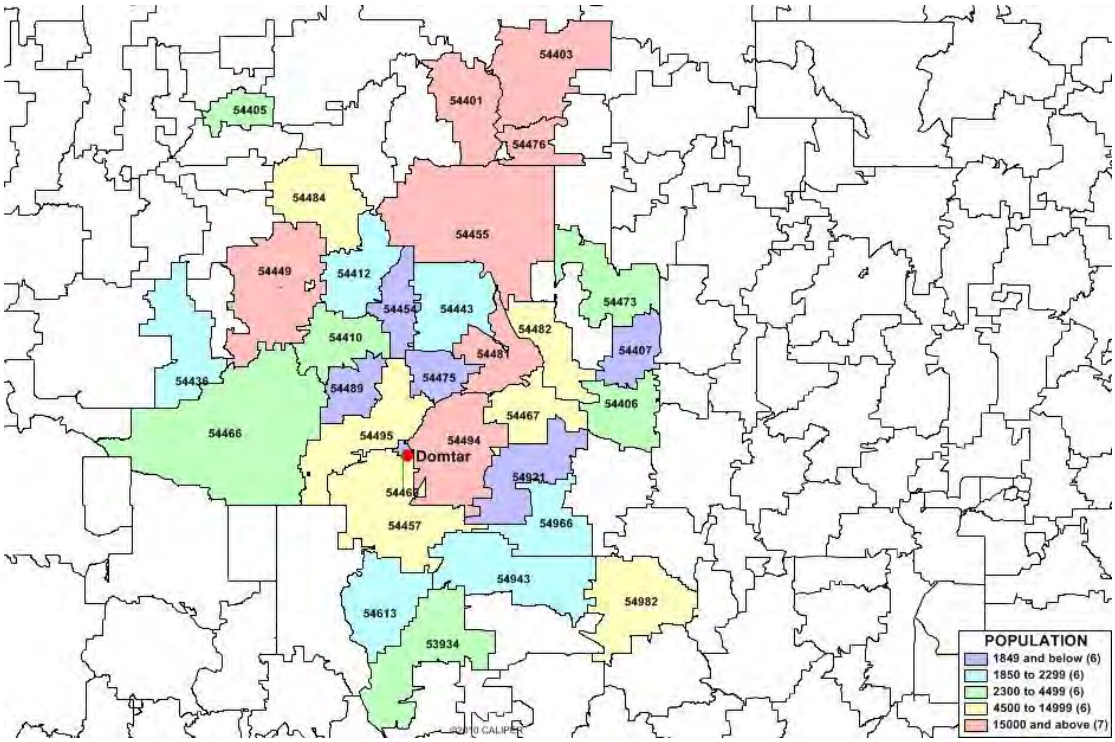
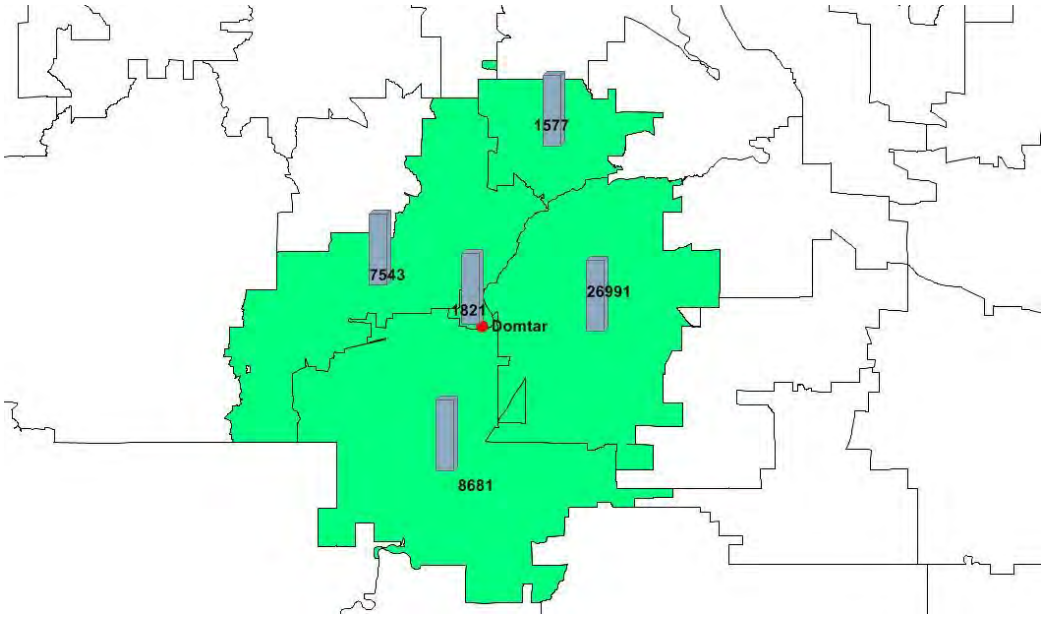


Figure E3. Population of the Zip Code areas within the core area.



B. Population Density:

There is a very sharp gradient between the population densities of rural and urban Zip Code areas within the Labor Shed. The average population density in the Labor Shed is 142 persons per square mile as compared to 102 persons per square mile for Wisconsin. The average population density of the core area is 184 persons per square mile. The five Zip Code areas with the highest population densities in the Labor Shed:

- 54469 – Port Edwards - 545 persons per square mile
- 54476 – Schofield - 474 persons per square mile
- 54481 – Stevens Point - 419 persons per square mile
- 54401 – Wausau - 349 persons per square mile
- 54494 – Wisconsin Rapids - 212 persons per square mile

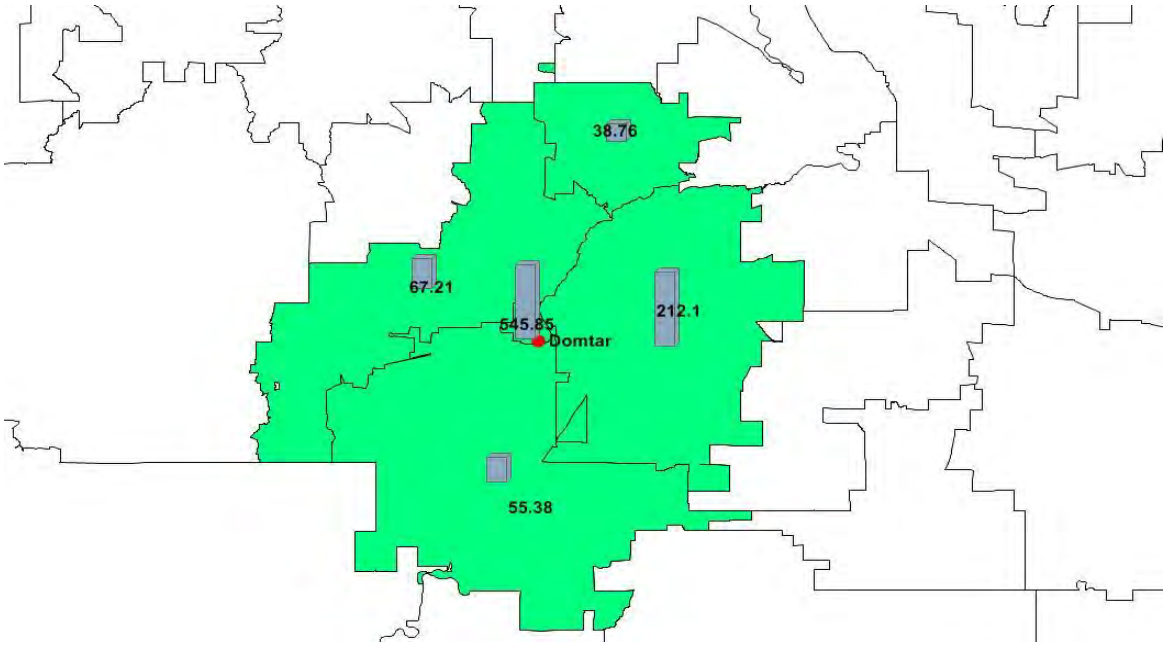
The five Zip Code areas with the lowest population densities in the Labor Shed:

- 54436 – 21 persons per square mile
- 54613 – 20 persons per square mile
- 54291 – 16 persons per square mile
- 54943 – 15 persons per square mile
- 54466 – 9 persons per square mile

Population densities of the Zip Code areas in the core area:

- 54494 – Wisconsin Rapids – 212 persons per square mile
- 54457 – Nekoosa – 55 persons per square mile
- 54469 – Port Edwards – 545 persons per square mile
- 54495 – Wisconsin Rapids – 67 persons per square mile
- 54475 – Rudolph – 39 persons per square mile

Figure E4. Population densities of the Zip Code areas in the Core Area.



C. Median Age

The median age of the Labor Shed is 41.7 years as compared to 37.3 years for the state. The median age of 43.8 years for the Core Area is much higher than either the Labor Shed or the state. The five Zip Code areas with the lowest median ages in the Labor Shed area:

- 54481 – Stevens Point - 27.9 years
- 54436 – Granton - 34.7 years
- 54476 – Schofield - 36.3 years
- 54467 – Plover - 36.4 years
- 54405 – Abbotsford - 37.1 years

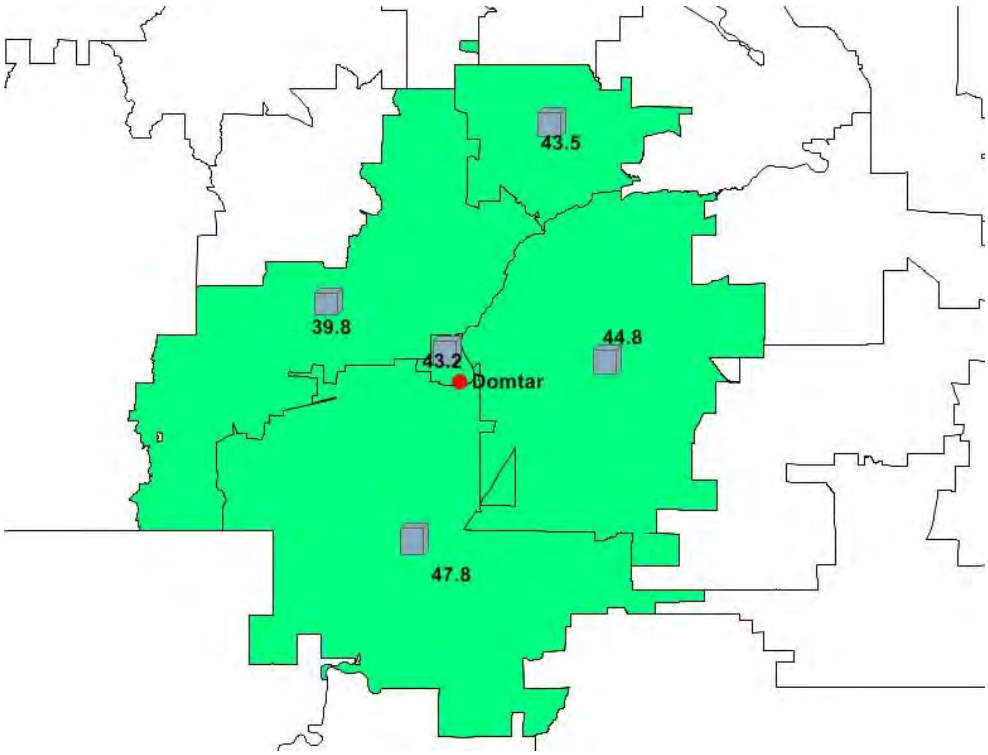
The five Zip Code areas with the highest median ages in the Labor Shed:

- 54982 – Stevens Point - 46.4 years
- 54457 – Nekoosa - 47.8 years
- 54993 – Hancock - 49.8 years
- 53954 – Friendship - 52.1 years
- 54613 – Arkdale - 54.0 years

The median ages of the Zip Code areas within the core area are:

- 54494 – Wisconsin Rapids - 44.8
- 54457 – Nekoosa - 47.8
- 54469 – Port Edwards - 43.2
- 54495 – Wisconsin Rapids - 39.8
- 54475 – Rudolph - 43.5

Figure E5. Median age of Zip Code areas in the Core Area.



D. Household Median Income

The median income household income for the Labor Shed is $49,840 as compared to $52,627 for the state. The average household median income in the Core Area is less than the state and Labor Shed at $45,877. The Zip Code areas with the highest median household incomes:

- 54482 – Stevens Point - $63,832
- 54455 – Mosinee - $60,237
- 54407 – Amherst Junction - $60,213
- 54467 – Plover - $59,681
- 54473 – Rosholt - $59,666

The five Zip Code areas having the lowest median household incomes:

- 54613 – Arkdale - $39,663
- 54966 – Plainfield - $39,579
- 54481 – Stevens Point - $37,794
- 54495 – Wisconsin Rapids - $37683
- 53934 – Friendship - $36,012

The Zip Code areas in the core area have the following median incomes:

- 54494 – Wisconsin Rapids - $48,996
- 54457 – Nekoosa - $50,184
- 54469 – Port Edwards - $43,514
- 54495 – Wisconsin Rapids - $37,683
- 54475 – Rudolph - $49,049

Figure E6. Median household income by Zip Code in the Labor Shed.

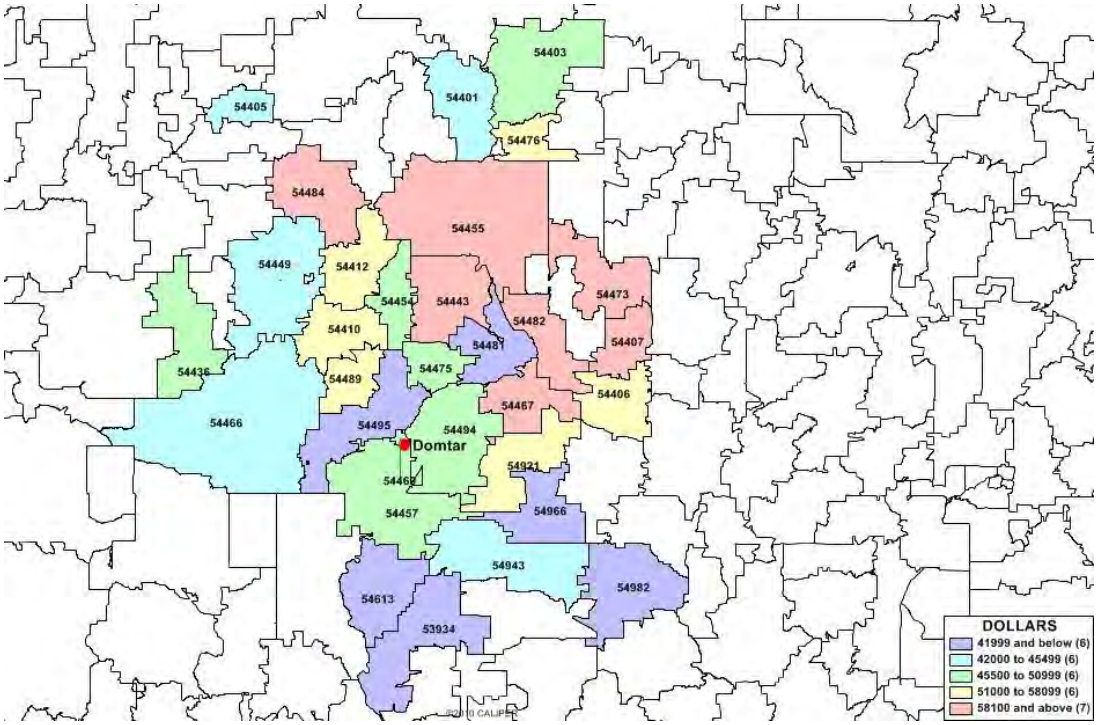
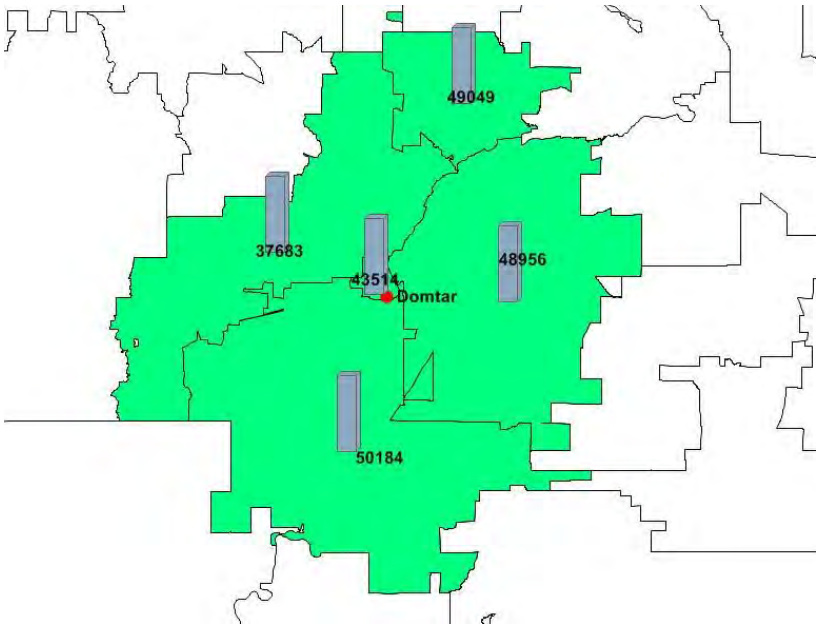


Figure E7. Median household income for Zip Codes in the Core Area.



E. Education:

The average percentage of the population 25 years or older in the Labor Shed that are high school graduates is 88.2%. The state average is 89.4%. The high school graduation rate in the core area is 91.3%, which is higher for either the Labor Shed or the state. The five Zip Code areas that have the highest percentage of high school graduates:

- 54469 – Port Edwards - 94.5%
- 54489 – Vesper - 93.4%
- 54455 – Mosinee - 93.2%
- 54482 – Stevens Point - 92.4%
- 54481 – Stevens Point 92.3%

Zip Code areas in the Labor Shed with the lowest percentage of the population that are 25 years or older and high school graduates:

- 54921 - Bancroft - 82.0%
- 54943 – Hancock - 81.8%
- 54613 – Arkdale - 81.8%
- 54436 – Granton - 80.9%
- 54405 – Abbotsford - 73.7%

The percentages of high school graduates by Zip Code in the Core Area:

- 54494 – Wisconsin Rapids - 91.4%
- 54457 – Nekoosa - 91.6%
- 54469 – Port Edwards - 94.5%
- 54495 – Wisconsin Rapids - 87.8%
- 54475 – Rudolph - 91.4%

Figure E8. Population 25 and older in the Labor Shed who are H.S. graduates.

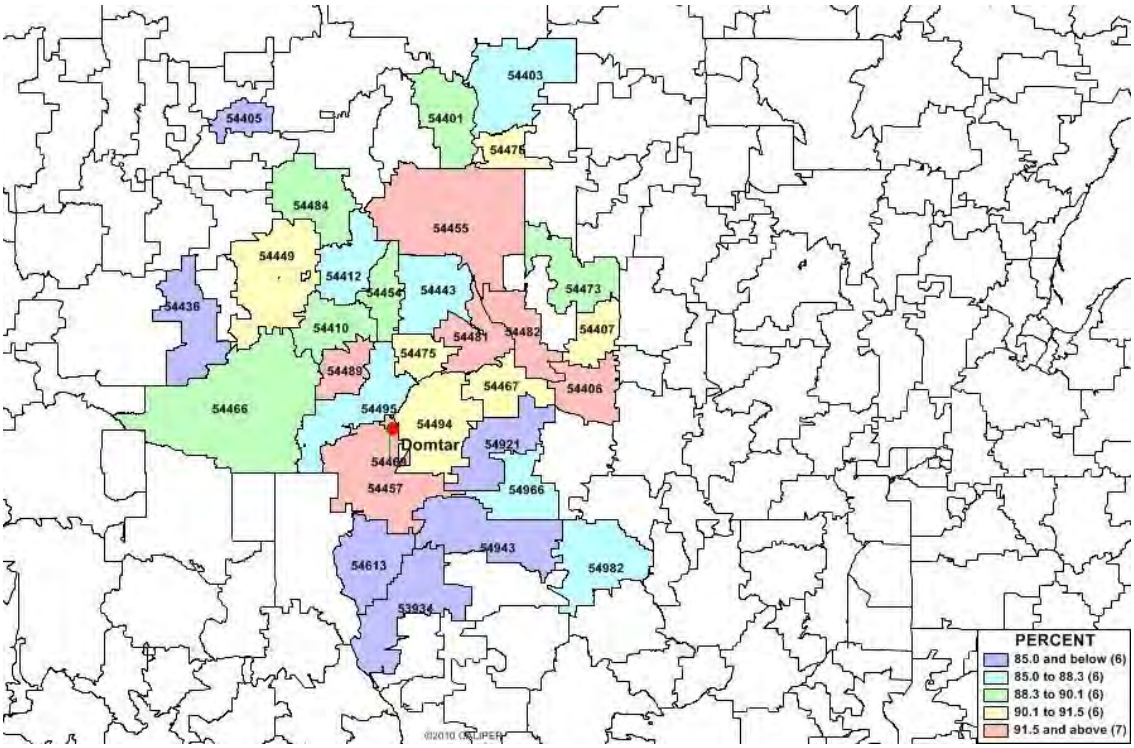
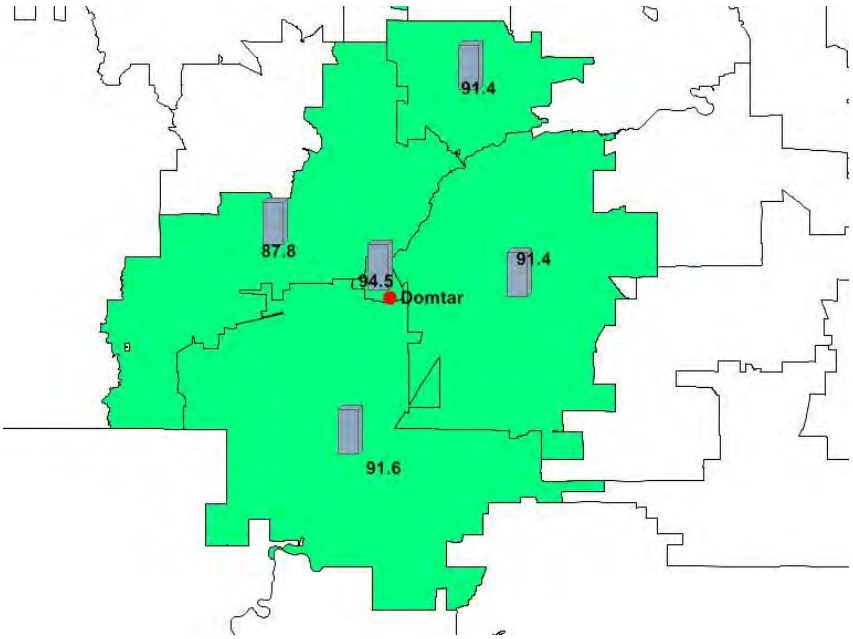


Figure E9. Percent of population 25 and older in Core Area who are H.S. graduates.



The average percentage of the population 25 years or older in the Labor Shed that hold a bachelor's degree or higher is 17.8%. This is below the state average of 25.9%. The average percent of individuals in the Core Area that have a bachelor's degree or higher is 15.4%. The Zip Code areas having the highest percentage of their population 25 years and older in the Labor Shed holding a bachelor's degree or higher:

- 54407 – Amherst Junction - 32.2%
- 54481 – Stevens Point - 30.7%
- 54467 – Plover - 30.7%
- 54482 – Stevens Point - 29.3%
- 54455 – Mosinee - 26.5%

Zip Code areas having the lowest percentage of their population 25 years and older in the Labor Shed holding a bachelor's degree or higher:

- 53934 – Friendship - 11.3%
- 54966 – Plainfield - 9.9%
- 54405 – Abbotsford - 9.5%
- 54613 – Arkdale - 8.8%
- 54436 – Granton - 8.2%

The percentages for with bachelor's degrees or higher in the Core Area:

- 54494 – Wisconsin Rapids - 17.8%
- 54457 – Nekoosa -15.6%
- 54469 – Port Edwards - 18.1%
- 54495 – Wisconsin Rapids - 11.8%
- 54475 – Rudolph - 13.5%

Figure E10. Percent of population 25 and older in Labor Shed with B.S./B.A. or higher.

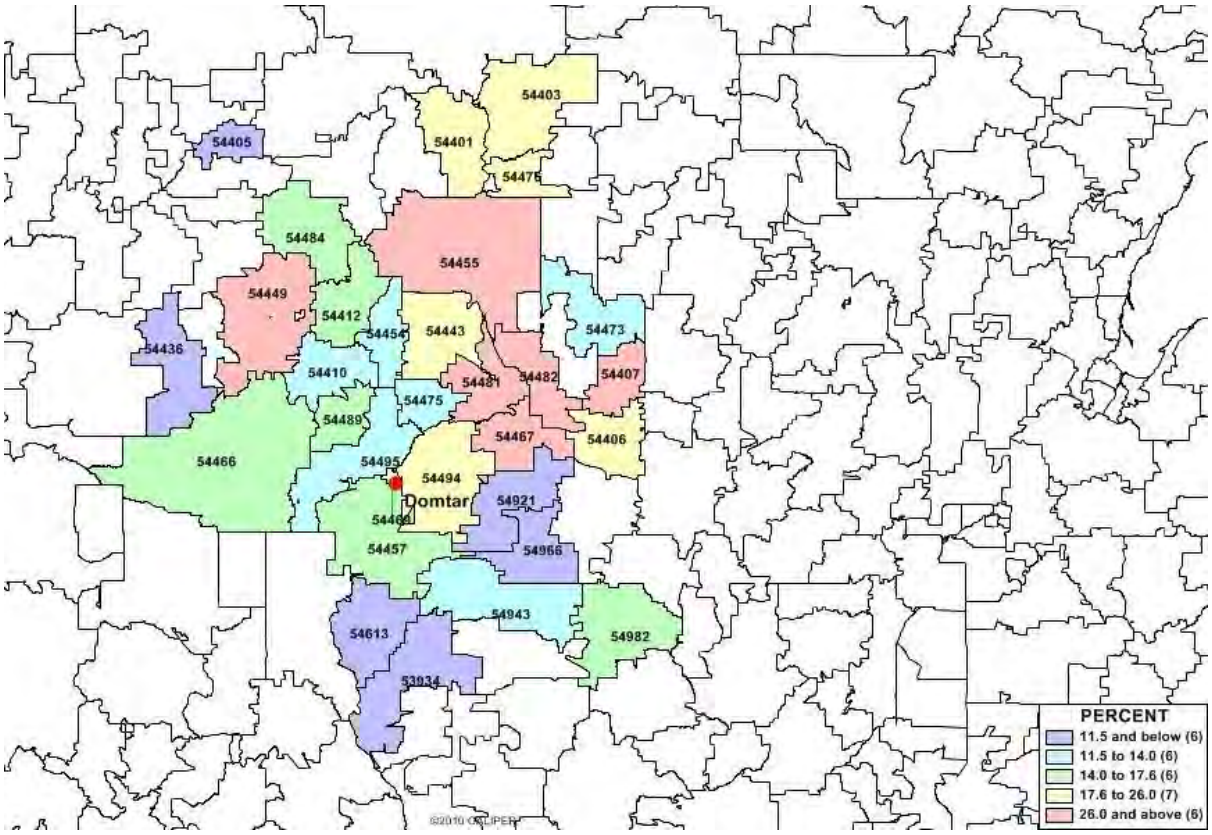
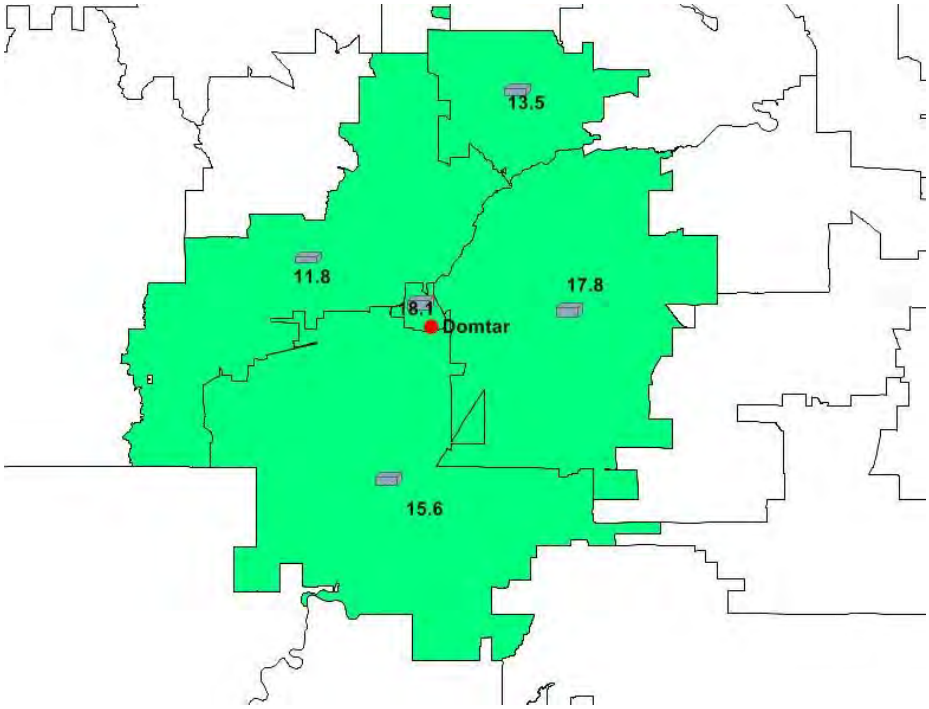


Figure E11. Percent of 25 and older in Core Area with B.S./B.A. degree or higher.



F. Veterans Status:

The average percent of the veteran population 18 years and older within the Labor Shed is 10.8%. This is above the state average of 9.7%. The average percent of the veteran population in the Core Area is higher than either the Labor Shed or the state at 11.7%. The five Zip Code areas having the highest percentage of the veteran population 18 or older in the Labor Shed:

- 54613 – Arkdale - 16.8%
- 53934 – Friendship - 16.1%
- 54457 – Nekoosa - 16.0%
- 54943 – Hancock - 14.6%
- 54982 – Stevens Point - 13.2%

The five Zip Code areas having the lowest percentage of veterans 18 or older:

- 54481 – Stevens Point - 8.2%
- 54412 – Auburndale - 7.8%
- 54436 – Granton - 7.5%
- 54454 – Milladore - 7.2%
- 54410 – Arpin - 6.4%

The percentages of the population that are veterans in the Core Area:

- 54494 – Wisconsin Rapids - 12.5%
- 54457 – Nekoosa - 16.0%
- 54469 – Port Edwards - 10.6%$
- 54495 – Wisconsin Rapids - 9.6%
- 54475 – Rudolph - 9.9%

G. Workers with Disabilities:

The average percentage of workers between 18 and 64 years of age having a disability in the Labor Shed is 8.2%. In the Core Area the average percentage of worker with disabilities is slightly higher at 8.5%. The five Zip Code areas with the highest percentage of workers having a disability:

- 54613 – Arkdale - 17.8%
- 54943 – Hancock - 13.6%
- 54982 – Stevens Point - 12.0%
- 54495 – Wisconsin Rapids - 11.5%
- 54443 – Junction City - 11.3%

The five Zip Code areas having the lowest percentage of workers having a disability:

- 53934 – Friendship - 5.6%
- 54475 – Rudolph - 5.4%
- 54489 – Vesper - 5.1%
- 54484 – Stratford - 4.1%
- 54454 – Milladore - 3.4%

The percentages of workers having a disability in the core Zip Code areas:

- 54494 – Wisconsin Rapids - 9.1%
- 54457 – Nekoosa - 9.8%
- 54469 – Port Edwards - 6.8%
- 54495 – Wisconsin Rapids - 11.5%
- 54475 – Rudolph - 5.4%

Figure E12. Percent of workers aged 18-64 with a disability in the Labor Shed.

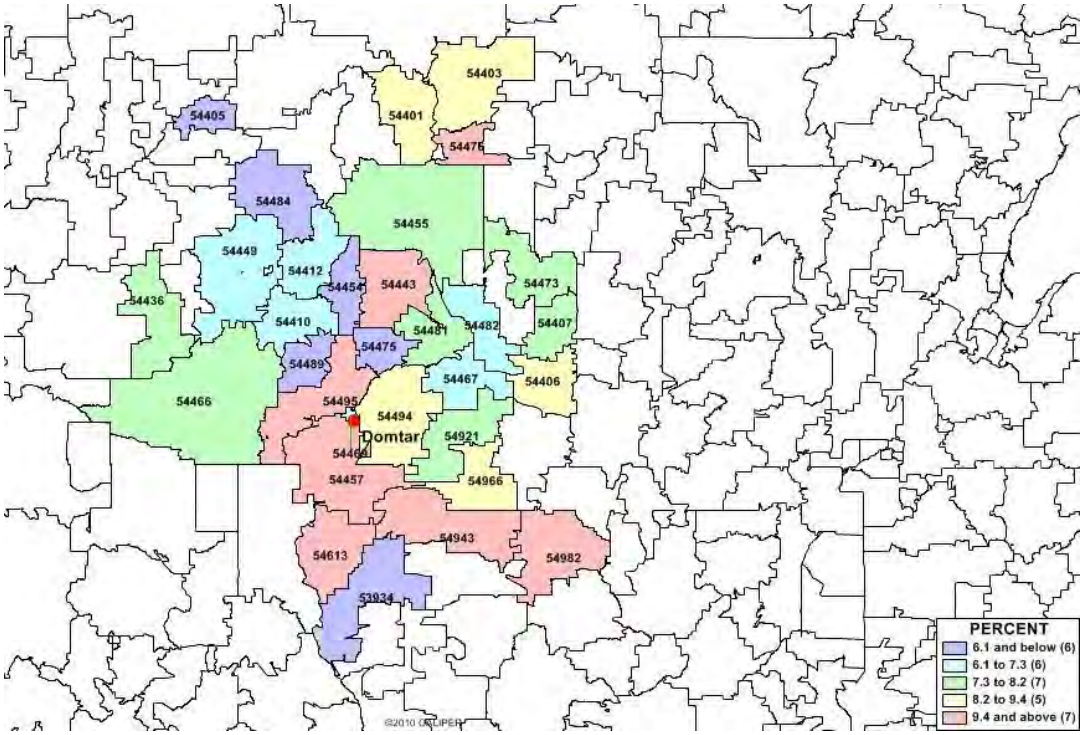
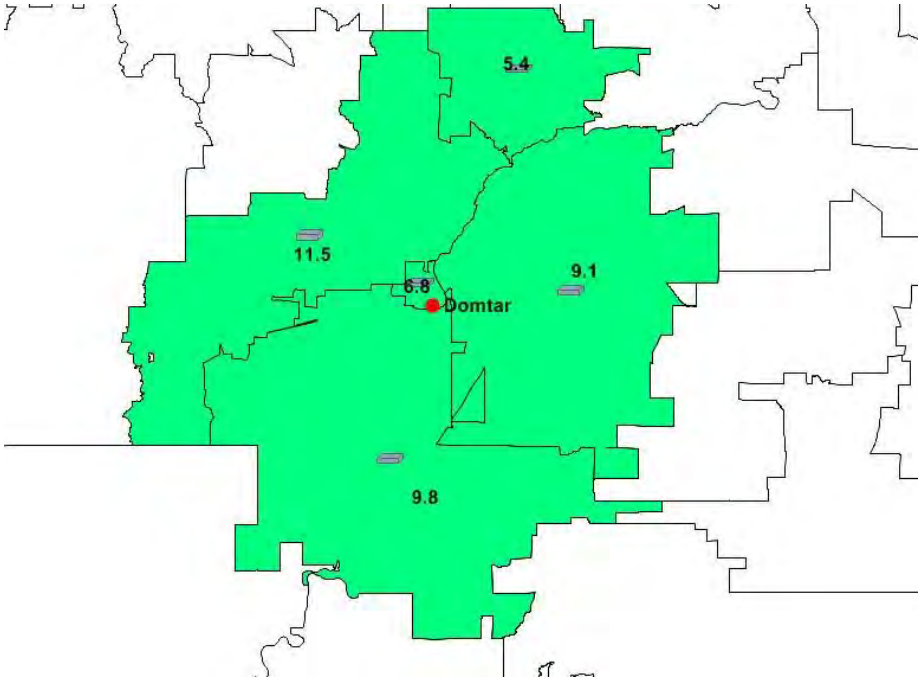


Figure E13. Percentage of workers aged 18-64 with a disability in the Core Area.



H. Civilian Labor Force

The average percent of 16 years and older in the civilian labor force for the Labor Shed is 66.1%. The percentage for the state is 68.5%. The percent of workers in the labor force for the Core Area is 62.4%. The areas having the highest percentage of persons 16 years of age and older in the civilian labor force in the Labor Shed:

- 54454 – Milladore - 72.3%
- 54484 – Stratford - 70.2%
- 54475 – Rudolph - 69.4%
- 54412 – Auburndale - 68.7%
- 54443 – Junction City - 68.2%

The lowest percentages of 16 or older in the labor force in the Labor Shed:

- 54982 – Wautoma - 53.8
- 54457 – Nekoosa - 50.5
- 54469 – Port Edwards - 46.0
- 53934 – Friendship - 45.7
- 54613 – Arkdale - 40.5

The percentages of the civilian work population 16 years and older for the Core Area:

- 54494 – Wisconsin Rapids - 63.6%
- 54457 – Nekoosa - 57.5%
- 54469 – Port Edwards - 53.0%
- 54495 – Wisconsin Rapids - 65.1%
- 54475 – Rudolph - 72.6%

Figure E14. Percent of population 16 or older in labor force within the Labor Shed.

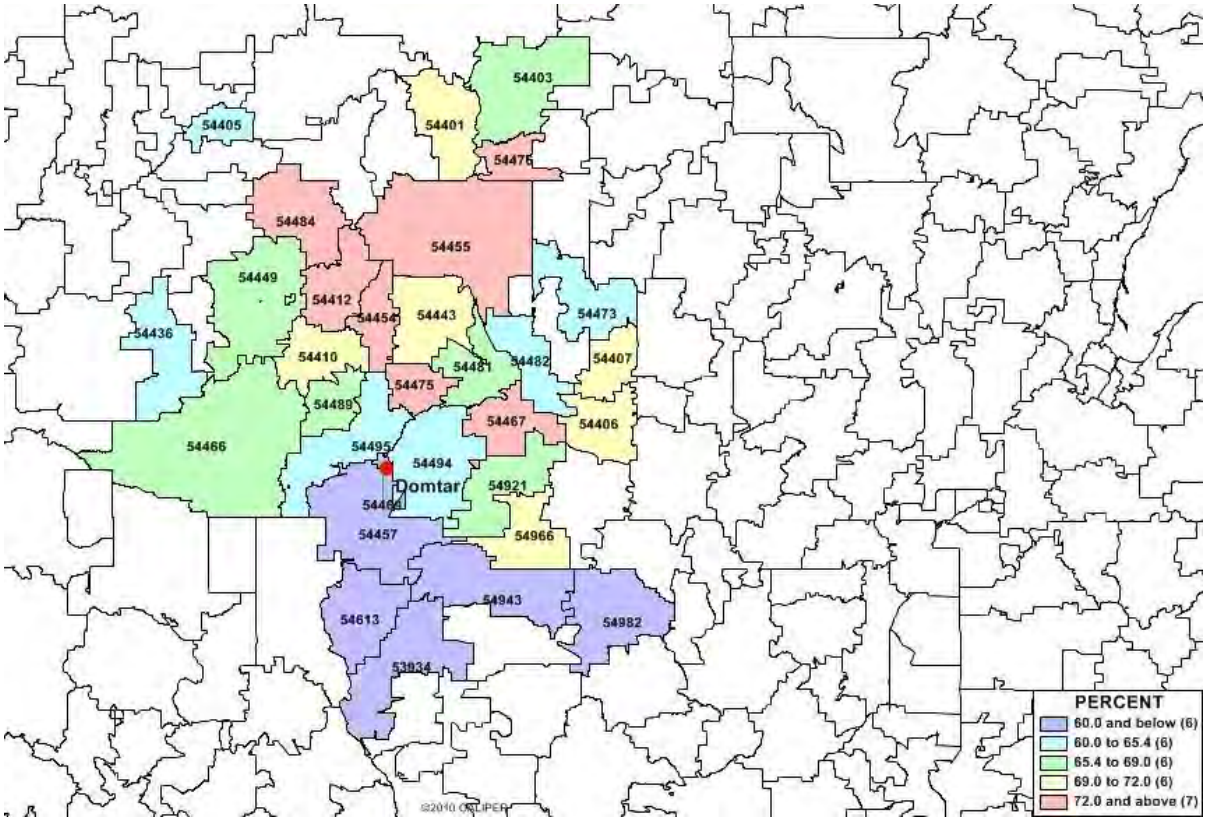
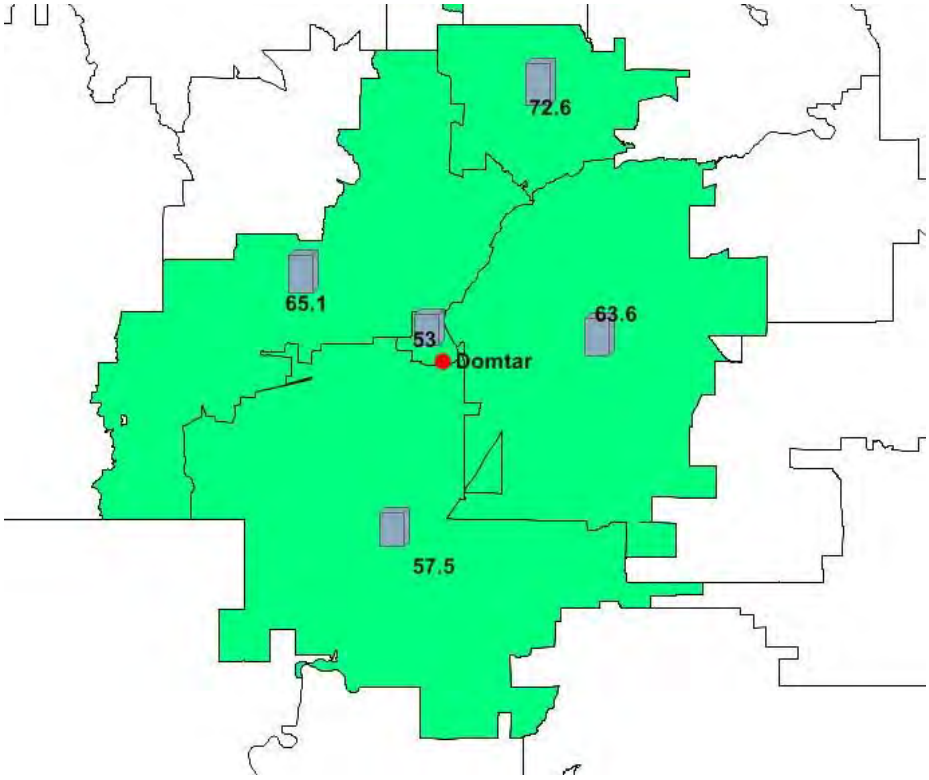


Figure E15. Percent of population 16 or older in labor force within the Core Area.



I. Unemployment

The average percentage of the civilian labor force that is unemployed for the Zip Code areas in the Labor Shed is 7.9%. This is above the state average of 7.5%. The rate of unemployment in the Core Area is 9.4%. The five Zip Code areas that have the highest percentages of the unemployed civilian labor force in the Labor Shed:

- 54613 – Arkdale - 16.6%
- 54469 – Port Edwards - 13.1%
- 54966 – Plainfield - 11.3%
- 54457 – Nekoosa - 11.3%
- 53934 – Friendship - 10.9%

Areas that have the lowest percentages of unemployed in the Labor Shed:

- 54405 – Abbotsford - 4.7%
- 54489 – Vesper - 4.5%
- 54475 – Rudolph - 4.3%
- 54484 – Stratford - 4.2%
- 54443 – Junction City - 4.1%

Unemployment rates for Zip Codes in the Core Area:

- 54494 – Wisconsin Rapids - 10.7%
- 54457 – Nekoosa - 11.3%
- 54469 – Port Edwards - 13.1%
- 54495 – Wisconsin Rapids - 7.7%
- 54475 – Rudolph - 4.3%

Figure E16 Percent of the unemployed civilian labor force within the Labor Shed.

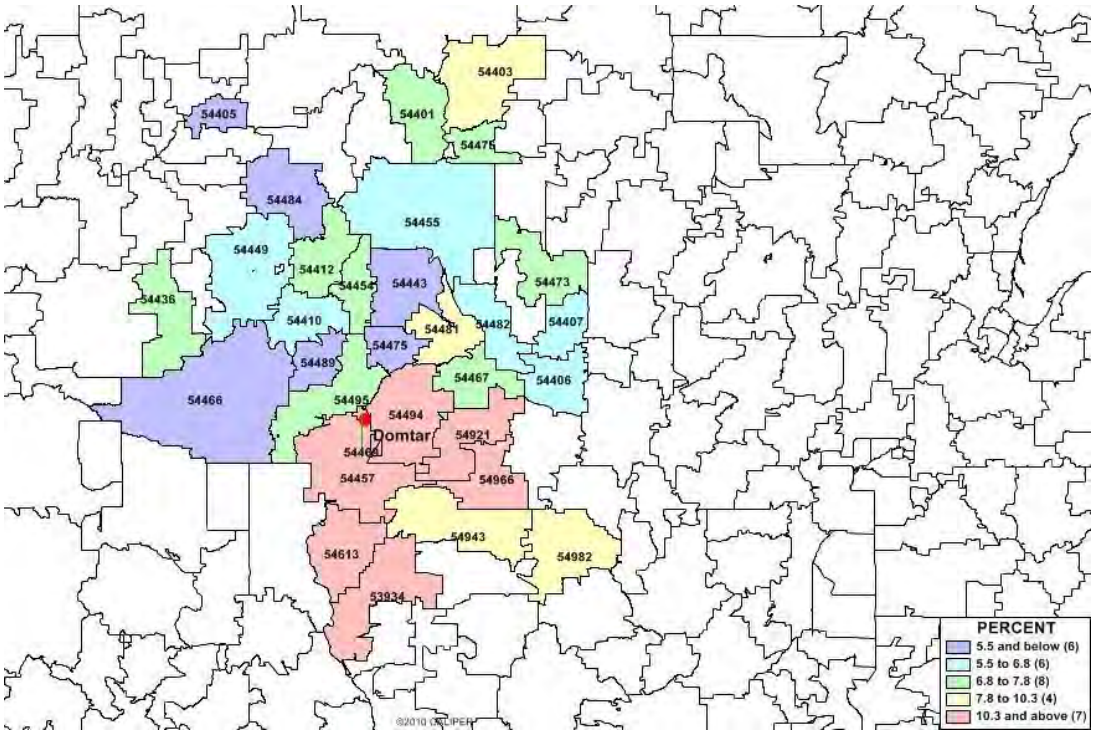
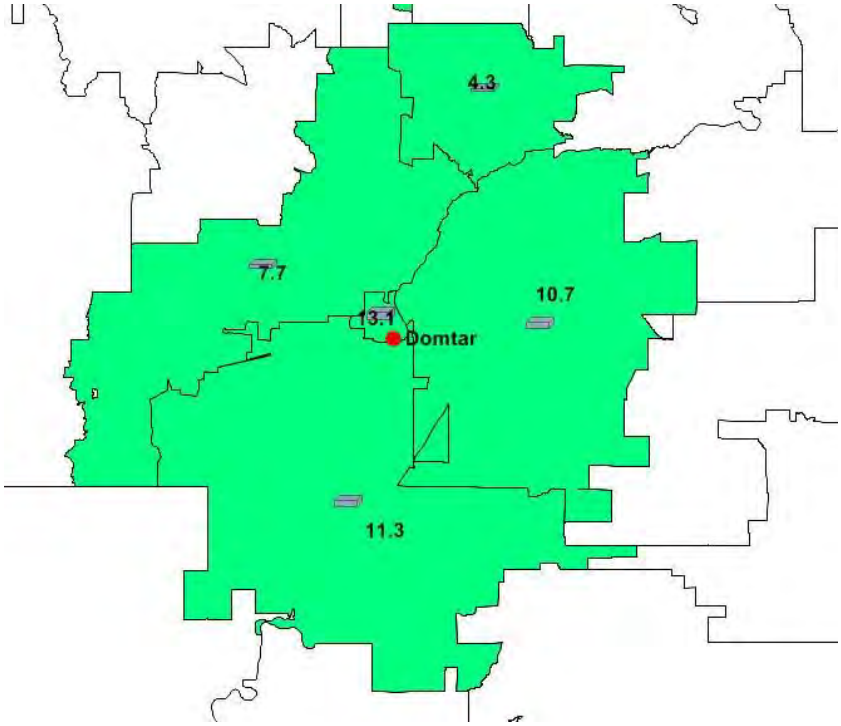


Figure E17. Percent of the unemployed civilian labor force within the Core Area.



J. Travel to Work

The average travel time to work by for the workers in the Labor Shed is 22.6 minutes while for the state the average travel time to work is 21.6 minutes. In the Core Area the average travel time to work is 21.1 minutes. The Zip Code areas that have the shortest average driving time to work in the Labor Shed:

- 54449 – 15.4 minutes - Marshfield
- 54401- 15.4 minutes - Wausau
- 54481 – 16.0 minutes - Stevens Point
- 54476 – 17.2 minutes - Schofield
- 54403 – 17.3 minutes - Wausau

Zip Code areas with the longest average driving time to work in the Labor Shed:

- 54454 – 26.2 minutes - Milladore
- 54943 – 27.4 minutes - Hancock
- 53934 – 27.4 minutes - Friendship
- 54613 – 27.5 minutes - Arkdale
- 54473 – 34.8 minutes - Rosholt

The average travel times to work for work for workers in the Core Area:

- 54494 – 18.1 minutes - Wisconsin Rapids
- 54457 – 23.0 minutes - Nekoosa
- 54469 – 20.0 minutes - Port Edwards
- 54495 – 19.9 minutes - Wisconsin Rapids
- 54475 – 24.6 minutes - Rudolph

K. Workers Employed in Manufacturing

An average of 18.2% of the labor force is employed in manufacturing in the Labor Shed compared to 18.4% in Wisconsin. The average percentage of workers employed in manufacturing in the Core Area is 24.8%. The Zip Code areas in the Labor Shed with the highest percentages of workers employed in manufacturing:

- 54475 – Rudolph - 29.3%
- 54436 – Granton - 24.4%
- 54455 – Mosinee - 24.2%
- 54469 – Port Edwards - 23.9%
- 54495 – Wisconsin Rapids - 23.7%

Areas in the Labor Shed with the lowest percentages of workers employed in manufacturing:

- 53934 – Friendship - 12.5%
- 54613 – Arkdale - 12.4%
- 54405 – Abbotsford - 10.6%
- 54482 – Stevens Point - 10.6%
- 54484 – Stratford - 10.6%

The percentages of workers employed in manufacturing for in the Core Area:

- 54494 – Wisconsin Rapids - 22.3%
- 54457 – Nekoosa - 23.2%
- 54469 – Port Edwards - 23.9%
- 54495 – Wisconsin Rapids - 23.7%
- 54475 – Rudolph - 29.3%

Figure E18. Percent of workers employed in manufacturing in the Labor Shed.

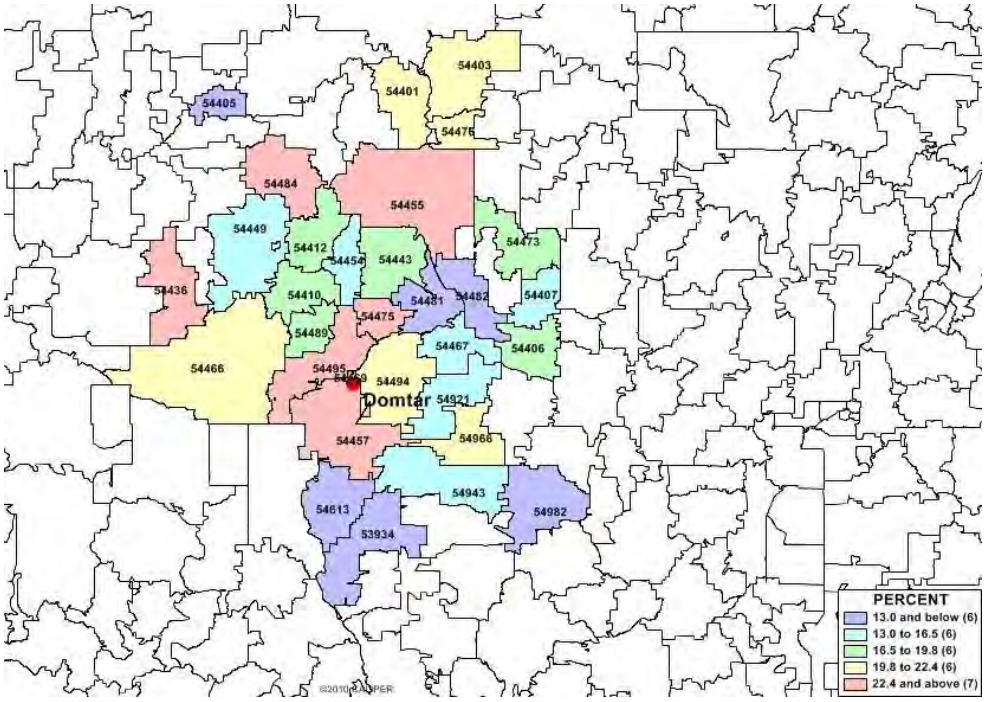
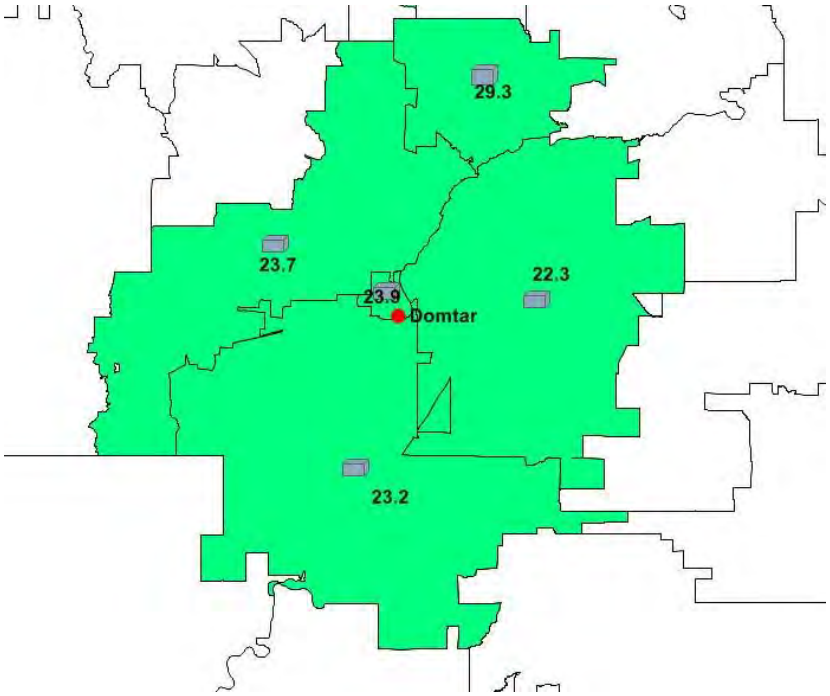


Figure E19. Percent of workers employed in manufacturing in the Core Area.



L. Health Insurance

The average percent of employed workers in the Labor Shed that have health insurance is 89.5% as compared to 90.6% in the Core Area. The Zip Code areas in the Labor Shed with the highest percentages of workers with health insurance:

- 54473 – Rosholt - 95.0%
- 54475 – Rudolph - 94.6%
- 54484 – Stratford - 93.8%
- 54412 – Auburndale - 93.2%
- 54469 – Port Edwards - 92.9% tied with (54410 – Arpin - 92.9%)

The Zip Code areas in the Labor Shed with the lowest percentages of employed workers with health insurance:

- 54457 – Nekoosa - 83.7%
- 54482 – Stevens Point - 82.6%
- 54921 – Bancroft - 82.4%
- 54476 – Schofield - 81.0%
- 54943 – Hancock - 80.0%

The percentages of employed workers in the Core Area that have health insurance:

- 54494 – Wisconsin Rapids - 92.9%
- 54457 – Nekoosa - 83.7%
- 54469 – Port Edwards - 92.9%
- 54495 – Wisconsin Rapids - 89.2%
- 54475 – Rudolph - 94.6%

The average percent of unemployed workers in the Labor Shed that have health insurance is 67.6% compared to 74.3% of the unemployed workers in the Core Area. The Zip Code areas in the Labor Shed with the highest percentages of unemployed workers with health insurance:

- 54489 – Vesper - 91.3%
- 54407 – Amherst Junction - 89.8%
- 54455 – Mosinee - 86.3%
- 54412 – Auburndale - 84.6%
- 54469 – Port Edwards - 83.7%

The Zip Code areas in the Labor Shed with the lowest percentages of unemployed workers with health insurance:

- 54466 – Pittsville - 53.9%
- 54482 – Stevens Point - 53.6%
- 54406 – Amherst - 52.6%
- 54943 – Hancock - 50%
- 54921 – Bancroft - 45.8%

The percentages of unemployed workers in the Core Area that have health insurance:

- 54494 – Wisconsin Rapids – 70.2%
- 54457 – Nekoosa – 70.7%
- 54469 – Port Edwards – 83.7%
- 54495 – Wisconsin Rapids – 76.2%
- 54475 – Rudolph – 70.6%

M. Poverty Level:

For the Zip Code areas in the Labor Shed, the average percentage of persons living below the poverty level is 10.9%. The average percentage of persons living below the poverty level in the Zip Code areas of the Core Area is 10.4%. The Zip Code areas in the Labor Shed with the highest percentage of people living below the poverty are level:

- 54481 – Stevens Point - 22.2%
- 54436 – Granton - 21.1%
- 54495 – Wisconsin Rapids - 19.0%
- 54403 – Wausau - 17.8%
- 54613 – Arkdale - 16.4%

The Zip Code areas in the Labor Shed with the lowest percentage of people living below the poverty are level:

- 54489 – Vesper – 6.9%
- 54466 – Pittsville - 6.8%
- 54407 – Amherst Junction - 6.6%
- 54455 – Mosinee - 5.9%
- 54475 – Nekoosa - 5.3%

The percentages of persons living in poverty by Zip Code area in the Core Area are:

- 54494 – Wisconsin Rapids - 7.5%
- 54457 – Nekoosa - 5.3%
- 54469 – Port Edwards - 10.8%
- 54495 – Wisconsin Rapids - 19.0%
- 54475 – Rudolph - 5.3%

Figure E20. Percent of all persons living below the poverty level in the Labor Shed.

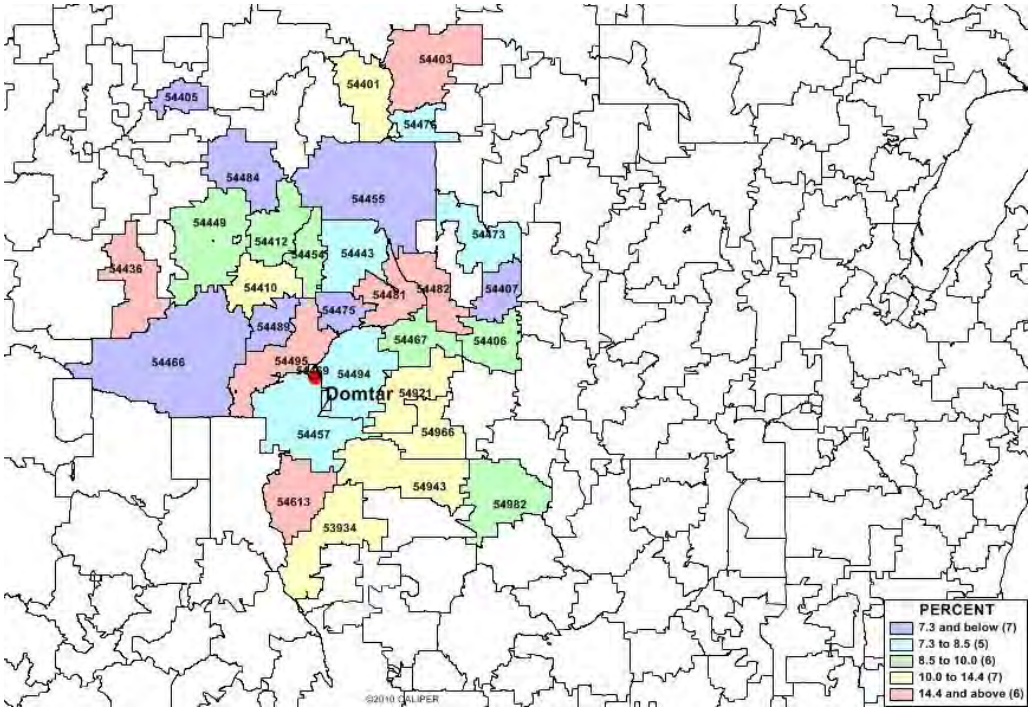
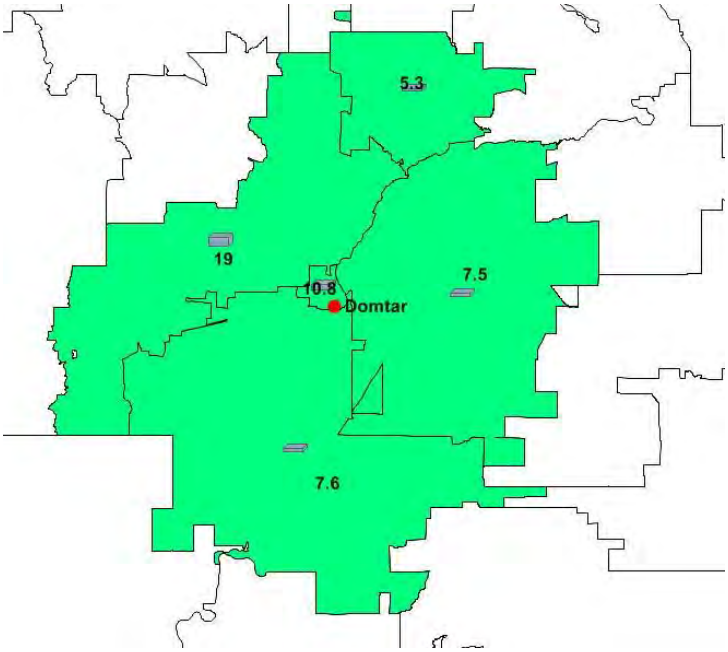


Figure E21. Percent of all persons living below the poverty level in the Core Area.



Summary

A. Population

The population of the Labor Shed is 264,639 people. The Zip Code area having the highest population is Wausau at 30,644 people which the lowest is Milladore which 1,325 persons. The population of the Zip Code areas in the Core Area has a similar range with the Wisconsin Rapids having the highest population at 26,991 and Rudolph the lowest population at 1,577.

B. Population Density

Population density is a key measure in any demographic analysis. It can be used to define the continuum between rural to urban areas. A traditional dividing point between rural and urban areas is 100 persons per square mile. The Labor Shed overall can be considered to be more urban than rural. The average population density in the Labor Shed is 142 persons per square mile as compared to the state which has a population density of 102 persons per square mile. The average population of the Core Area is 184 persons per square mile. This is a deceptive statistic. Three of the Zip Code areas are considered to be rural (Nekoosa, Wisconsin Rapids (54481), and Rudolph). The very high population density of Port Edwards at 545 persons per square mile essentially significantly raises the population of the Core Area.

C. Median Age

The Core Area has a median age of 43.8 years. This is higher than the median ages of either the Labor Shed at 41.7 years or the state at 37.3 years. It is not uncommon in Wisconsin for more rural areas to have lower median ages. In the Labor Shed the Zip Code area with the lowest median age is Stevens Point (54481) at 27.9 years and the highest is Arkdale at 54.0 years. In the Core Area Wisconsin Rapids (54495) has the lowest median age at 39.8 years and Nekoosa has the highest median age at 47.8 years. The median ages for the Core Area are high, especially when compared to the median age of the state.

D. Household Median Income

The median income household income for the Labor Shed is $49,840 as compared to $52,627 for the state. The average household median income in the Core Area is less than the state and Labor Shed at $45,877.

E. Education

The average percentage of persons 25 years and older who have graduated high school is 91.3%. This is significantly higher than the average percentage in the Labor Shed at 88.2% and the state at 89.4%. The average percentage of persons 25 years and older holding a bachelor's degree or higher in the Core Area is 15.4%. This is significantly lower that the average percentage for Zip Code areas in the Labor Shed at 17.8% or for the state at 25.9%.

F. Veterans Status

The average percentage of the Zip Code areas in the Core Area is 11.7%. This can be compared with 10.8% for Zip Code areas of the Labor Shed and 9.7% for the state. It is

interesting to note that the Core Area has the highest high school graduation which is higher than the average for the Labor Shed and the state and the lowest percentage of people holding a bachelor's degree or higher, but the highest percentage of the population who are veterans.

G. Workers with Disabilities

The average percentage of the population between 18 and 64 years of age having a disability in the Zip Code areas of the Core Area is 8.2% which is similar to the average 8.5% of the persons in the Zip Codes in the Labor Shed. It must be noted the five Zip Code areas that have the highest proportion of their population having is more than double the average percentage for the five Zip Code areas having the lowest percentage of the population having a disability.

H. Labor Force

The percentage of people aged 16 years and older in the labor force is 62.4% for the Zip Code areas of the Core Area. This is significantly lower that the average percentage of people in the labor force by Zip Code area for the Labor Shed at 66.1% or the state at 68.5%.

I. Unemployment

The highest percentage unemployment in the Labor Shed is 16.6% for Arkdale, while the lowest percentage is 4.1% for Junction City. The average percentage for unemployment in the Labor Shed is 7.9% which is below the state unemployment rate of 7.5%. The average unemployment rate for the Zip Code areas in the Core Area is 9.4% which is lower than the Labor Shed or the state. Three of the Zip Code areas in the Core Area have very high unemployment rates, including Port Edwards at 13.1 %, Nekoosa at 11.3% and Wisconsin Rapids (54494) at 10.7%. The Zip Code area in the Labor Shed having the highest unemployment rate is Arkdale at 16.6%.

J. Travel to Work

A comparison of the travel time to work in minutes reveals that the average travel time for the Zip Code areas in the Labor Shed (22.6 minutes) , the state (21.6 minutes), and average time for the Zip Code areas in the Core Area (21.1 minutes) are very similar with no appreciable difference.

K. Workers Employed in Manufacturing

The average percentage of the labor force employed in manufacturing in Zip Code areas of the Core Area is 24.8%, while the average percentage of workers by Zip Code area in the Labor Shed is 18.2% and for the state 18.4%. The Zip Code area in the Core Area with the highest percentage of workers employed in manufacturing is Rudolph at 29.3% and the lowest is Nekoosa at 23.2%. The Core Area represents one of the highest concentrations of manufacturing in the state.

L. Health Insurance

The average percent of employed workers in the Labor Shed that have health is 89.5% as compared to 90.6% in the Core Area. The average percent of unemployed workers in the

Labor Shed that have health is 67.6%. This contrasts with 74.3% of the unemployed workers in the Core Area that have health insurance.

M. Poverty Level

We often do not think of people living below the poverty level in Wisconsin, unfortunately this is a very chronic and growing trend. The average percentage of all people living below the poverty level in the Zip Code area for the Labor Shed is 10.9% and 10.4%. These averages are in themselves are high, but several Zip Code areas in the employment –shed have critically high poverty levels, Including Stevens Point (54481) at 22.2%, Granton at 21.1%, Wisconsin Rapids (54495) at 19.0%, Wausau (54403) at 17.8%, and Arkdale at 16.4%. Two Zip Code areas in the Core Area have high poverty rates, Wisconsin Rapids (54495) at 19% and Port Edwards at 10.8%

F APPENDIX

Educational Attainment Addendum

The relationship between education and employment prospects is complex and in some ways seemingly paradoxical. Just as other analyses in this report have documented the existence of an at-risk group of older employees who may find the transition more daunting, the fact that the 53-57 year old age group (Table F1 below) has notably less education than other groups supports this notion. (Note also from Table F1 that the youngest employees are much more educated than other respondents.) Up to a certain point, education increases employment prospects, but beyond that level, the most highly educated in the respondent group may have chosen to be more selective about accepting available employment, or may have found that fewer suitable jobs that matched their credentials were available in the local area. The problem of the underemployed (or "overeducated") worker is well-documented in career counseling circles, and it is an issue that is disproportionately significant in rural areas where the diversity of available jobs may be considerably less than in more populated regions of the country.

Table F1. Percent of respondents with at least some college education by age.

Age range	% with at least some college
38-42	92.31
43-47	50.00
48-52	70.00
53-57	43.18
58-62	60.53
63 or more	61.11

Table F2. Percent of respondents with some college education by work sector.

Work sector	Mean age	% with at least some college
Paper manufacturing	50.79	51.28
Other manufacturing	52.64	66.04
Non-manufacturing	52.58	57.58

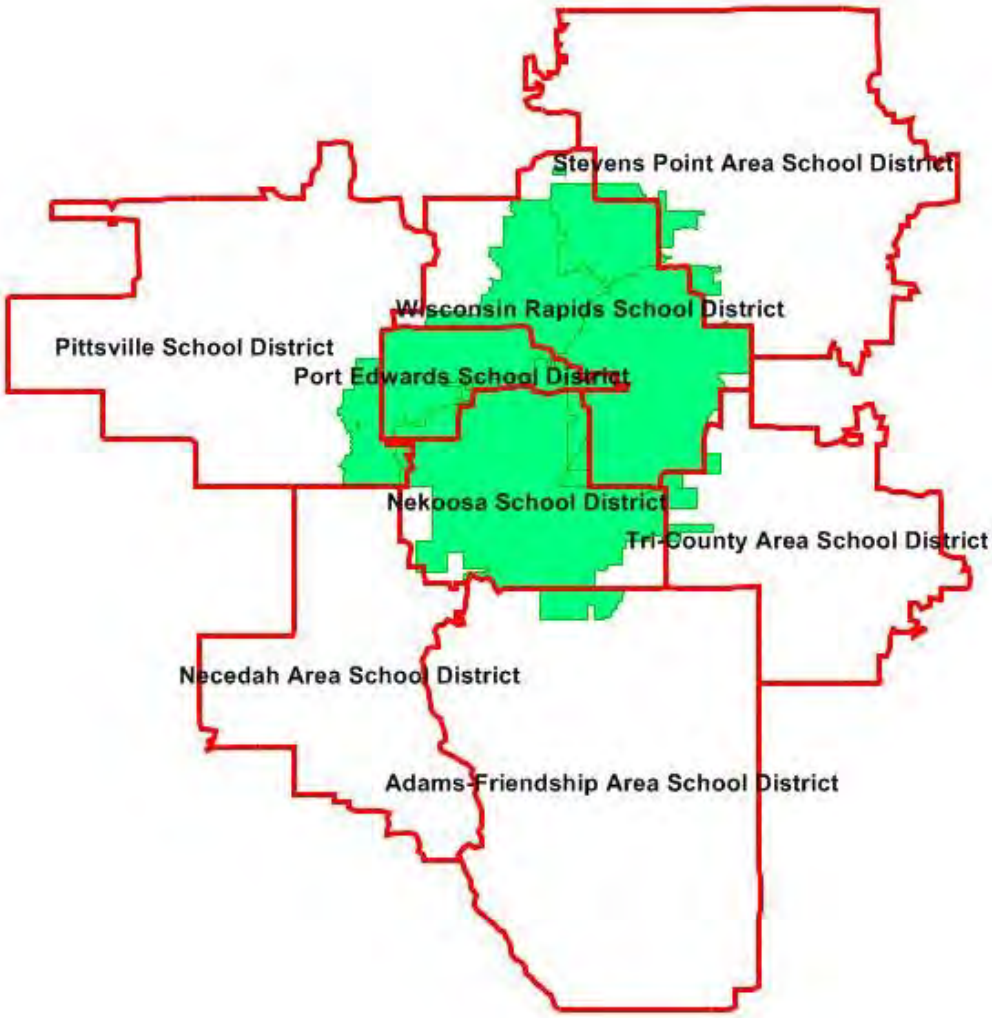
Table F3. Educational attainment and re-employment (total sample).

Highest level of education	% re-employed
High school diploma or less	79.27
Some college, but no degree	81.16
Associate degree	74.29
Bachelor's degree or more	64.71

Table F4. Educational attainment and re-employment (excluding workers 63 and older).

Highest level of education	% re-employed
High school diploma or less	91.04
Some college, but no degree	94.74
Associate degree	85.71
Bachelor's degree or more	76.92

Figure F1. Core Area overlay with area school districts.



G APPENDIX

Temperament Analysis

Based on responses to personality-based questions in the survey, respondents were classified as belonging to one of four temperaments, using a model derived from the work of David Keirsey.[32]

Commanders are motivated by duty, responsibility, security, and the maintenance of order and tradition. They are careful, linear, stepwise, "bottom up" learners who like to build a solid foundation of facts and details. They thrive on structure, certainty, and predictability. They have a concrete-linear mental style. They fundamentally trust authority.

Adventurers are motivated by fun, adventure, excitement, and life in the present moment. They are practical, application-oriented, hands-on, experiential learners who like to jump right into things and learn by doing. They thrive on activity, results, and immediacy. They have a concrete-nonlinear mental style. They fundamentally trust experience.

Systematizers are motivated by competence, challenge, mastery, and intellectuality. They are conceptual, logical, analytical, "top down" learners who like to fit new ideas into a mental context or cognitive map. They thrive on complexity, impersonal logic, and mental planning. They have an abstract-linear mental style. They fundamentally trust rationality.

Harmonizers are motivated by uniqueness, authenticity, self-actualization, and the expression of deeply held personal values. They are creative, innovative, relational, oceanic learners who like to connect unrelated ideas in a self-directed, free-flowing, autonomous way. They thrive on connections, significance, values, and intuition. They have an abstract-nonlinear mental style. They fundamentally trust intuition.

The percentage of respondents who fell within each temperament group are noted below. A small percentage of respondents did not complete the personality items and thus could not be classified into a temperament group.

[32] Keirsey and Bates (1984); Embree (1997). The terms listed (Commander, Adventurer, Systematizer, and Harmonizer) represent temperament categories that have been adapted from Keirsey and Bates and re-labeled by Embree.

Table G1. Temperament breakdown of total survey respondents.

Temperament group	% of total sample
Commander	20.4
Adventurer	19.9
Systematizer	6.5
Harmonizer	51.2
No report	2.0

As the following table indicates, willingness to participate in training was strongly influenced by temperament. Goal-oriented temperaments (Commanders and Systematizers) were more likely to participate in job re-training programs than were process-oriented temperaments (Adventurers and Harmonizers). To some extent, this may have been influenced by financial considerations, as the differing financial outcomes show.

Table G2. Temperament breakdown of respondents related to income and training.

Temperament	Mean old income	Mean new income	% participating in training
Commander	$55,837	$50,163	41.5
Adventurer	$52,630	$46,998	40.0
Systematizer	$54,369	$45,026	46.2
Harmonizer	$56,287	$49,516	37.9

As expected, Systematizers were the most willing to commute to find a new job, and Adventurers least. This is consistent with the expected contrast between the long-term mastery orientation of Systematizers and the focus on short-term rewards common to Adventurers. In other words, Systematizers, who most strongly value career advancement, will pay a higher price (like commuting) to get it. Adventurers, who least value such things, don't consider the price worth paying. (See Table G3 below.)

Table G3. Temperamentof respondents related to age and willingness to commute.

Temperament	Mean commuting distance	Mean age
Commander	46.5	53.7
Adventurer	37.8	53.6
Systematizer	47.3	52.8
Harmonizer	42.8	55.0