MEDFORD ECONOMIC MARKET ANALYSIS

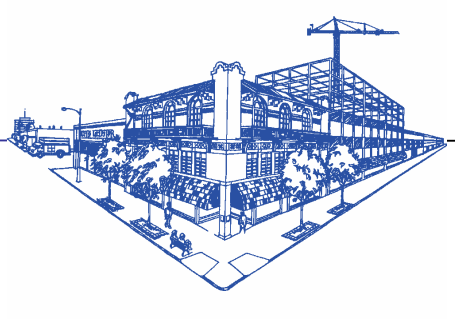
Prepared for:

City of Medford

March 2003

E. D. Hovee
& Company

Economic and Development Services



Medford Economic Market Analysis

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EXECUTIVE SUMMARY

Like many communities in the Pacific Northwest, Medford is in the midst of economic transition – from a resource dependent past to a more diversified economic base in the future. This economic market analysis is intended to address Medford's economic development prospects currently and over the longer 20-year planning horizon. The study also serves as a resource for the City as it proceeds with planning in compliance with the state's Goal 9 objectives – particularly in determining its industrial and commercial land needs.

ECONOMIC TRENDS

Regional Context. With 66,090 residents as of 2002, Medford is the largest city in Southern Oregon – accounting for 15% of all residents in a 4-county region. Of the region's cities, Medford has grown the fastest, averaging 2.7% per year versus 1.7% for both Southern Oregon and statewide over the last three decades.

Growth in Medford has translated into growth countywide. Jackson County as a whole accounts for 43% of Southern Oregon residents – 46% of all Southern Oregon jobs.

Age of Residents. As the population and employment hub of Southern Oregon, Medford residents are younger than residents in the rest of the region. Approximately 19% of residents are age 20-34, while only one-fourth are age 55 and older. Medford appears to be well represented across all age groups, but also has a large new retiree and senior population.

Age of Householder. Medford continues to attract households below the age of 45. Over the last decade, Southern Oregon lost nearly 2,500 householders age 25-34; Medford gained 270 such households.

Education Attainment. Medford and Jackson County are well represented within the higher education levels, with at least 55% of adults having some college education compared to 59% statewide. Education attainment compares favorably with the rest of the Southern Oregon region.

Jobs Balance. Medford employers provide nearly 1.5 jobs per resident actively participating in the local labor force, substantially higher than regional, state, and national rates. Medford serves as the Southern Oregon region's major employment hub.

Occupational Balance. The Southern Oregon economy currently appears to present a number of occupational mismatches. The workforce appears to supply a higher proportion of management and professional workers than area employers require, meaning the region exports these professions to other communities. Local employers have a greater demand for farming/fishing/forestry and blue-collar jobs; this forces area employers to import workers from outside the region to fill these positions.

Jackson County Competitive Advantages. To identify the industries that the region has the greatest advantage in competing for versus other areas around the U.S., a series of screening

criteria have been applied to the industry sectors identified. Five sets of screening criteria have been developed:

1. *Current and changing competitive position of the industry* – relative to the nation
2. *Worker productivity* – and change in productivity over time
3. *Percent of Output Value-Added* – with more than 50% viewed as most desirable
4. *Employment multiplier* – above 2.0 (meaning that at least two jobs are supported in the local economy for every new job directly created within the employment sector in question)
5. *Wage levels including changes over time* – relative to other industries in the local area

Nine industries meet four of the five criteria. Taken together, one-fifth of the industrial sectors portray Jackson County as being strongly competitive. Industries meeting four or more criteria include:

Mining	Instruments
Construction	Trucking & Warehousing
Lumber & Wood	Security & Commodity
Stone, Glass & Concrete	Real Estate
Electronic Equipment	Health Care

Medford Competitive Advantages. Firms located within Medford's UGA currently employ almost 37,900 workers. Services represent the largest sector providing 12,980 jobs, with health care workers accounting for 54% of all service-related jobs on commercial lands.

The manufacturing sector has less than 2,800 employees, but has increased by 12.5% since 1995. This job growth has occurred at a time when manufacturing jobs both countywide and nationally were in decline (-7.2% and -0.6% respectively).

Based on this analysis, Medford's employment opportunities can be divided into *three tiers*:

- *Tier 1* represents industries for which Medford is in the best position to realize opportunities due to its current and growing competitive advantage relative to other areas nationwide.
- *Tier 2* industries constitute employment sectors for which Medford has a current but eroding competitive position or sectors where Jackson County may be competitive but represents more of a challenge to Medford.
- *Tier 3* comprises sectors for which Medford is competitive relative to Jackson County but not outside the Southern Oregon region.

Tier 1 – Best Position	Tier 2 – Strong but Challenging	Tier 3 – Locally Competitive
Instruments	Mining	Food Products
Transit	Construction	Transportation Equipment
Transportation Services	Lumber & Wood	Air Transportation
Communications	Printing & Publishing	Wholesale Trade
Retail Trade	Stone, Glass & Concrete	Insurance Carriers
Banking	Electronic Equipment	Insurance Agents & Brokers
	Trucking & Warehousing	Business Services
	Electric, Gas & Sanitation	Legal Services
	Security & Commodity	
	Real Estate	
	Health Care	

As noted, Tier 1 industries represent the *best opportunities* for economic growth and diversification. Tier 2 and 3 sectors also are recommended for consideration – but may require more local initiative to market the opportunities available. Both Tier 2 and 3 industries will be particularly affected by policies and strategies Medford employs to maintain a competitive industrial and commercial land base.

EMPLOYMENT LAND CHARACTERISTICS

Over 3,400 acres (or 22%) of Medford's land base is classified as industrial under the City's General Land Use Plan (GLUP). Another 1,980 acres (or 13%) is designated as commercial. While there is general consistency between zoning and GLUP classifications, different development uses can be found across all GLUP designations.

Industrial Development. To date, nearly 790 acres in Medford have been developed with industrial uses:

- Eighty-three percent occur on land with an industrial GLUP designation.
- The remaining 17% occurs on commercial lands.
- One-fifth of Medford's industrial development transpired within the last ten years.
- Over the last decade, industrial development absorbed 160 acres; all but four acres occurred on industrial properties.
- Industrial development is absorbing an estimated 16 acres of industrial property per year and 0.40 acres of commercial land.

Commercial Development. Almost 1,500 acres of land have been developed for commercial uses:

- Sixty-five percent of commercial use is located on properties designated commercial.
- A remarkable 35% of all Medford's commercial development is occurring on its industrially zoned land.
- Commercial development absorbed 240 acres over the last ten years, 34% located on industrial properties (one-fourth for office-related uses).

- Commercial development is absorbing an estimated 8 acres of industrial land per year and 16 acres of commercial.

Industrial Land. Industrial land is developing at 29 acres per year; sixteen acres for industrial uses, eight acres for commercial, and five acres for other uses (i.e. airport hangars).

- Greatest demand has been experienced for properties 15 acres or larger, constituting 37% of demand. Properties 5 acres in size account for another 28% and 1-2 acre parcels captured 11%.
- Commercial development is occurring on properties less than 10 acres in size, developing 48% of the 1-5 acre properties.
- One in five jobs is located on industrial properties; over the last five years, approximately 380 net new jobs have been created annually on industrial lands.
- Job growth is fairly evenly distributed between industrial and commercial-related sectors.
- Average employment density is 4.8 jobs per acre.
- Thirty-six percent (1,230 acres) of Medford's industrial land is vacant.
- Sixty-two percent (or 766 acres) have environmental constraints; 590 acres are properties 10 acres or larger.
- Removal of another 79 acres associated with the PP&L and Medite sites leaves Medford with only 385 vacant industrial developable acres.
- Medford has only five large sites ranging from 10-35 acres in size. Fifty-six percent of the industrial land base consists of properties under five acres in size; at least one-half are likely to develop with commercial uses based on past trends.
- The bulk of the existing vacant industrial land inventory is situated on the north side of Medford.

Commercial Land. Over the last decade, commercial land has developed at 17 acres per year: fifteen and one-half acres for commercial uses, 0.70 acres for industrial, and one acre for other uses.

- Greatest demand has been experienced for 1-2 acre parcels (23%), followed by 2-5 acre (21%) properties and 15+ acre parcels (19%).
- Nearly two-thirds of Medford's employment base is located on commercial properties.
- Retail provides 39% and services employ another 36% of jobs on commercial lands; health care represents 54% of all service sector jobs on commercial lands.
- Average employment density is 18.7 jobs per acre.
- Just over one-fifth (448 acres) of commercial land is vacant. Sixty-one percent (or 274 acres) have environmental constraints; 125 acres are properties 10 acres or larger.
- Removal of EFU lands (21 acres) leaves Medford with only 153 acres of vacant developable commercial land.

- Medford has no commercial properties greater than 10 acres in size and only 65 acres in 1-5 acre properties.
- In contrast with industrial property, most of the large commercially-zoned vacant parcels are situated on the south side of Medford. In addition, some central downtown properties may have redevelopment potential even though they are not currently vacant.

ECONOMIC FORECAST

Even before considering development constraints, Medford may not have enough vacant employment land to meet future market demand. Medford currently has 1,678 acres (both industrial and commercial) of vacant employment properties.

Three alternative employment scenarios through the year 2020 have been outlined for consideration, involving: a) continued current mix of local area employment; b) changing shares toward more commercial use; and c) industrial lands focus.

With these scenarios, demand for industrial and commercial land over the next 20 years could range from 1,263 to 2,121 acres. After removal of constrained properties, Medford is left with only 538 acres, creating a potential deficit ranging from 725-1,583 acres. The land supply and demand implications of these alternative employment forecast scenarios are indicated by the following summary chart.

	Employment Scenario		
Employment Lands	Current Mix	Change Share	Industrial Land Focus
Land Supply (acres)	538	538	538
Land Demand (acres)	1,263	1,494	2,121
Surplus (+)/Deficit (-)	-725	-956	-1,583

Commercial. Medford currently has an extremely limited supply of commercial land. With only 153 acres of unconstrained vacant commercial property, Medford is likely to experience a 280-500 acre deficit through 2020. The lack of commercial property will increase market pressure for commercial uses to locate on industrial lands.

However, there are only 65 acres of 1-5 acre industrially designated parcels, fulfilling 53% of commercial demand over the last decade. Unless a framework for remediation of development constraints is implemented, land prices for vacant/unconstrained commercial land could escalate, having the effect of:

- Driving up industrial land prices as commercial demand competes with industrial
- Stimulating greater development of currently underutilized properties
- Pushing some commercial development to other sites outside of Medford

Redevelopment of smaller vacant and underutilized properties in Medford's downtown area could serve to reduce the need for added commercial Greenfield sites – particularly for office

and smaller scale retail uses. However, costs of development are often greater in a downtown area and the major impetus for new commercial uses in recent years has been to develop on larger sites outside the downtown core.

Industrial. Industrial land comprises 70%-75% of Medford's vacant employment property. However, 845 acres of the vacant 1,230 acres is affected by identified development constraints. Medford will need 708-1,688 acres to fulfill market demand over the next 20 years. With only 385 acres unconstrained, Medford could experience a deficit of 320-1,300 acres.

Even with remediation of constrained properties, Medford could have a 460-acre deficit (under the industrial land focus scenario). Furthermore, the lack of large industrial sites could result in Medford continuing to lose industrial development opportunities to other communities, such as White City or to other Southern Oregon communities outside Jackson County.

POLICY ISSUES

Medford economic development, planning and elected officials are faced with several policy questions pertinent to securing the City's economic future. The policies presented for consideration have been derived from this economic analysis. They represent the consultant's preliminary conclusions and are presented for purposes of discussing Medford's economic future.

1. **Determine Medford's regional employment role.** For Medford to continue as a regional job center, local officials should plan for an additional 16,200 jobs over the next 20 years and 30,000-38,000 over the longer 50-year Regional Problem Solving time frame.

2. **Chart Medford's economic identity.** Medford has a multitude of paths that could be chosen – setting a direction for the community's economic future. First option is to "stay the course," which would translate into Medford continuing to serve the region as a commercial center. A second alternative is to not only remain as the region's major commercial center but become more aggressive in attracting industrial investment.

3. **Consider local socio-economics as part of a jobs development strategy.** Medford should create a strategy for developing a skilled workforce to fill the deficiency in blue-collar occupations throughout the Southern Oregon region. As part of a workforce development strategy, Medford will have to provide access to a network of resources to serve their growing minority population. Southern Oregon University and Rogue Community College represent increasingly critical partners in work force skills training to effect a broader, community-wide economic development strategy.

4. **Focus economic development efforts where demonstrated competitive advantages are offered.** Medford has a number of business and industrial potentials for which it can competitively vie with other communities – segmented into three tiers of best, strong but challenging and locally competitive opportunities as described above.

These opportunities are consistent with the community's relative competitiveness for business investment. Medford also offers two additional distinct advantages that can serve to encourage business expansion or attract new firms, notably:

- Relatively low cost supply of labor compared to the nation, especially larger metro markets.
- Inclusion of all commercial and industrial properties within an enterprise zone.

5. **Ensure Medford has an adequate supply of employment lands.** Over the next 20 years, Medford faces a potential deficit of 725-1,583 acres. In response, the City should develop a series of strategies that remove or mitigate the constraints facing two-thirds of its vacant inventory. This may include consideration of adding new employment lands to the existing urban growth boundary.

6. **Provide a competitive supply of both commercial and industrial land.** Medford will need 430 to 650 acres to satisfy market demand over the next 20 years. If development trends over the last decade continue, 53% (or 230-350 acres) of *commercial* demand will be for 1-5 acre sites. With only 65 acres of unconstrained 1-5 acre parcels, Medford will only be capable of satisfying 19%-28% of anticipated market demand. The lack of sites will increase pressure for commercial to develop on industrial sites. An active downtown redevelopment program could potentially reduce, but is not expected to eliminate, the deficit of sites for future commercial use.

   Industrial development has been lagging for several factors. Parcelization of large industrial sites for smaller commercial development is significantly driving up land prices as well as reducing the competitive supply of large industrial sites. Industrial land demand projections translate into the need for between 260 to 630 acres of 15+ acres sites. With only 94 unconstrained acres in 15+ acre parcels, Medford can satisfy only 15%-36% of the anticipated demand for large sites.

7. **Consider revising zoning designations and land use regulations consistent with an adopted economic develop strategy.** Medford could consider rezoning a portion of its industrial land (parcels under 5 acres) to a heavy commercial and/or "business park" type of zone. This would allow development of uses with a mix of commercial/industrial activity to continue on industrial lands as well as small scale industrial activity.

   At the same time, action could be taken to limit commercial development on selected industrial properties 5 acres or larger, reserving these larger tracts for primarily industrial uses. Allowing some portion of office ancillary to the industrial development should also be considered given the type of industries for which Medford is competitive – reflecting the e-commerce overlay and higher proportion of on-site office use for many industries.

8. **Incorporate development standards into Medford's land use regulations.** The development review assessment currently underway by the City of Medford offers an opportunity to consider changes appropriate for commercial and industrial land regulations. The City could also consider limiting the parcelization of large industrial sites by providing planning options for development to *phase in* more systematically.

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I. INTRODUCTION

Like many communities in the Pacific Northwest, Medford is in the midst of economic transition – from a resource dependent past to a more diversified economic base in the future. This economic market analysis is intended to address Medford's economic development prospects currently and over the longer 20-year planning horizon. The study also serves as a resource for the City's compliance with the state's Goal 9 objectives as well as assisting the City in determining its industrial and commercial land needs.

BACKGROUND

Historically, forest products and health services were the primary economic drivers in Medford/Jackson County. However, the forest products industry has contracted throughout the Pacific Northwest due to changes in industry technology and federal land management policies, i.e. significant restrictions of timber harvests on federal forest lands.

As the forest products sector has declined, growth in health services have dramatically increased – adding nearly 2,500 jobs over the last decade. Other economic growth sectors in Medford's/Jackson County's economy have included professional services, social services, and retail trade.

With substantial increases in services and retail trade sectors, Medford/Jackson County is transitioning to a commercial-based economy. This transition is similar to that being faced by numerous other urban areas and smaller communities throughout the Pacific Northwest. This has translated into increased development pressure on Medford's industrial land for commercial uses rather than industrial. With the uncertainty of the long-term economic effects of a lagging industrial base, Medford has chosen to examine its economic competitiveness to determine the community's long-term economic future.

PURPOSE

The City of Medford retained E.D. Hovee & Company to provide an economic market analysis. The intent of the analysis is to provide information that leads to a fundamental understanding of market forces affecting the need for industrial and commercial lands within Medford and the surrounding community. Specific tasks include:

- A review of available industrial sites in relationship to sizes, numbers, and vacancies in order to project the need for industrial land and building types within Medford relative to local and regional demands.
- Review available commercial sites, inventory commercial vacancies, and project the need and most appropriate locations for additional commercial projects.[1]
- Inventory brownfields within the City limits.
- Address the relationship of commercial development city and region-wide to downtown and its core area market role in commercial needs and utilization.

METHODOLOGY & QUALIFICATIONS

E.D. Hovee & Company obtained readily available data to assess Medford's economic future.[2] Specific information utilized in the analysis includes:

- City of Medford Planning Department, Industrial Land Analysis, August 2001.
- City of Medford Planning Department, Report on Economic Development, July 1998.
- Confidential employment by employer and location, Oregon Employment Department.
- Land use, tax lot, and environmental GIS files from City of Medford.
- Socioeconomic data from U.S. Census Bureau.
- Downtown market assessments being conducted by Bruce Ostley for the Medford Urban Renewal Agency.
- Proprietary IMPLAN economic data from Minnesota Implan Group.

ORGANIZATION OF REPORT

The remainder of this report is organized around the following topics:

Economic Trends
Employment Land Characteristics
Economic Forecast
Policy Issues

II. ECONOMIC TRENDS

The economic market assessment starts with an overview of local and regional economic trends. The evaluation examines Medford's role within the Southern Oregon economy, demographic trends, labor force characteristics, employment growth, jobs balance, and competitive position.

REGIONAL CONTEXT

With 63,154 residents as of the 2000 census (and 66,090 as of 2002), Medford is the largest city in Southern Oregon, accounting for 15% of all residents in a 4-county region. Of the region's cities, Medford has grown the fastest, averaging 2.7% per year versus 1.7% for both Southern Oregon and statewide over the last three decades.

Jackson County as a whole accounts for 43% of Southern Oregon residents with population growing at a pace of 2.2% per year. Jackson County also accounts for 46% of all Southern Oregon jobs. Jackson County's job base has been growing by 3.6% per year versus 2.7% region-wide and 2.8% statewide.

Figure 1. Southern Oregon Region

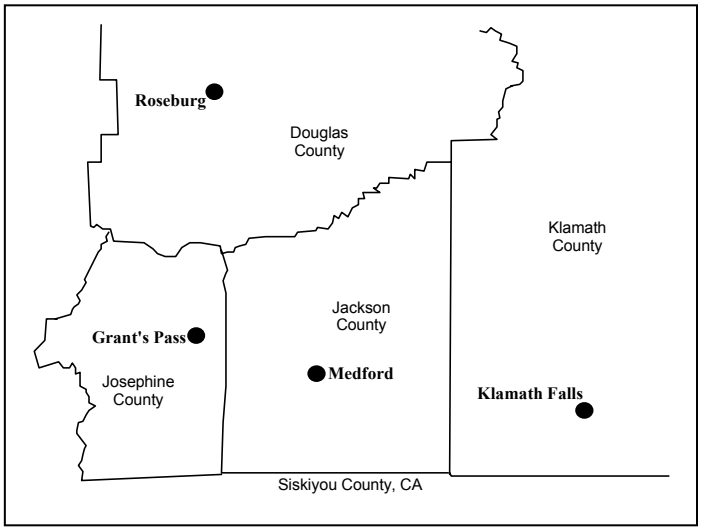


Figure 2. Comparison of Population & Employment Trends for Southern Oregon

Geographic Area	1970	1980	1990	2000	Annual Percent Change 70-80	80-90	90-00
Population:							
Grants Pass	12,455	15,032	17,503	23,003	+1.9%	+1.5%	+2.8%
Klamath Falls	15,775	16,661	17,737	19,462	+0.5%	+0.6%	+0.9%
Medford	28,454	39,746	47,021	63,154	+3.4%	+1.7%	+3.0%
Roseburg	14,461	16,644	17,069	20,017	+1.4%	+0.3%	+1.6%
Douglas County	71,743	93,748	94,649	100,399	+2.7%	+0.1%	+0.6%
Jackson County	94,533	132,456	146,389	181,269	+3.4%	+1.0%	+2.2%
Josephine County	35,746	58,855	62,649	75,726	+5.1%	+0.6%	+1.9%
Klamath County	50,021	59,117	57,702	63,775	+1.7%	-0.2%	+1.0%
Southern Oregon	252,043	344,176	361,389	421,169	+3.2%	+0.5%	+1.5%
State of Oregon	2,091,533	2,633,156	2,842,321	3,421,399	+2.3%	+0.8%	+1.9%
Employment:							
Douglas County	28,773	41,354	46,757	52,898	+3.7%	+1.2%	+1.2%
Jackson County	36,131	58,792	76,513	103,734	+5.0%	+2.7%	+3.1%
Josephine County	12,673	22,384	27,057	34,583	+5.9%	+1.9%	+2.5%
Klamath County	22,726	27,135	28,667	33,777	+1.8%	+0.6%	+1.7%
Southern Oregon	100,303	149,665	178,994	224,992	+4.1%	+1.8%	+2.3%
State of Oregon	925,914	1,353,338	1,639,255	2,118,403	+3.9%	+1.9%	+2.6%

Source: U.S. Census Bureau and U.S. Bureau of Economic Analysis (BEA).

As of 2000, Jackson County had a base of over 103,700 employees. In Jackson County, there are 0.57 jobs for every resident. By contrast, the other three counties have a jobs-to-resident ratio of only 0.51. This indicates the economic centrality and importance of Medford/Jackson County to the entire Southern Oregon economy.

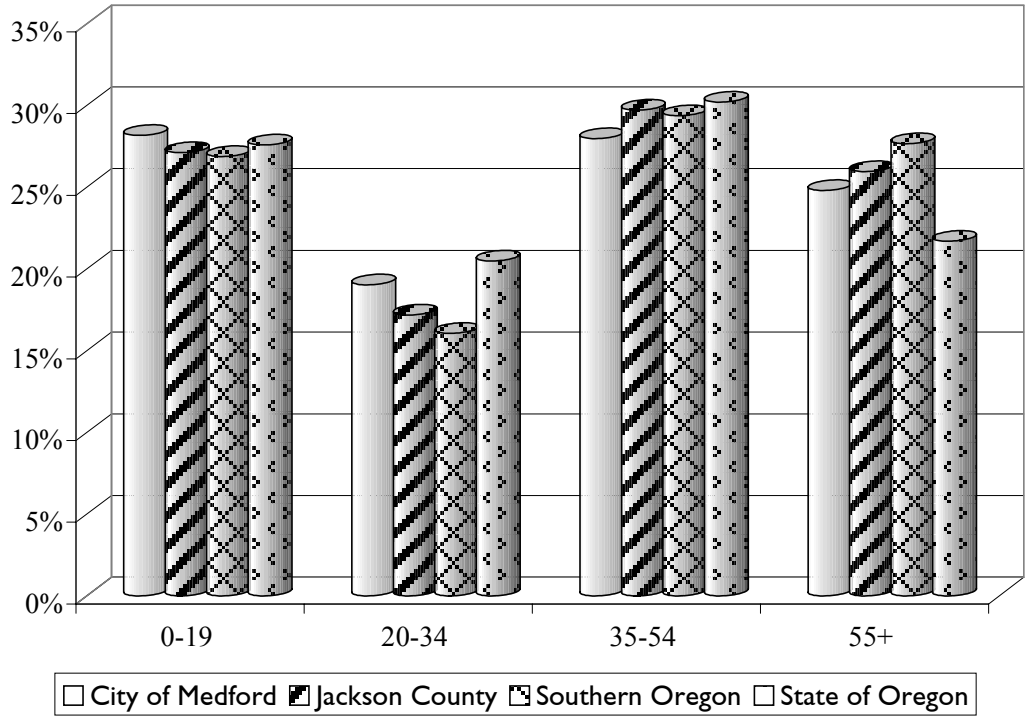
DEMOGRAPHICS

Demographic indicators important to this review of Medford area economic prospects include age of residents, race/ethnicity, household size, age of householder, householder growth, educational attainment and household income.

Age of Residents. Southern Oregon tends to have a slightly older population than the rest of the state. Approximately 28% of residents in Southern Oregon are age 55 and older versus 22% statewide.

However, the population and employment hub of Southern Oregon, Medford residents are younger than residents in the rest of the region. Approximately 19% of residents are age 20-34, while only one-fourth are age 55 and older. Overall, Medford has relatively low proportions of its population in age categories of 35 and over.

Figure 3. Population by Age Group (2000)



Source: U.S. Census Bureau.

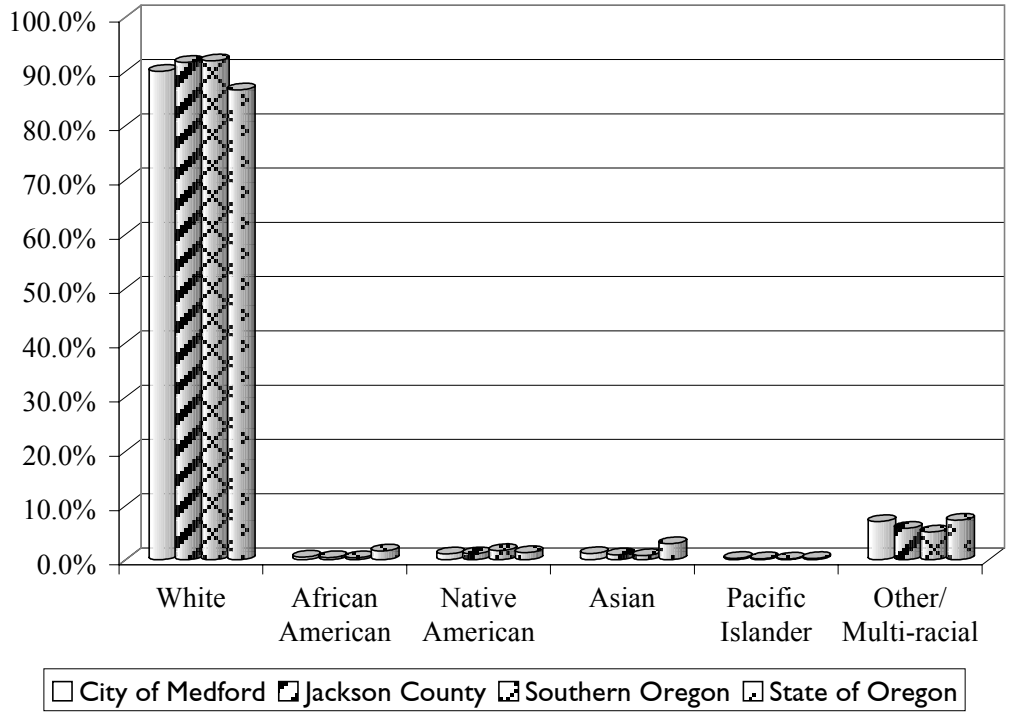
A relatively young population is an indicator of the city's vitality – attracting a more diverse population and younger adults that are relatively mobile. This younger demographic also creates

greater need for entry level jobs and early job advancement opportunities than may be the case elsewhere in Southern Oregon.

RACE/ETHNICITY

Racial make-up is fairly comparable throughout Southern Oregon. Ninety percent of residents are white, with other/multi-racial persons accounting for another 4%-7%. As compared to statewide averages, Southern Oregon has a lower representation of African Americans and Asians.

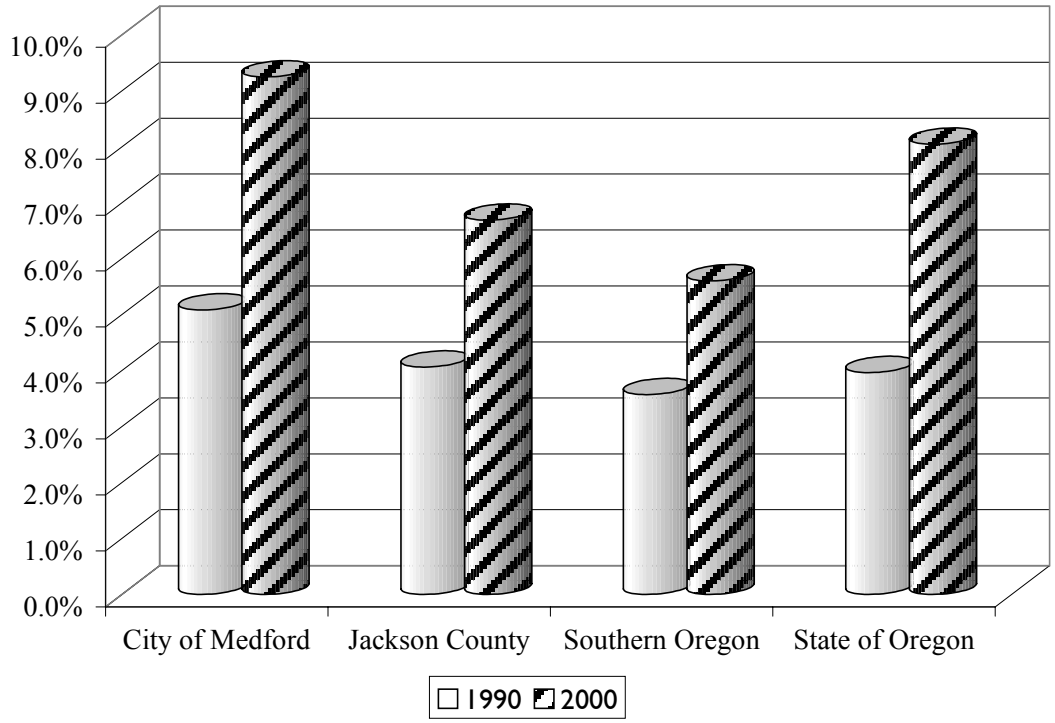
Figure 4. Racial Make-up (2000)



Source: U.S. Census Bureau.

Over 9% of Medford's population is Latino. This compares to 5.6% region-wide and 8% statewide. Latino representation has nearly doubled, increasing from 5.1% in 1990 to 9.2% in 2000. Latino's also accounted for 205 of Medford's population growth over the last decade.

Figure 5. Latino Population (1990-2000)

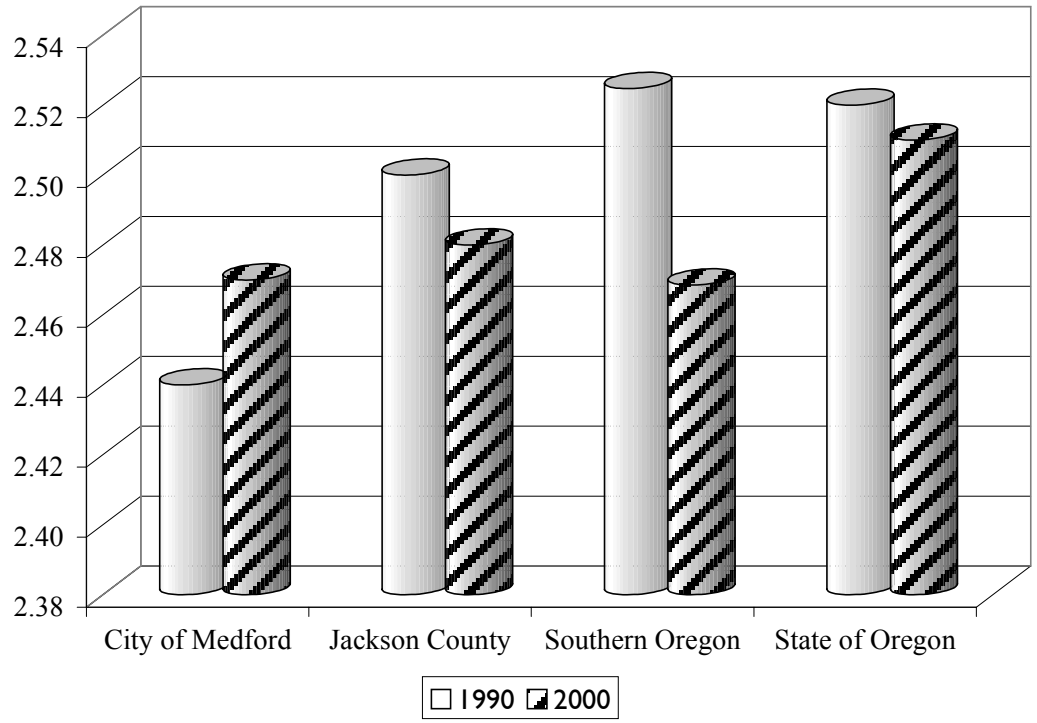


Source: U.S. Census Bureau.

Consistent with trends and projections nationally, the proportion of racial and ethnic minorities in the Medford area can be expected to increase in the years ahead. This more diverse population will contribute to labor force growth – creating both challenges and new opportunities for continued commercial and industrial employment.

Household Size. Southern Oregon households are somewhat smaller than statewide averages. Southern Oregon households average 2.47 persons versus 2.51 for the entire state. While Medford households are also smaller, household sizes increased over the last decade – a trend counter to regional and statewide trends.

Figure 6. Average Household Size (1990 & 2000)



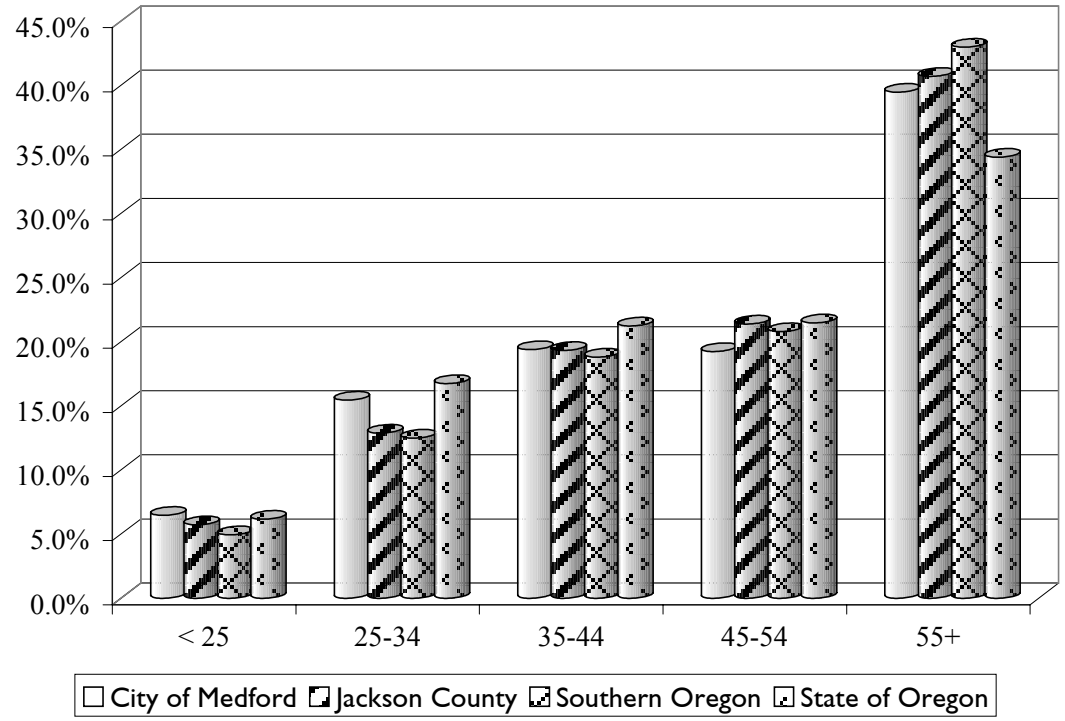
Source: U.S. Census Bureau.

The recent trend to increasing household size also is consistent with Medford's generally younger age profile. Increased household size also can be expected to generate economic opportunities – for household purchases and potentially more workers per household.

Age of Householder. Another way of looking at age is by *householder*. The householder is the person that typically makes the decision of where to live.

Outside the City of Medford, the Southern Oregon region is significantly over represented in senior households, with 43% of householders age 55 and older versus 34% statewide. In comparison, Medford appears to be well represented across all age groups, but also has a large senior population.

Figure 7. Age of Householder (2000)

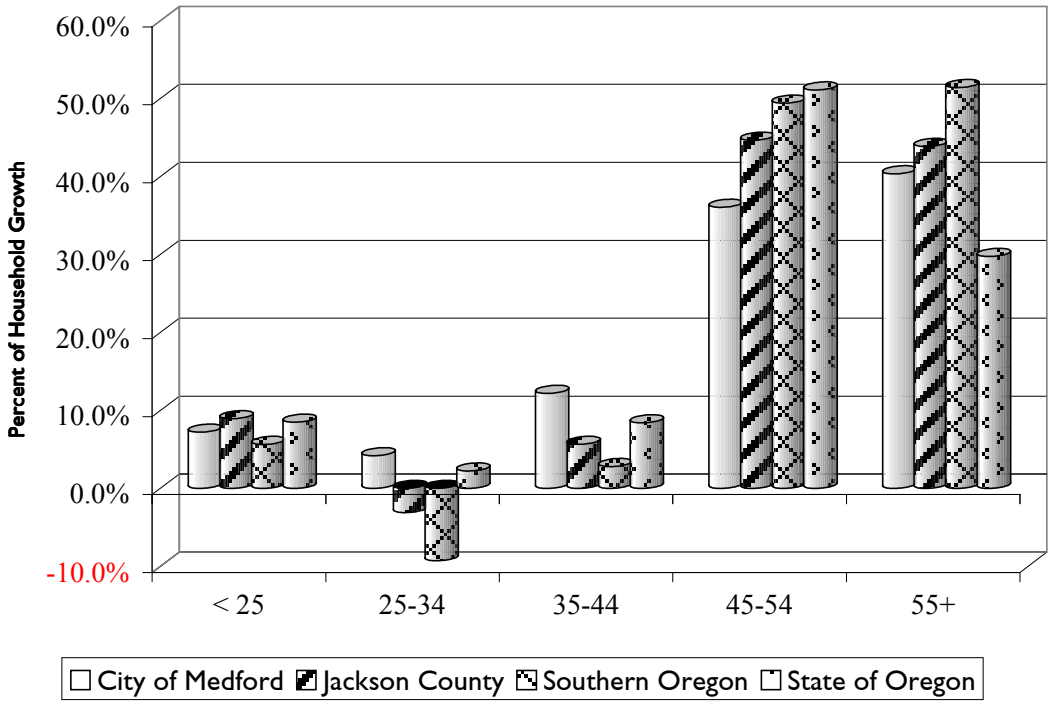


Source: U.S. Census Bureau.

Householders are particularly well represented in the 25-34 young adult age category – by comparison with Jackson County and the entire Southern Oregon region. As with household size, a younger population represents added labor force – contributing to local job needs and economic development opportunities.

Householder Growth. Residential growth in Medford has occurred across all household age groups. As the Southern Oregon region appears to be losing younger households, Medford continues to attract households below the age of 45. In particular, over the last decade Southern Oregon lost nearly 2,500 householders age 25-34, and Medford gained 270.

Figure 8. Household Growth by Age of Householder (1990-2000)



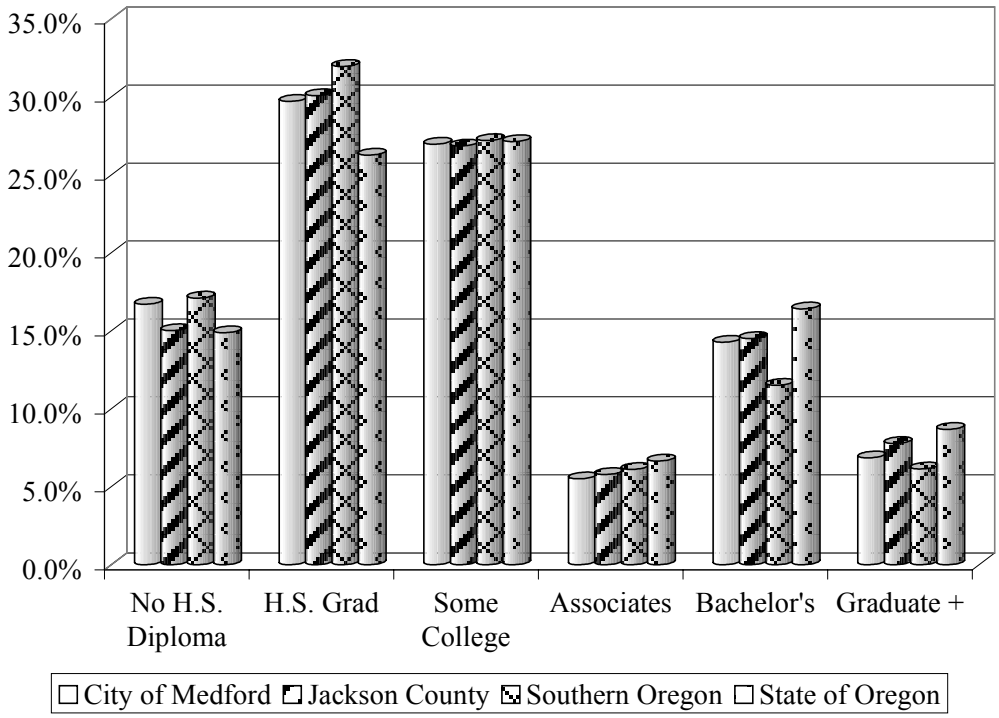
Source: U.S. Census Bureau.

Medford's growth of younger households runs counter to experience elsewhere regionally and statewide. However, the predominant share of household growth has been in the 45 and over categories – both locally and regionally. This growth represents *baby boomers* in the 45-54 age bracket with a mix of early retirees and seniors age 55 and over.

Medford's attractiveness to younger households can be beneficial for retailers – as 35-44 year olds are in an age period of proportionately high household purchases. This also is an age group with relatively high labor force participation.

Educational Attainment. A larger proportion of Southern Oregon residents (age 25 and older) have only a high school diploma, 32% region-wide versus 26% statewide. However, Medford and Jackson County are well represented within the higher education levels, with at least 55% having some college education compared to 59% statewide.

Figure 9. Education Attainment of Residents Age 25 and Older (2000)



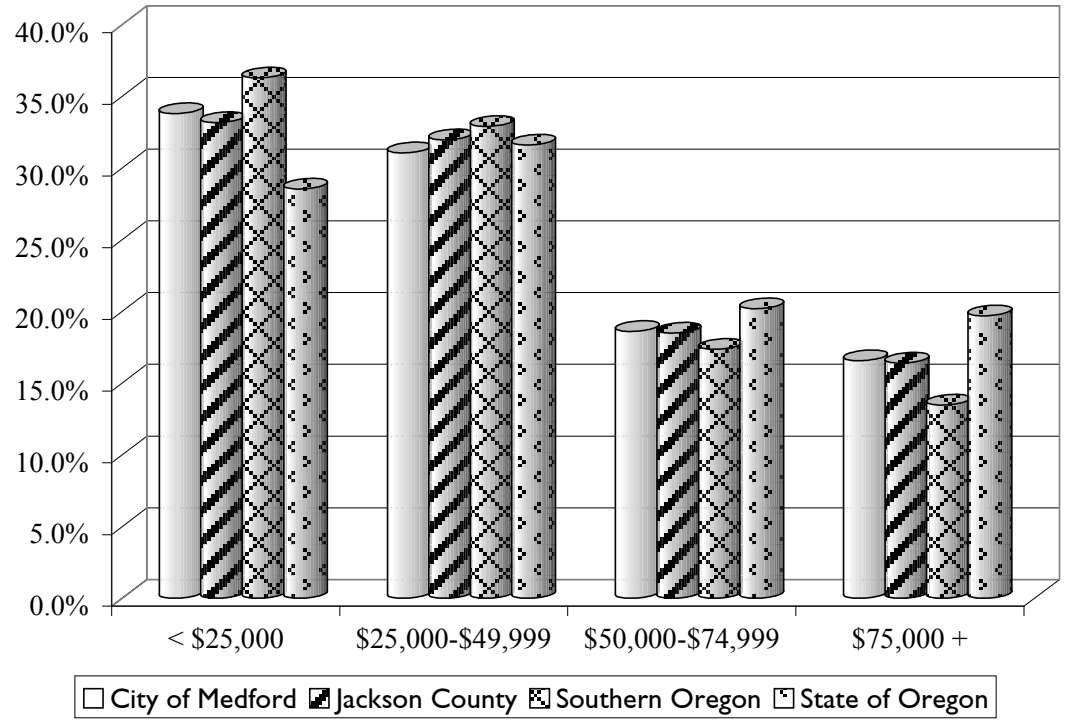
Source: U.S. Census Bureau.

Educational attainment of Medford and Jackson County residents compares particularly favorably with the rest of the Southern Oregon region. This represents an economic development asset – for marketing to new companies looking to locate in Medford and existing companies seeking to expand locally.

Household Income. Households in Medford and the Southern Oregon region tend to have lower incomes than residents statewide. Median income in Medford is $36,500 compared to $40,900 statewide. Also, 65%-70% of households living in Medford/Southern Oregon have annual incomes below $50,000 versus 60% statewide.

The lower incomes in Southern Oregon are primarily due to the presence of a significant senior population that lives on fixed incomes. Other factors include shrinkage of relatively high wage forest products employment, with shifts to service sector jobs and lower wage rates. This issue is discussed further in the competitive position section.

Figure 10. Household Income Distribution (2000)



Source: U.S. Census Bureau.

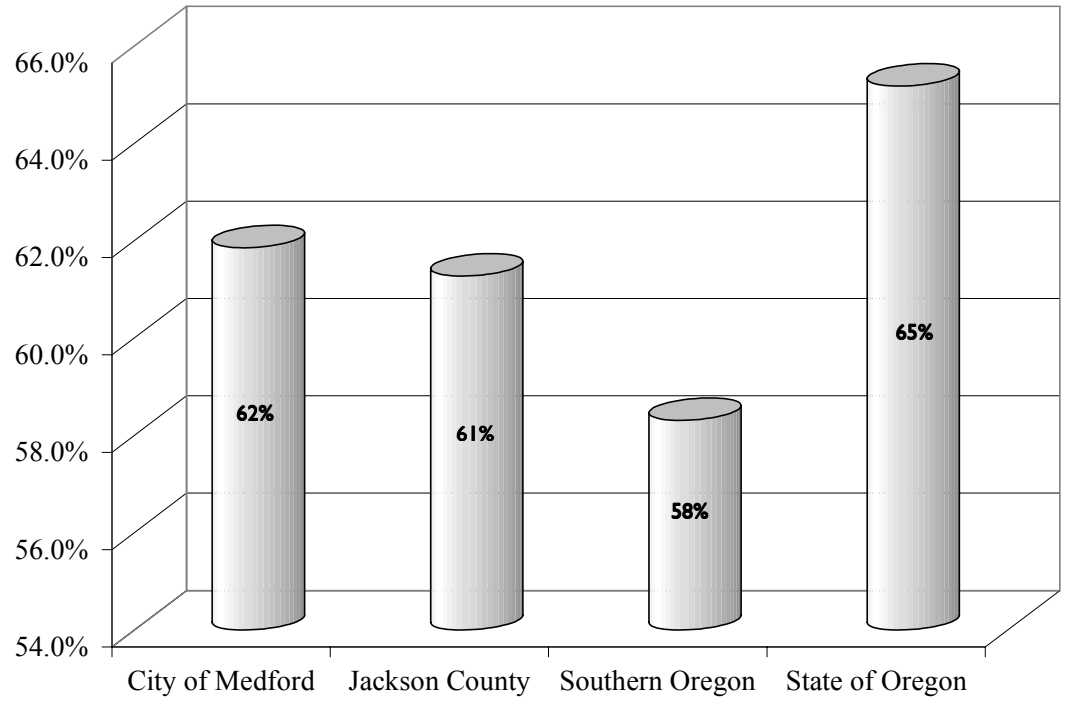
Medford compares more favorably to the entire Southern Oregon region – with higher proportions of households earning $50,000 and above. This coordination of strong incomes with a younger demographic will continue to *drive* retail and service business opportunity in Medford.

LABOR FORCE

Topics of note are labor force participation and unemployment.

Participation Rate. Labor force participation rates are slightly lower locally and regionally than statewide. In Medford, 62% of residents age 16 and older (30,200) are in the labor force. By comparison, only 58% (or 193,000) participate region-wide versus 65% throughout the state of Oregon.

Figure 11. Labor Force Participation Rates (2000)



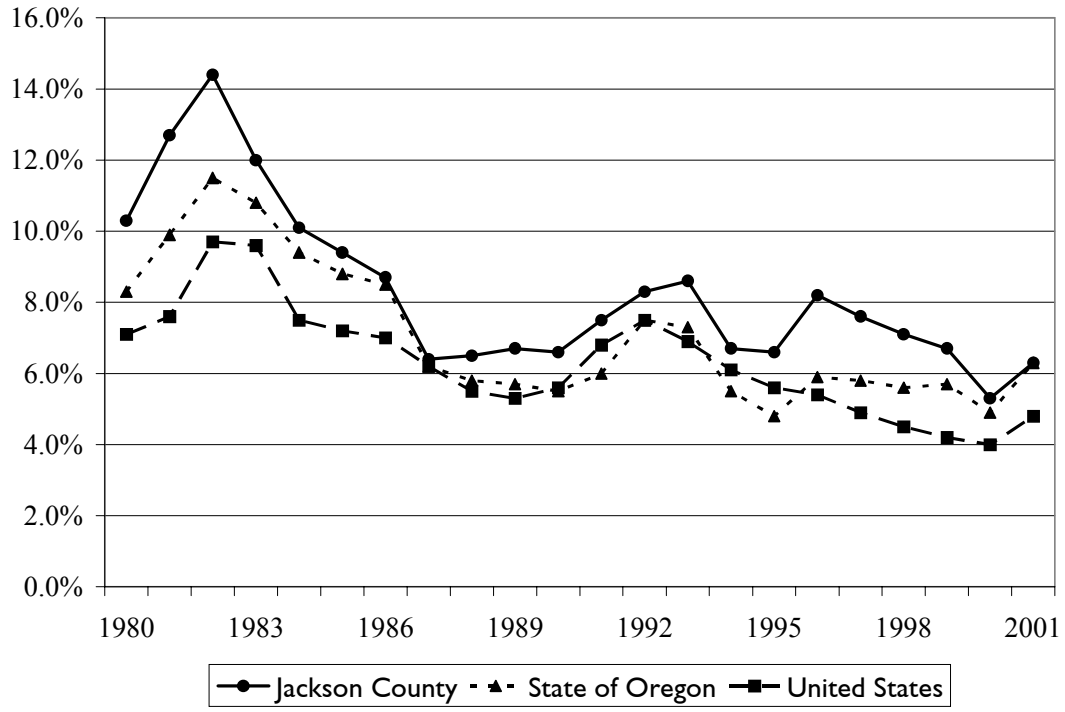
Note: Employment figures include workers covered and not-covered by unemployment insurance as well as self-employed. Adjustments were made to Medford using Jackson County data. Medford estimate for the city limits only.

Source: U.S. Census Bureau.

Lower participation rates reflect the presence of a large retired senior population. Another factor is unemployment which typically exceeds comparable statewide and national figures. However, a younger demographic in Medford could contribute to greater labor force participation rates in the years ahead.

Unemployment Rates. As of 2001, just over 6% of Jackson County's labor force is unemployed, up from 5% in 2000. Jackson County's unemployment rate had been declining since 1996, before the emergence of a recent national recession. However, unemployment rates are substantially lower than the 14% rate experienced during the last major recession in the early 1980s.

Figure 12. Average Annual Unemployment Rates (1980-2001)



Source: Oregon Employment Department.

Of particular note is the observation that the gap between unemployment locally and statewide has been virtually erased. As of 2000, the unemployment rate for Jackson County was virtually identically with the rate statewide.

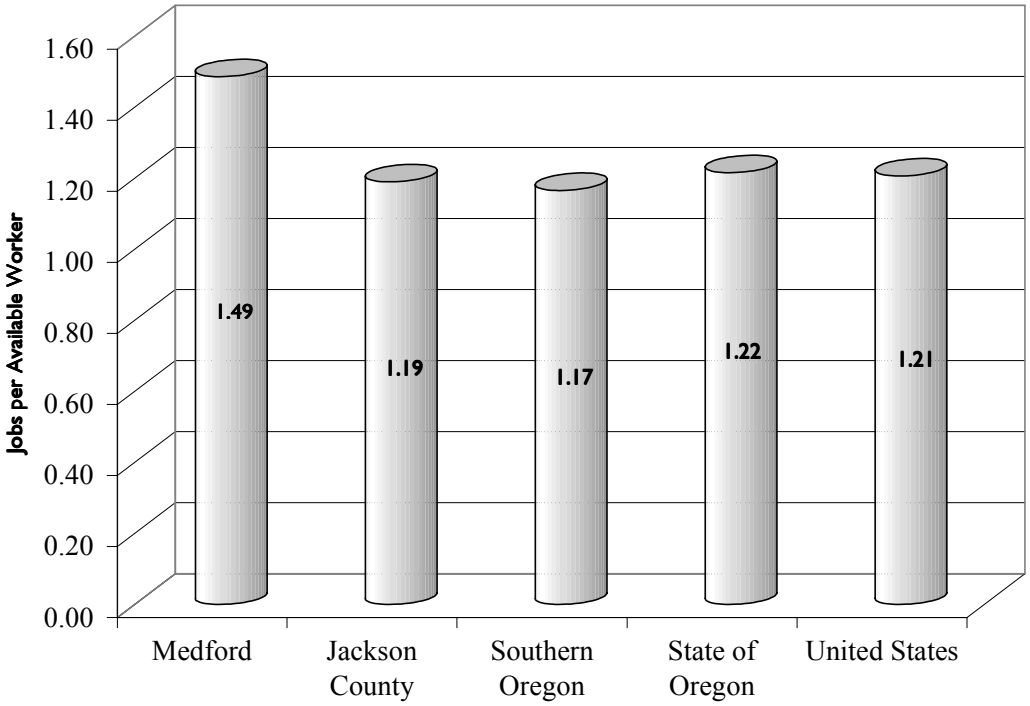
JOBS BALANCE

Communities statewide and across the nation are giving greater attention to improving their jobs balance to ensure adequate job opportunities are available for local residents and labor force. Two alternative measures are used to identify how well a community is performing relative to the region, state, or nation:

- **Jobs per Available Worker –** The number of jobs provided by local employers compared to the available supply of workers (local labor force). Measures how well a community provides jobs to local residents seeking work.
- **Jobs-Housing –** Ratio of local job opportunities per housing unit. Can also be used to assess job creation relative to residential growth.

Jobs per Available Worker. As previously noted, Medford serves as the Southern Oregon region's major employment hub. Medford employers provide nearly 1.5 jobs per resident actively participating in the local labor force, substantially higher than regional, state, and national rates.[3] The entire Southern Oregon region appears to be in-balance with state and national averages, further evidence that Medford serves as a regional jobs center.

Figure 13. Jobs per Available Worker (2000)

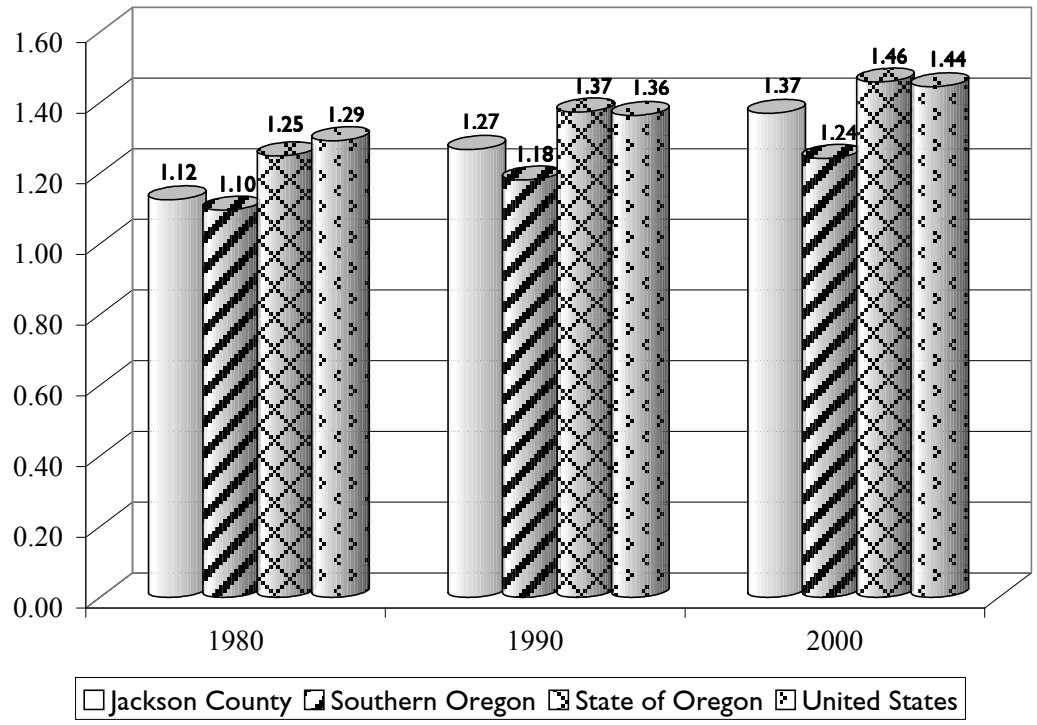


Source: U.S. Census Bureau and U.S. Bureau of Economic Analysis.

In effect, Medford is a *net importer* of labor force – from elsewhere in Jackson County and the Southern Oregon region. An important question for the community's future relates to the extent to which Medford retains or further strengthens this role – both as an industrial and commercial regional center.

Jobs-Housing. Nationally, the ratio of jobs to housing balance has been increasing over the last 20 years. In 1980, the U.S. jobs-housing ratio was 1.29 increasing to 1.44 by 2000. The main reason for the improved jobs-housing ratio has been increasing labor force participation including more double income households. *Note:* Medford's job-housing balance in 2000 was 1.49.

Figure 14. Jobs-Housing Balance (1980-2000)



Source: U.S. Census Bureau and U.S. Bureau of Economic Analysis.

Region-wide, job growth has outpaced housing development. This is evident when examining the region's jobs-housing balance, as the number of jobs per housing unit increased consistently from 1980-2000. In 1980, the region's jobs-housing ratio was 1.10 jobs per housing unit increasing to 1.24 by year 2000. This also signals that the region is becoming more *job rich.* However, Medford's jobs-housing balance remains somewhat low as a result to a large retired senior population.

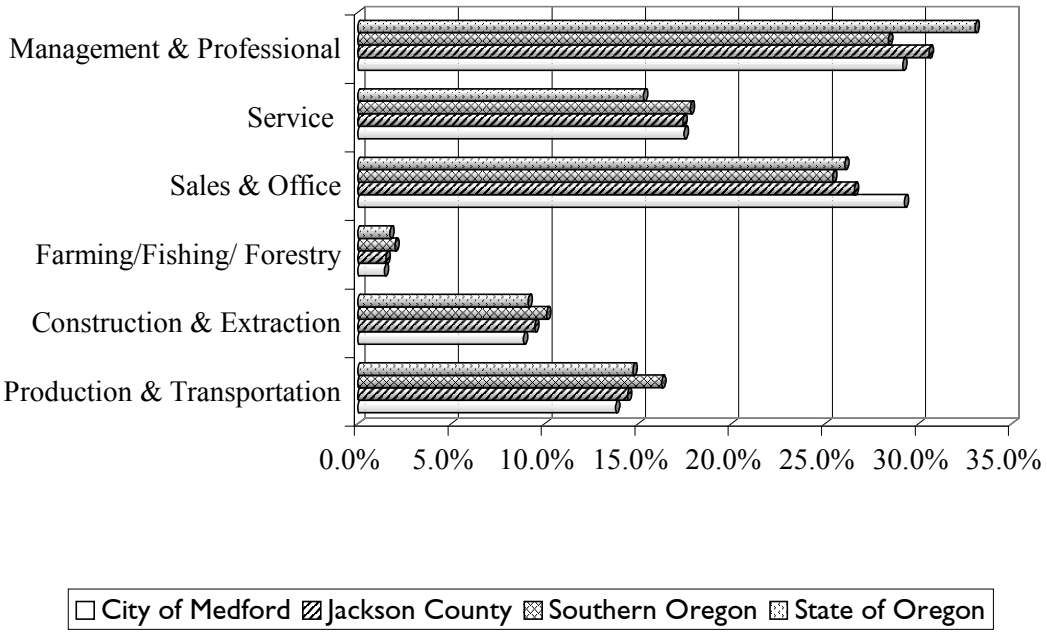
OCCUPATION MIX

The term *occupation mix* denotes the diversity of employment, by type of occupation in which a worker is employed. This discussion focuses on resident occupations and occupation balance.

Resident Occupations. The occupations of Medford residents are essentially driven by local employment opportunities. A high proportion (47%) of residents are employed in service, sales, and office occupations as compared to statewide (41%). In contrast, Medford has a slightly lower representation (29%) in management and professional occupations (versus 33% statewide).

The residential occupation mix region-wide has been geared more toward blue-collar jobs. Over one-fourth (26%) of Southern Oregon residents are employed in construction, extraction, production, and transportation occupations. In contrast, only 23% of Medford and 24% of statewide residents are employed in these same occupations.

Figure 15. Residential Occupation Mix (2000)



Source: U.S. Census Bureau.

The labor force that resides in Medford is particularly strongly represented in sales and office and service occupations compared to the rest of the county, state or region.

Occupation Balance. The Southern Oregon economy appears to present a number of occupational mismatches. The workforce appears to supply a higher proportion of management and professional workers than area employers require; meaning the region exports these professions to other communities. The limited local employment opportunities for these occupations also contribute to the region's under representation as compared to statewide.

Figure 16. Occupational Profile by Place of Work and Residence (2000)

	Southern Oregon*	
Occupation	Workplace	Resident
Management & Professional	23.3%	28.4%
Service	17.4%	17.8%
Sales & Office	26.5%	25.3%
Farming/Fishing/Forestry	4.5%	2.1%
Blue-Collar	28.3%	26.3%
All Occupations	100.0%	100.0%

*Note: The geographic definition of Southern Oregon is expanded to include Lake County due to data limitations.

Source: U.S. Census Bureau and Oregon Employment Department.

While the Southern Oregon region over supplies management and professional workers, local employers have a greater demand for farming/fishing/forestry and blue-collar jobs; this often forces area employers to import workers from outside the region to fill these positions. This significant demand has led to the region's over representation in these occupations.

COMPETITIVE POSITION

How do demographic labor force, jobs balance and occupation characteristics affect a community's economic market potentials? The answer is that the worker profile does influence local and regional competitiveness for business. However, other factors – ranging from labor productivity to export orientation of local business – also come into play.

Economic development opportunities that may be available for Medford will result in part from the area's overall competitiveness in attracting industries relative to other regions nationwide. This evaluation examines the region's current competitiveness as well as how it has changed since 1990 across a broader number of important economic factors. The analysis first examines Jackson County, as the most comprehensive detailed data available is at the county level and Jackson County accounts for nearly one-half of all economic activity in Southern Oregon. The study then examines Medford's competitiveness.

Regional Competitive Methodology. This assessment identifies the industries for which Jackson County has a *competitive advantage* with the greatest potential for success in attracting (or retaining) added business investment and employment. The end result of this analysis may be a determination of the industries that will most likely prosper and be best suited for the region with particular application to Medford.

Information provided in this section comes from Minnesota IMPLAN Group's proprietary IMPLAN database and model.[4] Information for 2000 is the most recent available, and is used to analyze current conditions. In some cases, 1990 data is also incorporated to identify the underlying structural changes and economic trends occurring since 1990.

A key measuring tool – or benchmark – used to analyze a local industry cluster's performance as compared to the nation is termed a *location quotient* (LQ). The LQ measures how competitive

firms in Jackson County are to other firms operating in the same industry nationally. The LQ is computed as a ratio between the county and the nation.

An LQ of more than 1.00 indicates that the county out performs the nation. For industries where the LQ is less than 1.00, the county underperforms the U.S. For example, if the output per worker for the lumber & wood products industry is $148,600 in Jackson County and $126,700 nationwide, the LQ would be 1.17 (or $148,600÷$126,700). An LQ below 1.00 means the industry could be at a competitive disadvantage and an LQ above 1.00 means the industry could have a competitive advantage.

Jackson County Employment Concentration. As of 2000, Jackson County contained over 104,800 jobs. Nearly one-third of all jobs are service-related, with retail providing another 21% and manufacturing 10%. The job base has increased by 43% since 1990.

While the manufacturing base has been expanding in Jackson County, national manufacturing jobs have declined. Between 1990 and 2000, the County's manufacturing employment increased by 10% versus a -3% figure nationwide.

Figure 17. Concentration of Jackson County's Employment Base

	Jackson County		Average Wage		United States		Location Quotient	
	2000	% Chg.		% Chg.	2000	% Chg.		Chg.
Employment Sector	Jobs	1990-00	2000	1990-00	Jobs	1990-00	2000	1990-00
Agriculture	4,832	+1.8%	$15,500	- 26.7%	4,922,796	+16.0%	1.58	- 0.51
Mining	271	+207.8%	$37,700	+6.3%	753,302	- 14.2%	0.58	+0.39
Construction	7,495	+50.8%	$37,800	+24.4%	11,372,084	+23.0%	1.06	+0.06
Manufacturing	10,536	+9.6%	$40,500	- 3.3%	19,059,229	- 3.2%	0.89	- 0.02
20 Food products	468	+22.1%	$32,000	- 13.2%	1,729,830	+2.9%	0.43	+0.01
21 Tobacco	0	+0.0%	$0	+0.0%	35,700	- 30.7%	0.00	+0.00
22 Textile mill products	0	+0.0%	$0	+0.0%	541,985	- 23.1%	0.00	+0.00
23 Apparel & textiles	69	- 2.4%	$16,500	- 0.6%	686,854	- 36.8%	0.16	+0.04
24 Lumber & wood	4,814	- 17.3%	$42,900	- 5.3%	928,933	+9.1%	8.33	- 4.45
25 Furniture & fixtures	236	+85.7%	$32,400	+13.4%	594,525	+12.7%	0.64	+0.19
26 Paper products	0	- 100.0%	$0	+0.0%	657,947	- 5.6%	0.00	- 0.31
27 Printing & publishing	953	+16.8%	$31,200	- 6.3%	1,655,504	- 3.6%	0.93	+0.04
28 Chemical products	142	- 46.4%	$53,800	+11.1%	1,046,136	- 3.9%	0.22	- 0.24
29 Petroleum products	0	- 100.0%	$0	+0.0%	122,496	- 18.5%	0.00	- 0.76
30 Rubber & plastics	85	+88.9%	$28,000	- 23.6%	1,016,983	+13.8%	0.13	+0.04
31 Leather products	2	+0.0%	$8,400	+0.0%	73,400	- 47.3%	0.04	+0.04
32 Stone, glass & concrete	545	+73.6%	$40,300	+62.4%	604,773	- 3.3%	1.45	+0.51
33 Primary metals	1	+0.0%	$20,800	+0.0%	702,399	- 6.5%	0.00	+0.00
34 Fabricated metal prod.	472	+33.3%	$31,000	- 30.2%	1,589,920	+10.6%	0.48	+0.02
35 Industrial machinery	343	+53.9%	$38,600	- 5.3%	2,138,467	- 0.1%	0.26	+0.06
36 Electronic equipment	894	+79.6%	$32,400	- 0.7%	1,740,235	+2.8%	0.83	+0.28
37 Transport. equipment	264	+5.2%	$41,800	+16.4%	1,861,751	- 7.2%	0.23	- 0.01
38 Instruments	911	+1301.5%	$66,500	+81.5%	843,064	- 16.0%	1.74	+1.62
39 Misc. manufacturing	336	+67.3%	$19,000	- 32.8%	488,327	+9.0%	1.11	+0.27
TCU	4,502	+26.8%	$38,100	- 24.0%	7,683,042	+26.5%	0.94	- 0.15
40 Railroads	42	- 37.6%	$16,800	- 79.7%	205,950	- 25.0%	0.33	- 0.13
41 Transit	297	+26.5%	$17,200	- 27.9%	627,615	+51.9%	0.76	- 0.30
42 Trucking & warehousing	2,133	+24.0%	$37,600	- 21.4%	2,517,711	+25.5%	1.36	- 0.24
44 Water transportation	2	- 50.0%	$18,900	- 70.6%	197,248	+4.8%	0.02	- 0.03
45 Air transportation	313	+86.2%	$37,000	- 1.9%	1,282,109	+77.6%	0.39	- 0.04
46 Pipelines	0	+0.0%	$0	+0.0%	12,570	- 31.6%	0.00	+0.00
47 Transportation services	545	+68.1%	$39,800	- 6.3%	580,913	+35.1%	1.51	+0.10
48 Communication	901	+26.2%	$36,800	- 38.7%	1,566,414	+28.0%	0.92	- 0.16
49 Electric, gas & sanitation	268	- 15.4%	$72,100	+5.7%	692,512	- 13.0%	0.62	- 0.12
Wholesale	2,927	+10.3%	$37,400	- 13.4%	7,575,798	+14.5%	0.62	- 0.13
Retail Trade	22,509	+39.0%	$18,800	- 7.2%	27,315,670	+20.4%	1.32	- 0.01
FIRE	6,469	+48.3%	$29,000	+8.6%	12,430,981	+30.6%	0.84	- 0.02
60 Banking	887	- 13.8%	$35,500	- 4.9%	2,119,158	- 6.7%	0.67	- 0.17
61 Credit Agencies	1,142	+485.8%	$20,100	- 69.7%	2,517,608	+203.5%	0.73	+0.29
62 Security & Commodity	630	+128.2%	$86,000	+5.4%	956,426	+85.4%	1.06	+0.06
63 Insurance Carriers	284	- 31.5%	$39,600	+15.2%	1,585,048	+4.5%	0.29	- 0.22
64 Insurance Agents & Brokers	690	+34.5%	$27,800	- 18.7%	1,404,557	+27.8%	0.79	- 0.08
65 Real Estate	2,836	+46.5%	$17,200	+203.6%	3,848,184	+17.2%	1.18	+0.08
Services	33,389	+82.5%	$25,500	- 19.4%	53,840,937	+42.7%	1.00	+0.09
70 Lodging	1,255	+18.8%	$16,800	- 0.6%	2,107,845	+17.0%	0.96	- 0.14
73 Business Services	4,833	+139.5%	$22,500	- 0.7%	12,259,468	+77.0%	0.63	+0.09
80 Health Care	10,273	+84.5%	$42,300	- 20.6%	11,840,363	+30.7%	1.39	+0.25
81 Legal Services	447	+10.3%	$51,800	- 18.7%	1,601,699	+19.3%	0.45	- 0.12
87 Professional Services	2,768	+248.2%	$21,500	- 31.4%	6,303,247	+42.9%	0.71	+0.37
All Other Services	13,813	+63.5%	$14,800	- 25.4%	19,728,315	+39.1%	1.13	+0.01
Government	11,915	+32.6%	$39,700	+69.8%	23,536,863	+14.8%	0.81	- 0.01
All Industries	104,845	+42.7%	$28,700	- 3.3%	168,490,702	+22.8%		

Note: LQ means Location Quotient. All figures are preliminary and subject to change. IMPLAN estimates Jackson County to have 1,111 more jobs than BEA's estimate. However, estimates are within 1% and therefore are of no major concern.

Source: E.D. Hovee & Company using Minnesota IMPLAN Group's proprietary IMPLAN database.

Relative to the U.S., it appears that Jackson County has a relatively low level of manufacturing activity (with an employment LQ of 0.89). However, this is not true for all manufacturing sectors, as the county has a high activity level (or current competitive advantage) in lumber & wood products; stone, glass, & concrete; instruments; and miscellaneous manufacturing.

The highest level of activity, by far, occurs within the lumber & wood products. However, the level of concentrated activity has decreased significantly since 1990. Jackson County's competitiveness has grown the fastest in instruments. Other manufacturing sectors for which Jackson County has experienced an *increased competitive share* of national employment include furniture/fixtures, industrial machinery, electronic equipment and miscellaneous manufacturing. Related industrial strength has been shown in transportation services.

On the commercial retail and service side, substantial competitive gains have been experienced with credit agencies, real estate, business services, health care and professional services. This growth points to increased diversification and sophistication of the Medford area economy.

The *fastest-growing* industry in Jackson County is instruments, which has gone from 65 jobs in 1990 to 911 in 2000. Other rapidly-growing industries have included credit agencies, professional services, mining, business services, and security & commodity.

While manufacturing employment has not increased as rapidly as the non-manufacturing job base, manufacturing jobs pay an average of $40,500 per year. This is more than 40% above the *average wage* for all employment sectors ($28,700). Specific sectors reporting significantly high average wages include security & commodity ($86,000); electric, gas & sanitation ($72,100); instruments ($66,500); and chemical products ($53,800).

There are a limited set of sectors that *score well* according to all of the following criteria:

- Average wage above the average for all employment sectors
- Wage increases exceeding the average for all sectors
- Industry concentration higher than the U.S. average (i.e. LQ greater than 1.00)
- Increased industry concentration (or LQ) in the 1990s

The four sectors that have met all of these criteria are construction; stone, glass & concrete; instrument manufacturing; and security & commodity services. Six sectors met three of the four criteria, including mining, furniture & fixtures, electronic equipment, transportation services, real estate, and health care.

Jackson County Industry Productivity & Value-Added. Countywide, industrial workers are three-quarters as productive as the rest of the nation (measured as value of output produced per worker). In 2000, the average worker in Jackson County produced output valued at $76,300, 25% below comparable national rates.

Figure 18. Average Productivity by Sector for Jackson County (versus U.S.)

Employment Sector	2000 Output/ Worker	Location Quotient 2000	Location Quotient Chg. 1990-00	% of Output Value-Added 2000 JC	% of Output Value-Added 2000 US	% of Output Value-Added Chg. 1990-00 JC	% of Output Value-Added Chg. 1990-00 US
Agriculture	$33,100	0.58	+0.04	69.9%	41.7%	+19.2%	+7.5%
Mining	$99,900	0.30	+0.09	63.0%	48.6%	- 2.2%	- 20.7%
Construction	$115,300	0.98	+0.13	37.0%	39.1%	+4.2%	+0.8%
Manufacturing	$159,300	0.70	- 0.05	35.0%	35.5%	+0.3%	- 3.9%
20 Food products	$251,300	0.88	- 0.13	23.5%	27.2%	+3.1%	+0.2%
21 Tobacco	$0	0.00	+0.00	0.0%	45.2%	+0.0%	- 15.3%
22 Textile mill products	$0	0.00	+0.00	0.0%	33.2%	+0.0%	+4.0%
23 Apparel & textiles	$76,700	0.66	- 0.29	28.4%	29.3%	- 2.5%	- 11.6%
24 Lumber & wood	$148,600	1.17	- 0.07	40.0%	37.3%	+4.9%	+2.8%
25 Furniture & fixtures	$102,700	0.83	+0.14	37.9%	36.0%	- 10.4%	- 9.2%
26 Paper products	$0	0.00	- 1.36	0.0%	33.2%	- 32.2%	- 3.4%
27 Printing & publishing	$112,000	0.82	- 0.05	36.5%	46.2%	- 6.7%	- 3.6%
28 Chemical products	$269,700	0.65	- 0.01	37.3%	43.0%	+18.7%	+4.6%
29 Petroleum products	$0	0.00	- 0.25	0.0%	14.9%	- 40.3%	- 8.9%
30 Rubber & plastics	$160,300	0.91	+0.07	24.7%	33.3%	- 25.0%	- 19.1%
31 Leather products	$31,500	0.26	+0.00	46.3%	43.7%	+0.0%	+5.9%
32 Stone, glass & concrete	$141,800	0.88	+0.07	39.9%	44.3%	+7.8%	- 2.5%
33 Primary metals	$79,100	0.31	+0.00	31.6%	28.6%	+0.0%	+0.1%
34 Fabricated metal prod.	$115,700	0.72	- 0.02	37.8%	43.3%	- 5.9%	- 0.7%
35 Industrial machinery	$118,200	0.58	- 0.07	36.8%	37.0%	- 9.2%	- 11.7%
36 Electronic equipment	$182,600	0.74	+0.12	24.4%	41.7%	- 17.9%	- 0.2%
37 Transport. equipment	$191,700	0.62	+0.13	31.2%	31.6%	- 19.1%	- 9.0%
38 Instruments	$271,800	1.33	+0.63	30.3%	37.1%	- 14.7%	- 19.6%
39 Misc manufacturing	$69,600	0.61	- 0.29	41.0%	51.4%	+5.6%	+10.1%
TCU	$129,700	0.70	- 0.10	50.4%	55.1%	- 11.6%	- 5.7%
40 Railroads	$102,200	0.51	- 0.52	22.4%	53.5%	- 49.7%	- 14.0%
41 Transit	$36,700	0.80	- 0.05	58.3%	63.0%	- 14.3%	- 4.7%
42 Trucking & warehousing	$113,700	1.03	- 0.06	44.8%	43.8%	- 21.5%	- 18.0%
44 Water transportation	$188,800	0.79	- 0.28	15.0%	30.4%	- 26.9%	- 1.9%
45 Air transportation	$93,300	0.81	+0.06	56.7%	61.3%	+6.6%	+4.9%
46 Pipelines	$0	0.00	+0.00	0.0%	77.6%	+0.0%	+7.2%
47 Transportation services	$62,000	0.84	- 0.07	74.3%	73.5%	+6.3%	+13.2%
48 Communication	$163,800	0.54	- 0.22	44.1%	55.8%	- 24.0%	- 20.1%
49 Electric, gas & sanitation	$428,400	0.85	- 0.13	62.3%	60.6%	+12.0%	+11.5%
Wholesale	$90,100	0.71	- 0.10	68.5%	69.2%	- 10.6%	- 6.2%
Retail Trade	$40,500	0.91	+0.12	73.8%	72.9%	- 1.6%	+1.4%
FIRE	$177,500	0.82	- 0.01	68.1%	69.1%	- 7.9%	- 4.2%
60 Banking	$184,100	0.73	- 0.08	66.2%	66.2%	- 2.3%	- 0.2%
61 Credit Agencies	$37,800	0.71	- 0.96	54.0%	64.0%	+31.8%	+45.3%
62 Security & Commodity	$184,400	0.73	+0.04	40.8%	56.6%	- 35.6%	- 9.5%
63 Insurance Carriers	$119,600	0.72	- 0.12	57.6%	62.2%	+19.6%	+20.1%
64 Insurance Agents & Brokers	$44,500	0.74	+0.04	78.7%	78.7%	- 1.9%	+2.7%
65 Real Estate	$268,300	0.72	+0.02	73.6%	73.4%	- 9.1%	- 8.8%
Services	$53,900	0.86	+0.03	55.0%	63.7%	- 9.6%	+2.1%
70 Lodging	$44,800	0.70	+0.03	58.3%	63.1%	- 9.2%	- 6.4%
73 Business Services	$49,300	0.73	+0.10	55.1%	69.2%	- 25.6%	- 4.5%
80 Health Care	$72,400	1.02	+0.02	65.0%	66.0%	- 4.7%	+7.3%
81 Legal Services	$70,500	0.66	- 0.05	77.9%	77.9%	- 5.9%	+1.0%
87 Professional Services	$42,700	0.53	- 0.15	54.5%	59.6%	- 11.2%	- 3.3%
All Other Services	$44,400	0.96	+0.13	41.3%	56.4%	- 11.1%	+3.6%
Government	$47,500	0.85	+0.28	92.6%	89.4%	+9.2%	- 1.2%
All Industries	$76,300	0.75	+0.02	56.0%	57.1%	- 0.5%	- 0.5%

Note: All figures are preliminary and subject to change.

Source: E.D. Hovee & Company using Minnesota IMPLAN Group's proprietary IMPLAN database and model.

Jackson County sectors exhibiting relatively high rates of productivity compared to the U.S. include lumber & wood, instruments, trucking & warehousing, and health care. Productivity in instruments, relative to the nation, has increased dramatically in recent years.

As compared to the nation, Jackson County businesses (taken together) produce a level of value-added output slightly below the nation. Out of the 46 employment sectors identified, only 12 out-performed the U.S. Over the last decade, Jackson County's level of value-added output has remained the same relative to the nation.

Jackson County Export Orientation, Procurement & Multipliers. To be deemed *export-oriented,* it is often determined that an industry should export at least 50% of its output to purchasers outside the region. Only 15 of Jackson County's employment sectors export at least 50% of their output to communities outside the County.

Taken together, Jackson County businesses only export 33% of their output, with 15 sectors showing very low proportions (less than 20%) of their output being sold or delivered outside the county. The main reason the group as a whole does not meet the 50% benchmark is that Jackson County employers are mostly locally focused, as Jackson County accounts for nearly 50% of Southern Oregon's residential and economic activity.

Industries exporting more than 90% of their output outside Jackson County include mining; rubber & plastics; stone, glass & concrete; primary metals; transportation equipment; and fabricated metal products. Another nine industries showing a relatively high amount of export orientation include agriculture, food products, chemical products, industrial machinery, miscellaneous manufacturing, air transportation, transportation services, and insurance.

Industries making significant *local purchases* are: construction; lumber & wood; trucking & warehousing; electric, gas & sanitation; retail trade; lodging; health care; "all other services"; and government.

One-third of all industrial sectors have a *jobs multiplier* greater than 2.0; in other words, supporting more than one job elsewhere in the Jackson County economy for every worker they directly employ. In fact, two sectors support two or more indirect and induced jobs for every direct job. These sectors include food products and instrument manufacturing.

Figure 19. Export Orientation, Local Procurement, and Economic Impact by Sector

Employment Sector	Output Exported 2000	Chg. 1990-00	2000 Local Procure.	Economic Multipliers (2000) Output	Income	Jobs
Agriculture	69.5%	+25.3%	53.8%	1.56	1.45	1.33
Mining	90.5%	+89.3%	4.1%	1.46	1.44	1.62
Construction	16.9%	+10.9%	100.0%	1.68	1.76	2.13
Manufacturing	65.8%	+16.5%	53.6%	1.66	1.90	2.32
20 Food products	86.4%	+81.0%	6.1%	1.61	2.85	4.27
21 Tobacco	0.0%	+0.0%	0.0%	0.00	0.00	0.00
22 Textile mill products	0.0%	+0.0%	0.0%	0.00	0.00	0.00
23 Apparel & textiles	11.2%	+7.8%	6.4%	1.48	1.82	1.52
24 Lumber & wood	73.6%	+8.5%	82.7%	1.77	1.92	2.32
25 Furniture & fixtures	2.5%	+0.4%	63.9%	1.61	1.70	1.81
26 Paper products	0.0%	- 49.1%	0.0%	0.00	0.00	0.00
27 Printing & publishing	47.6%	+45.2%	36.5%	1.54	1.71	1.83
28 Chemical products	76.5%	- 26.6%	7.5%	1.42	1.78	2.54
29 Petroleum products	0.0%	- 1.3%	0.0%	0.00	0.00	0.00
30 Rubber & plastics	100.0%	+99.9%	0.7%	1.47	1.97	1.98
31 Leather products	25.8%	+0.0%	0.9%	1.35	1.49	1.15
32 Stone, glass & concrete	92.4%	+88.4%	7.8%	1.56	1.71	2.02
33 Primary metals	100.0%	+0.0%	1.0%	1.47	1.65	1.49
34 Fabricated metal prod.	95.0%	+78.2%	3.5%	1.44	1.60	1.69
35 Industrial machinery	62.4%	+27.6%	19.7%	1.53	1.58	1.81
36 Electronic equipment	25.6%	- 17.6%	47.1%	1.63	2.11	2.28
37 Transport. equipment	98.8%	+88.5%	1.9%	1.42	1.67	2.02
38 Instruments	48.1%	+12.1%	59.8%	1.64	1.88	3.15
39 Misc manufacturing	85.6%	+69.4%	8.5%	1.47	1.64	1.46
TCU	23.7%	- 9.0%	76.4%	1.66	1.80	2.11
40 Railroads	17.4%	- 0.7%	27.3%	1.64	2.40	1.85
41 Transit	0.2%	- 5.7%	73.8%	1.58	1.46	1.31
42 Trucking & warehousing	32.0%	- 12.6%	98.5%	1.83	1.92	2.21
44 Water transportation	37.7%	+22.1%	15.1%	1.56	3.33	2.68
45 Air transportation	62.3%	+22.6%	27.4%	1.50	1.51	1.70
46 Pipelines	0.0%	+0.0%	0.0%	0.00	0.00	0.00
47 Transportation services	52.0%	- 7.3%	66.1%	1.66	1.39	1.61
48 Communication	15.9%	- 34.0%	53.2%	1.68	1.97	2.45
49 Electric, gas & sanitation	0.4%	+0.3%	77.6%	1.32	1.68	2.68
Wholesale	8.5%	- 6.0%	55.7%	1.54	1.49	1.72
Retail Trade	28.1%	+4.4%	92.8%	1.52	1.40	1.30
FIRE	23.9%	+0.3%	65.3%	1.44	2.01	2.04
60 Banking	4.7%	- 22.2%	57.1%	1.47	1.96	2.15
61 Credit Agencies	4.0%	- 22.6%	69.3%	1.84	1.64	1.42
62 Security & Commodity	40.0%	+0.2%	59.7%	1.93	1.79	2.96
63 Insurance Carriers	1.0%	+0.3%	23.3%	1.61	1.84	2.25
64 Insurance Agents & Brokers	78.4%	+17.5%	57.4%	1.61	1.37	1.41
65 Real Estate	25.5%	+3.8%	69.9%	1.33	2.73	2.17
Services	27.7%	+5.4%	80.8%	1.70	1.54	1.54
70 Lodging	3.2%	- 26.3%	79.3%	1.65	1.64	1.41
73 Business Services	0.9%	+0.3%	66.4%	1.69	1.56	1.50
80 Health Care	36.8%	+13.0%	91.3%	1.67	1.42	1.69
81 Legal Services	1.9%	+1.3%	34.6%	1.69	1.35	1.74
87 Professional Services	1.8%	- 1.7%	50.6%	1.76	1.58	1.51
All Other Services	35.7%	+7.1%	82.0%	1.75	1.77	1.46
Government	7.1%	- 25.1%	95.2%	1.60	1.26	1.42
All Industries	32.7%	+1.9%	75.4%	1.61	1.59	1.65

Note: All figures are preliminary and subject to change.

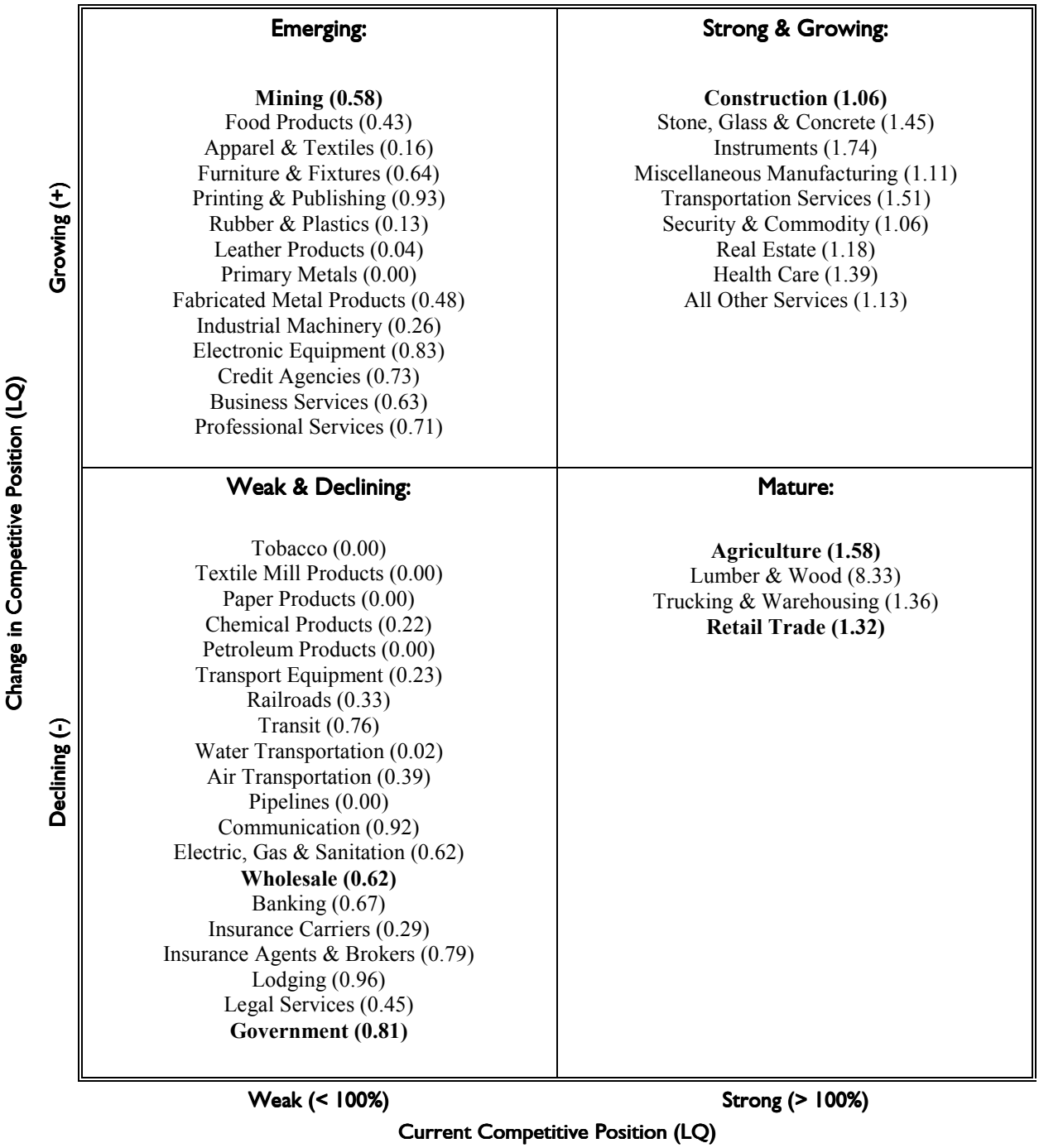
Source: E.D. Hovee & Company using Minnesota IMPLAN Group's proprietary IMPLAN database and model.

Competitive Advantage Framework. How does one pull all this economic data together to make a meaningful assessment of most likely targets for future economic development and diversification of the Medford area economy? One approach is through a *competitive advantage* framework that considers both the current and changing competitive position of Medford and Jackson County's business sectors.

The framework for evaluating potential competitive advantages is predicated on the assessment of the *current and changing competitive position* of various industry clusters in the county as compared to the nation. As indicated by the chart which follows, four distinctive *quadrants* of competitiveness can be identified:

- *Strong and growing* sectors represent industries that have an existing competitive presence in the study area, exceeding the national average. For these sectors, the study area's competitive position not only is above average, but has increased in recent years (from 1990-2000).
- In contrast, *weak and declining* industries are those that currently have below average representation; the study area's competitive position for these sectors diminished even further between 1990 and 2000.
- A *mature* industry is one that currently maintains a strong and competitive position, but whose competitive position has decreased since 1990.
- Finally, *emerging* sectors are those that historically have maintained a below average competitive position but have achieved gains in competitive share since 1990.

Figure 20. Jackson County's Competitive Advantage



Note: **Boldface** print items represent sectors with above average productivity. Percentages in parentheses indicate employment location quotient (LQ) or competitive position relative to the nation.

Source: E.D. Hovee & Company, using IMPLAN input-output data sets, January 2003.

In reviewing the matrix classifications, the natural inclination might be to assume only "strong and growing" industries represent best industrial development opportunities. However, a more diversified *portfolio* approach should be considered. This would involve tailoring strategic decisions around:

- Limited effort – in terms of general marketing and response to inquiries – for *weak and declining* sectors.
- Repositioning of the *mature* sectors – with emphasis on innovation, value-added diversification, improved work force skills and environmental stewardship.
- Targeted business recruitment, workforce training and infrastructure investment – for selected *emerging* industries.
- Strategic business development and infrastructure support – targeted to specific industry-driven needs of *strong and growing* sectors.

Competitive Cluster Criteria. To identify the industries that the region has the greatest advantage in competing for versus other areas around the U.S., a series of screening criteria have been applied to the industry sectors identified. Five sets of screening criteria have been developed:

1. Current and changing *competitive position* of the industry – relative to the nation (as illustrated by the previous target industry matrix). The recommended target should *either* have a strong competitive position currently or demonstrate improvement in its competitive standing in recent years (since 1990).

2. *Worker productivity* and change in productivity – as quantifiable indicators of workforce suitability. To be recommended as a target industry, existing local firms should *either* demonstrate high productivity comparable to other firms nationally *or* a rate of productivity increase more rapid than has been experienced by this industry sector nationwide.

3. *Percent of Output Value-Added* – with more than 50% indicating a majority of an industry's output value being created within the local economy.

4. *Employment multiplier and/or forecast employment growth* – with the multiplier indicating the *ripple effect* that the sector provides as a stimulus to other supporting employment activity in the community. To be recommended as a target industry, the sector should demonstrate a relatively high employment multiplier.

5. *Wage levels* including changes over time – relative to other industries in the local area. A target threshold of preference is given for jobs *either* paying at least the local average annual wage of $28,700 *or* with positive wage growth from 1990-2000.

In the matrix chart that follows, industries are assigned a 1 for each criterion they meet. A zero is assigned for every criterion not met.

Figure 21. Screening Competitive Advantage Industries for Jackson County

Employment Sector	Employment LQ 2000	Employment LQ 1990-00	Productivity LQ 2000	Productivity LQ 1990-00	% Value-Added	Jobs Mult.	Average Wage 2000	Average Wage 1990-00	LQ Emp.	LQ Prod.	% Value-Added	Jobs Mult.	Avg. Wage	Total
Agriculture	1.58	- 0.51	0.58	+0.04	69.9%	1.33	$15,500	- 26.7%	1	1	1	0	0	3
Mining	0.58	+0.39	0.30	+0.09	63.0%	1.62	$37,700	+6.3%	1	1	1	0	1	4
Construction	1.06	+0.06	0.98	+0.13	37.0%	2.13	$37,800	+24.4%	1	1	0	1	1	4
Manufacturing	0.89	- 0.02	0.70	- 0.05	35.0%	2.32	$40,500	- 3.3%	0	0	0	1	1	2
20 Food products	0.43	+0.01	0.88	- 0.13	23.5%	4.27	$32,000	- 13.2%	1	0	0	1	1	3
21 Tobacco	0.00	+0.00	0.00	+0.00	0.0%	0.00	$0	+0.0%	0	0	0	0	0	0
22 Textile mill products	0.00	+0.00	0.00	+0.00	0.0%	0.00	$0	+0.0%	0	0	0	0	0	0
23 Apparel & textiles	0.16	+0.04	0.66	- 0.29	28.4%	1.52	$16,500	- 0.6%	1	0	0	0	0	1
24 **Lumber & wood**	8.33	- 4.45	1.17	- 0.07	40.0%	2.32	$42,900	- 5.3%	1	1	0	1	1	4
25 Furniture & fixtures	0.64	+0.19	0.83	+0.14	37.9%	1.81	$32,400	+13.4%	1	1	0	0	1	3
26 Paper products	0.00	- 0.31	0.00	- 1.36	0.0%	0.00	$0	+0.0%	0	0	0	0	0	0
27 Printing & publishing	0.93	+0.04	0.82	- 0.05	36.5%	1.83	$31,200	- 6.3%	1	0	0	0	1	2
28 Chemical products	0.22	- 0.24	0.65	- 0.01	37.3%	2.54	$53,800	+11.1%	0	0	0	1	1	2
29 Petroleum products	0.00	- 0.76	0.00	- 0.25	0.0%	0.00	$0	+0.0%	0	0	0	0	0	0
30 Rubber & plastics	0.13	+0.04	0.91	+0.07	24.7%	1.98	$28,000	- 23.6%	1	1	0	0	0	2
31 Leather products	0.04	+0.04	0.26	+0.00	46.3%	1.15	$8,400	+0.0%	1	0	0	0	0	1
32 **Stone, glass & concrete**	1.45	+0.51	0.88	+0.07	39.9%	2.02	$40,300	+62.4%	1	1	0	1	1	4
33 Primary metals	0.00	+0.00	0.31	+0.00	31.6%	1.49	$20,800	+0.0%	1	0	0	0	0	1
34 Fabricated metal prod.	0.48	+0.02	0.72	- 0.02	37.8%	1.69	$31,000	- 30.2%	1	0	0	0	1	2
35 Industrial machinery	0.26	+0.06	0.58	- 0.07	36.8%	1.81	$38,600	- 5.3%	1	0	0	0	1	2
36 **Electronic equipment**	0.83	+0.28	0.74	+0.12	24.4%	2.28	$32,400	- 0.7%	1	1	0	1	1	4
37 Transport. equipment	0.23	- 0.01	0.62	+0.13	31.2%	2.02	$41,800	+16.4%	0	1	0	1	1	3
38 **Instruments**	1.74	+1.62	1.33	+0.63	30.3%	3.15	$66,500	+81.5%	1	1	0	1	1	4
39 Misc manufacturing	1.11	+0.27	0.61	- 0.29	41.0%	1.46	$19,000	- 32.8%	1	0	0	0	0	1
TCU	0.94	- 0.15	0.70	- 0.10	50.4%	2.11	$38,100	- 24.0%	0	0	1	1	1	3
40 Railroads	0.33	- 0.13	0.51	- 0.52	22.4%	1.85	$16,800	- 79.7%	0	0	0	0	0	0
41 Transit	0.76	- 0.30	0.80	- 0.05	58.3%	1.31	$17,200	- 27.9%	0	0	1	0	0	1
42 **Trucking & warehousing**	1.36	- 0.24	1.03	- 0.06	44.8%	2.21	$37,600	- 21.4%	1	1	0	1	1	4
44 Water transportation	0.02	- 0.03	0.79	- 0.28	15.0%	2.68	$18,900	- 70.6%	0	0	0	1	0	1
45 Air transportation	0.39	- 0.04	0.81	+0.06	56.7%	1.70	$37,000	- 1.9%	0	1	1	0	1	3
46 Pipelines	0.00	+0.00	0.00	+0.00	0.0%	0.00	$0	+0.0%	0	0	0	0	0	0
47 Transportation services	1.51	+0.10	0.84	- 0.07	74.3%	1.61	$39,800	- 6.3%	1	0	1	0	1	3

Employment Sector	Employment LQ 2000	Employment LQ 1990-00	Productivity LQ 2000	Productivity LQ 1990-00	% Value-Added	Jobs Mult.	Average Wage 2000	Average Wage 1990-00	LQ Emp.	LQ Prod.	% Value-Added	Jobs Mult.	Avg. Wage	Total
48 Communication	0.92	- 0.16	0.54	- 0.22	44.1%	2.45	$36,800	- 38.7%	0	0	0	1	1	2
49 Electric, gas & sanitation	0.62	- 0.12	0.85	- 0.13	62.3%	2.68	$72,100	+5.7%	0	0	1	1	1	3
Wholesale	0.62	- 0.13	0.71	- 0.10	68.5%	1.72	$37,400	- 13.4%	0	0	1	0	1	2
Retail Trade	1.32	- 0.01	0.91	+0.12	73.8%	1.30	$18,800	- 7.2%	1	1	1	0	0	3
FIRE	0.84	- 0.02	0.82	- 0.01	68.1%	2.04	$29,000	+8.6%	0	0	1	1	1	3
60 Banking	0.67	- 0.17	0.73	- 0.08	66.2%	2.15	$35,500	- 4.9%	0	0	1	1	1	3
61 Credit Agencies	0.73	+0.29	0.71	- 0.96	54.0%	1.42	$20,100	- 69.7%	1	0	1	0	0	2
62 **Security & Commodity**	1.06	+0.06	0.73	+0.04	40.8%	2.96	$86,000	+5.4%	1	1	0	1	1	4
63 Insurance Carriers	0.29	- 0.22	0.72	- 0.12	57.6%	2.25	$39,600	+15.2%	0	0	1	1	1	3
64 Insurance Agents & Brokers	0.79	- 0.08	0.74	+0.04	78.7%	1.41	$27,800	- 18.7%	0	1	1	0	0	2
65 **Real Estate**	1.18	+0.08	0.72	+0.02	73.6%	2.17	$17,200	+203.6%	1	1	1	1	1	5
Services	1.00	+0.09	0.86	+0.03	55.0%	1.54	$25,500	- 19.4%	1	1	1	0	0	3
70 Lodging	0.96	- 0.14	0.70	+0.03	58.3%	1.41	$16,800	- 0.6%	0	1	1	0	0	2
73 Business Services	0.63	+0.09	0.73	+0.10	55.1%	1.50	$22,500	- 0.7%	1	1	1	0	0	3
80 **Health Care**	1.39	+0.25	1.02	+0.02	65.0%	1.69	$42,300	- 20.6%	1	1	1	0	1	4
81 Legal Services	0.45	- 0.12	0.66	- 0.05	77.9%	1.74	$51,800	- 18.7%	0	0	1	0	1	2
87 Professional Services	0.71	+0.37	0.53	- 0.15	54.5%	1.51	$21,500	- 31.4%	1	0	1	0	0	2
All Other Services	1.13	+0.01	0.96	+0.13	41.3%	1.46	$14,800	- 25.4%	1	1	0	0	0	2
Government	0.81	- 0.01	0.85	+0.28	92.6%	1.42	$39,700	+69.8%	0	1	1	0	1	3
All Industries	1.00	+0.00	0.75	+0.02	56.0%	1.65	$28,700	- 3.3%						

Note: LQ denotes location quotient or competitive position relative to the entire nation. An LQ of over 100% exceeds the national average. Items which meet threshold criteria are noted with **boldface** type. In the five columns at the far right, 1 indicates the criterion is met. Otherwise 0 is shown. The last column indicates the number of threshold criteria met. Sectors meeting four or five of the threshold criteria are indicated in **boldface**.

Source: E.D. Hovee & Company using IMPLAN, Oregon Employment Department, and U.S. Bureau of Labor Statistics data sets.

Only the real estate sector meets all five criteria. However, another nine industries meet four of the five criteria. Taken together, one-fifth of the industrial sectors portray Jackson County as being strongly competitive. Industries meeting *four or more* criteria include:

Mining	Instruments
Construction	Trucking & Warehousing
Lumber & Wood	Security & Commodity
Stone, Glass & Concrete	Real Estate
Electronic Equipment	Health Care

Medford's Competitive Position. The analysis level can be focused even more tightly from Jackson County to Medford specifically. Firms located within Medford's UGA currently employ almost 37,900 workers. Services is the largest sector providing 12,980 jobs, with health care workers accounting for 40% of all service-related jobs. The retail sector contributes another 11,140 jobs and government adds another 3,430.

The manufacturing sector has less than 2,800 employees, but has grown by 12.5% since 1995. This job growth has occurred at a time when manufacturing jobs both countywide and nationally were in decline (-7.2% and -0.6% respectively).

Between 1995 and 2000, Medford's job base expanded by 15% (or 990 jobs per year). Three individual sectors more than doubled their workforce. Instrument-related employment grew the fastest at 306%, followed by transit (264%) and air transportation (163%).

Due to the fact that Medford is the region's commercial hub, Medford has a competitive advantage in an alternative set of employment sectors. Only three of the ten sectors for which Jackson County has a strong competitive position are also highly competitive for Medford (i.e. lumber & wood, instruments, and health care). In terms of national competitiveness, Medford also appears to have a strong position in printing & publishing; transit; transportation services; communication; electric, gas & sanitation; retail trade; and banking. Medford's strong position in transit, communication, electric/gas/sanitation, retail, and banking is a result of its role in servicing a larger regional population base.

Medford has a strong competitive position in eight additional sectors internal to the Southern Oregon economy (or relative to the rest of Jackson County). The eight sectors include food products, transportation equipment, air transportation, wholesale trade, insurance carriers, insurance agents/brokers, business services, and legal services. While not as competitive to other regions across the U.S., Medford should be in a strong position to capitalize on any opportunities that could arise within these sectors countywide.

Figure 22. Medford Employment Trends & Competitive Advantage Industries

	Medford UGA		Medford-JC		Medford-US	
	2000	% Chg.	LQ	Chg.	LQ	Chg.
Employment Sector	Jobs	1995-00	2000	1995-00	2000	1995-00
Agriculture	1,016	+33.5%	0.58	+0.11	0.92	+0.15
Mining	D	D	D	D	D	D
Construction	1,306	+38.9%	0.48	+0.05	0.51	+0.05
Manufacturing	2,782	+12.5%	0.73	+0.11	0.65	+0.06
20 Food products	200	-15.6%	1.18	+0.03	0.51	-0.12
21 Tobacco	0	+0.0%	0.00	+0.00	0.00	+0.00
22 Textile mill products	D	D	D	D	D	D
23 Apparel & textiles	D	D	D	D	D	D
24 Lumber & wood	836	-2.6%	0.48	+0.08	4.00	-0.38
25 Furniture & fixtures	81	+58.8%	0.95	+0.06	0.61	+0.19
26 Paper products	0	+0.0%	0.00	+0.00	0.00	+0.00
27 Printing & publishing	604	-11.2%	1.75	+0.13	1.62	-0.19
28 Chemical products	D	D	D	D	D	D
29 Petroleum products	0	+0.0%	0.00	+0.00	0.00	+0.00
30 Rubber & plastics	D	D	D	D	D	D
31 Leather products	0	+0.0%	0.00	+0.00	0.00	+0.00
32 Stone, glass & concrete	53	+26.2%	0.27	-0.13	0.39	+0.06
33 Primary metals	0	+0.0%	0.00	+0.00	0.00	+0.00
34 Fabricated metal prod.	84	+50.0%	0.49	+0.17	0.23	+0.06
35 Industrial machinery	109	-6.8%	0.88	-0.10	0.23	-0.03
36 Electronic equipment	144	+25.2%	0.45	+0.01	0.37	+0.05
37 Transport. equipment	151	+22.8%	1.58	-0.09	0.36	+0.05
38 Instruments	451	+306.3%	1.37	-0.31	2.38	+1.78
39 Misc manufacturing	37	-7.5%	0.30	-2.38	0.34	-0.04
TCU	1,945	+32.0%	1.20	+0.03	1.13	+0.11
40 Railroads	0	+0.0%	0.00	+0.00	0.00	+0.00
41 Transit	240	+263.6%	2.23	+1.49	1.70	+1.11
42 Trucking & warehousing	356	-15.4%	0.46	-0.26	0.63	-0.18
44 Water transportation	0	+0.0%	0.00	+0.00	0.00	+0.00
45 Air transportation	155	+162.7%	1.37	+0.34	0.54	+0.19
46 Pipelines	0	+0.0%	0.00	+0.00	0.00	+0.00
47 Transportation services	265	+48.9%	1.35	-0.21	2.03	+0.53
48 Communication	761	+55.0%	2.34	+0.63	2.16	+0.35
49 Electric, gas & sanitation	168	-35.1%	1.73	-0.47	1.08	-0.50
Wholesale	1,631	-9.7%	1.54	+0.37	0.96	-0.22
Retail Trade	11,143	+12.5%	1.37	-0.03	1.81	+0.03
FIRE	1,661	+18.0%	0.71	-0.08	0.59	-0.03
60 Banking	492	+17.7%	1.53	+0.34	1.03	+0.10
61 Credit Agencies	187	+24.7%	0.45	-0.16	0.33	-0.10
62 Security & Commodity	129	-22.8%	0.57	-0.70	0.60	-0.53
63 Insurance Carriers	198	+57.1%	1.93	+0.96	0.56	+0.17
64 Insurance Agents & Brokers	250	+28.9%	1.00	+0.31	0.79	+0.17
65 Real Estate	405	+14.7%	0.40	-0.16	0.47	-0.04
Services	12,979	+17.8%	1.08	-0.12	1.07	-0.07
70 Lodging	400	-20.6%	0.88	-0.13	0.84	-0.38
73 Business Services	2,577	+37.1%	1.48	+0.38	0.93	+0.00
80 Health Care	5,224	+10.3%	1.41	-0.41	1.96	-0.01
81 Legal Services	256	+8.9%	1.58	+0.31	0.71	-0.04
87 Professional Services	502	+37.5%	0.50	+0.00	0.35	+0.04
All Other Services	4,020	+21.8%	0.81	-0.14	0.91	-0.07
Government	3,430	+8.3%	0.80	+0.05	0.65	+0.02
All Industries	37,893	+15.0%				

Note: D indicates industries that could not be disclosed due to the sector having fewer than 3 employers.

Source: E.D. Hovee & Company using data provided by Oregon Employment Department.

Based on this analysis, Medford's employment opportunities can be divided into three tiers.

- Sectors within Tier 1 represent industries for which Medford is in the best position to realize opportunities due to its current and growing competitive advantage relative to other areas nationwide.
- Tier 2 industries represent employment sectors that Medford has a current but eroding competitive position or sectors for which Jackson County may be competitive but represent more of a challenge to Medford.
- Tier 3 comprises sectors for which Medford is competitive relative to Jackson County but not outside the Southern Oregon region.

Figure 23. Medford Target Industry Opportunities by Tier

Tier 1 – Best Position	Tier 2 – Strong but Challenging	Tier 3 – Locally Competitive
Instruments	Mining	Food Products
Transit	Construction	Transportation Equipment
Transportation Services	Lumber & Wood	Air Transportation
Communications	Printing & Publishing	Wholesale Trade
Retail Trade	Stone, Glass & Concrete	Insurance Carriers
Banking	Electronic Equipment	Insurance Agents & Brokers
	Trucking & Warehousing	Business Services
	Electric, Gas & Sanitation	Legal Services
	Security & Commodity	
	Real Estate	
	Health Care	

Source: E.D. Hovee & Company.

Of the Tier 1 sectors, instruments and transportation services represent the primary industrial opportunities – with other opportunities of communications, retail trade and banking most likely to occur with commercial development.

The range of industrial opportunity is substantially broader at the Tier 2 and 3 levels. However, these represent sectors for which more local effort and initiative may be required to market and attract the opportunities available. Both Tier 2 and 3 industries will be particularly affected by policies and strategies Medford employs to maintain a competitive industrial and commercial land base.

III. EMPLOYMENT LAND CHARACTERISTICS

To this point the *Medford Economic Market Analysis* has addressed broader demographic, economic and competitive questions that could affect future business and job prospects. This analysis now turns to a more focused assessment of industrial and commercial lands. This review of *employment land characteristics* covers an assessment of the existing land inventory versus projected future needs.

BACKGROUND

An industrial and commercial land inventory analysis was completed utilizing the City of Medford's GIS files, Oregon Employment Department employment data, commercial and industrial building trends from the Medford Planning Department, and office development data from private consultant Bruce Ostley – for analysis being conducted on behalf of the Medford Urban Renewal Agency (MURA). Results of this analysis inform local policy makers how employment lands are being utilized and the market forces that will influence future development. Specific information examined includes the rate at which land is developing, job densities, type of jobs locating on employment lands, and the amount and location of remaining vacant commercial and industrial land.

The City of Medford Planning Department completed an industrial land analysis in August 2001. The report provided similar results to the evaluation contained in this section and corroborates many of the findings contained herein.[5]

METHODOLOGY

Updated GIS files have been obtained from the City of Medford's Planning Department. Shape files covered:

- City Limits
- Urban Growth Boundary (UGB)
- General Land Use Plan (GLUP) Designations
- Roads/Streets
- Zoning
- Tax Lots (entire UGB)
- Environmental Constraints

The tax lot file has been further augmented to include zoning, GLUP (or Comp Plan) designations, vacant/developed status, and site size classifications by property record. Properties are classified by zoning district and GLUP designation according to the center of the property. For example, if the center of a parcel falls within a light industrial zone, it is classified light industrial as the majority of the property lies within that designation. In effect, this method makes no attempt to split or allocated properties that fall within multiple designations.

Private properties are designated vacant through a two step process. The first step classifies a property vacant if its improvement value is zero. The list is further refined by reviewing the

assessor's property description. Properties are classified developed if they are not designated as vacant, publicly owned, exempt, unbuildable, a transportation facility, or with property value.

Each property is then assigned one of seven site size classifications:

- < 0.5 acres – sites less than 0.5 acres
- 0.5-1.0 acres – sites 0.5 to 0.99 acres
- 1.0-2.0 acres – sites 1.0 to 1.99 acres
- 2.0-5.0 acres – sites 2.0 to 4.99 acres
- 5.0-10.0 acres – sites 5.0 to 9.99 acres
- 10.0-15.0 acres – sites 10.0 to 14.99 acres
- 15+ acres – sites 15 acres or larger

Building square footage data was obtained from the Medford Planning Department's 1998 Report on Economic Development and subsequent estimates covering years 1998 through 2002, with data specific to office space being developed by private consultant Bruce Ostley.

Employment data was obtained through a confidentiality agreement between the City of Medford, E.D. Hovee & Company and Oregon Employment Department. The database contained monthly average employment estimates by employer and location for years 1995 and 2000. The Medford Planning Department geo-coded the database using an in-house address file. Each employer was then assigned a corresponding GLUP designation and firm size classification:

- 0-19 employees
- 20-49 employees
- 50-99 employees
- 100-149 employees
- 150+ employees

Detailed results are contained in a series of exhibits (tables and maps) attached to the end of this report in Appendix A.

COMP PLAN VS. ZONING

A first step in the industrial/commercial lands analysis involved a review of consistency between Comprehensive Plan (GLUP) designations and current zoning. Of the 3,425 acres designated by the Comp Plan as industrial land within Medford's UGB, 74% is currently zoned industrial – only 21 acres is zoned commercial. Of the remaining 860 acres, 720 acres is located outside the city limits and designated for future industrial use.

Figure 24. Total Acreage by Comp Plan & Zoning Designations

	Comp Plan (GLUP)			
Zoning	Ind'l	Com'l	Other	All Areas
Industrial	2,544.66	57.73	49.63	2,652.02
Commercial	20.77	1,273.84	70.77	1,365,38
Other	859.66	646.72	10,068.22	11,574.60
All Ares	3,425.09	1,978.29	10,188.62	15,592.00

Note: Estimates are preliminary and subject to change.

Source: E.D. Hovee & Company using City of Medford GIS files.

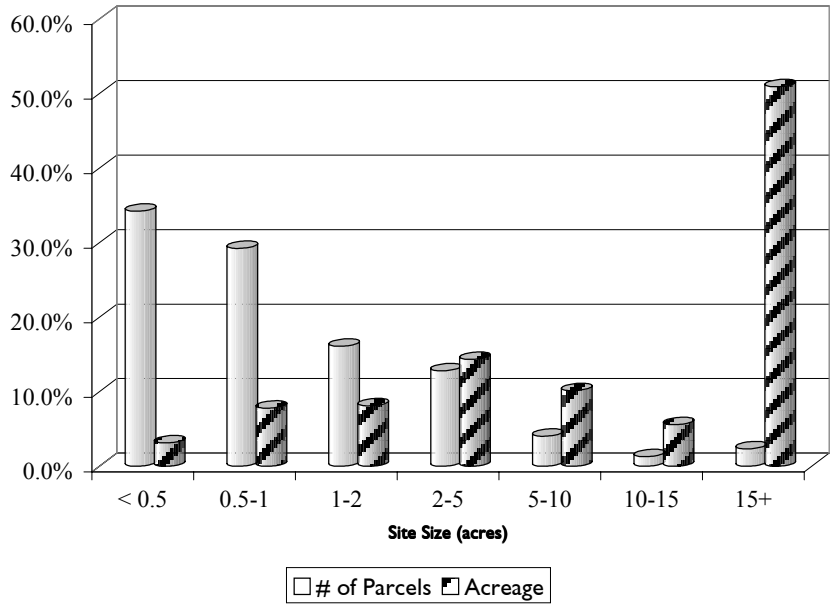
Review of commercial Comp Plan lands also indicates that 64% (or 1,274 acres) are zoned commercial. Less than 60 acres are zoned industrial. Of the 647 acres denoted as "other," 386 acres are located outside the UGB and designated for future commercial use, 186 acres are designated Exclusive Forest Use (EFU), and the remaining 74 acres are zoned residential.

INDUSTRIAL LAND

Characteristics of Medford's industrial land inventory profiled through this analysis include property size, land development, parcel size, absorption, zone changes, employment, and vacant properties

Property Size. While 80% of all industrial properties (according to Comp Plan designation) are under 2.0 acres, they account for less than one-fifth of all industrial acreage. Less than 4% of industrial properties are 10 acres or larger; however, they contain over 56% of Medford's industrial land inventory.

Figure 25. Industrial Comp Plan Properties by Parcel Size

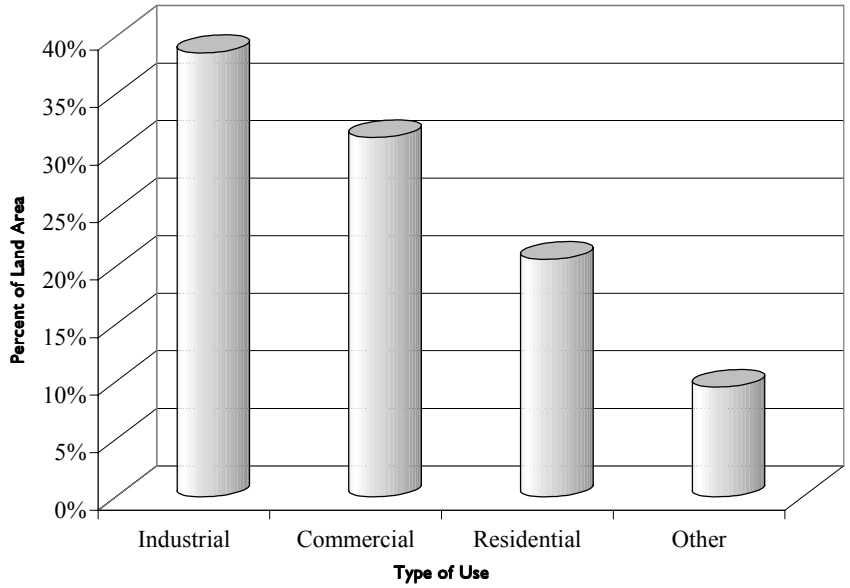


Source: E.D. Hovee & Company using City of Medford GIS files.

Land Development. Nearly 780 industrial parcels are developed in Medford, comprising 1,690 acres. Over half the developed industrial properties are designated General Industrial (GI) under Medford's General Land Use Plan (GLUP); however, these parcels only account for 38% of all developed industrial land.

In fact, only 39% of industrial land is currently being used for industrial purposes. Commercial uses account for 31% of developed industrial land and residential uses account for another 21%.

Figure 26. Developed Industrial Land by Use

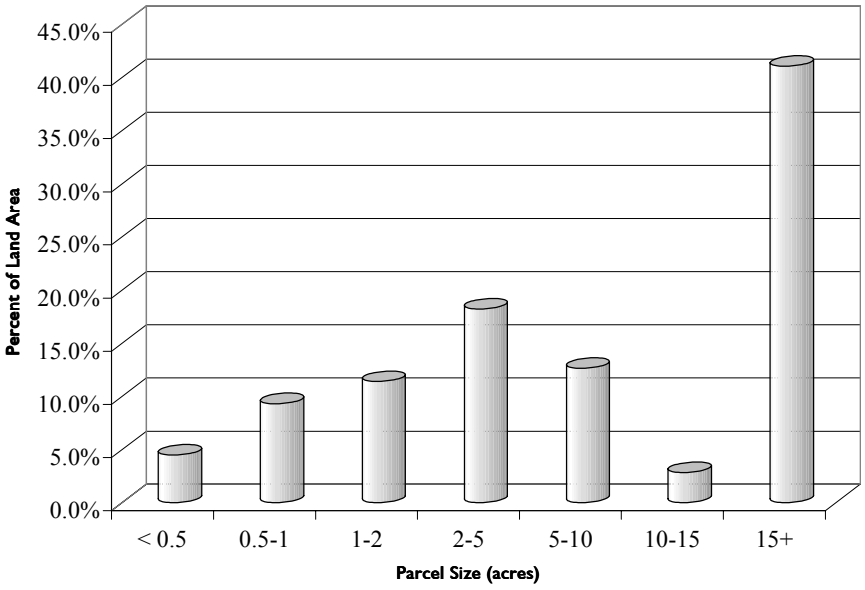


Note: Estimates are preliminary and subject to change.
Source: E.D. Hovee & Company using City of Medford GIS files.

The greatest amount of erosion to commercial use occurs within General Industrial (GI) and Airport (A) zones, where 48% and 44% of the developed acreage respectively is used for commercial purposes. Residential uses primarily occur within the Heavy Industrial (HI) areas, with four parcels comprising 158 acres representing 45% of all industrial land currently being used as residential – these may be prime candidates for future redevelopment.[6]

Parcel Size. Large parcels comprise a significant portion of Medford's developed industrial land. Parcels greater than 15 acres account for 41% (or 694 acres) of the 1,690 acres of developed industrial land. Properties 2-5 acres comprise another 18% followed by 5-10 acre parcels (13%) and 1-2 acre (11%) parcels.

Figure 27. Developed Industrial Land by Parcel Size

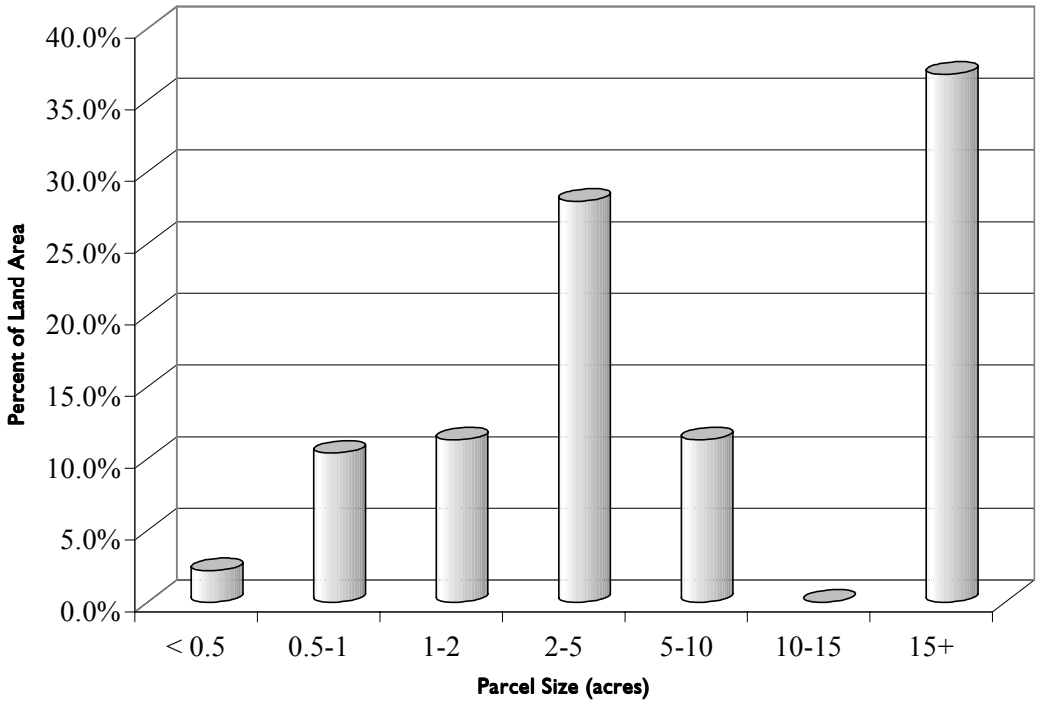


Note: Estimates are preliminary and subject to change.
Source: E.D. Hovee & Company using City of Medford GIS files.

Absorption. An estimated 293 acres of industrial land has been developed over the last 10 years, for an annual absorption rate of 29.3 acres. Over 50% (or 156 acres) was for industrial use. Fifty-five acres was developed for airport hangars and 82 acres for a variety of commercial uses (one-fourth is office-oriented).[7]

General Industrial properties account for 42% of the industrial developed land within the last 10 years. Airport properties comprise another 37% and Heavy Industrial represents 21%.

Figure 28. Developed Industrial Land by Parcel Size (1993-2002)



Note: Estimates are preliminary and subject to change.
Source: E.D. Hovee & Company using City of Medford GIS files.

Large 15+ acre parcels comprise 37% of all industrial land developed over the last 10 years – half developed at the airport for hangers. Parcels of 1-5 acres in size account for 39% and properties under one acre in size represent another 13%.

Zone Changes. The City of Medford Planning Department has examined industrial zone change applications as part of their 2001 Industrial Land Analysis. From 1994 through April of 2001, 27 industrial-related zone change applications were processed involving 332 acres. Twenty-two applications were approved resulting in an industrial zoning designation. Twenty of the applications were for a light industrial (I-L) designation comprising 255.6 acres and two for general industrial (I-G) involving 21.6 acres. Taken together, these changes produced a net loss of 238 acres of I-G zoned land – with significant redesignation from I-G to I-L categories.

The nature of the zone change applications indicated a market preference toward less intensive land uses available under the I-L zoning district. The applications were dispersed throughout the community, focused along major transportation routes with high visibility and good access. Staff's hypothesis is that the majority of development occurring on the zone changed sites is for limited retail, office, and services – uses already present on nearby sites.

Employment on Industrial Lands. One in five jobs within Medford is located on industrially designated lands. Manufacturing is the largest employment sector, accounting for 25% of all industrial land jobs. Thirty-seven percent of all jobs located on industrial lands represent commercial-related (i.e. retail, FIRE, and service sectors) rather than industrial uses. Forty-four percent of the commercial-related jobs on industrial properties are business service employers (e.g. software, advertising, etc.).

Seventy-one percent of Medford's manufacturing jobs are located on industrial lands. Over one-half of transportation, communication, and utilities (50%) and wholesale (55%) jobs are also located on industrial lands. Despite recent commercialization of industrial properties, only 11% of all commercial jobs are located on industrial land.

Nearly 1,900 jobs were created on industrial properties between 1995 and 2000. Job growth on industrial parcels accounted for 38% of Medford's total job growth. In other words, industrial lands are accommodating a higher share of Medford's job growth in the last decade than previously. Leading *job gainers* on industrially designated lands include retail trade (+484), followed by services (+408 with business services +324), manufacturing (+347 with instruments +328), and transportation, communication, and utilities (+327 – transit +200).

Figure 29. Employment Characteristics of Industrial Lands (1995-2000)

	# of Jobs		Job		% of
Employment Sector	1995	2000	Growth	% Chg.	All Jobs
Agriculture	428	485	+57	+13.3%	48%
Mining	D	D	D	D	D
Construction	374	527	+153	+40.9%	40%
Manufacturing	1,628	1,975	+347	+21.3%	71%
TCU	642	969	+327	+50.9%	50%
Wholesale	819	891	+72	+8.8%	55%
Retail Trade	621	1,105	+484	+77.9%	10%
FIRE	59	112	+53	+89.8%	7%
Services	1,305	1,713	+408	+31.3%	13%
Government	164	152	-12	-7.3%	4%
All Industries	6,040	7,929	+1,889	+31.3%	21%
– Developed Land (Acres)	1,065	1,653	+588	+55.2%	
– Jobs per Acre	5.7	4.8		-15.4%	

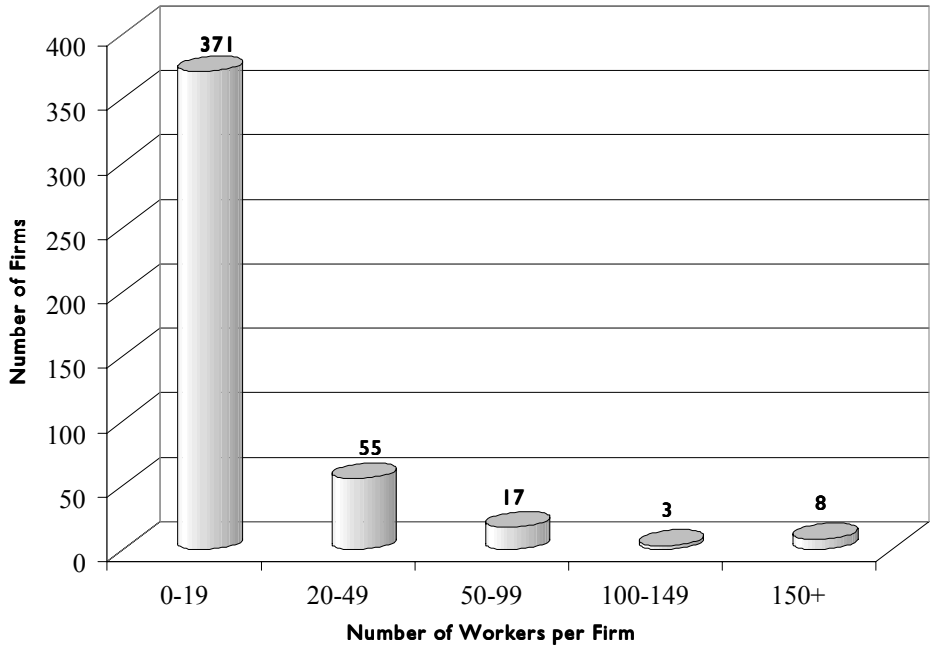
Note: TCU stands for transportation, communications, and utilities. FIRE denotes finance, insurance, and real estate. D indicates data that could not be disclosed due to confidentiality agreements.

Source: E.D. Hovee & Company using City of Medford GIS files and Oregon Employment Department data.

Job densities on industrial lands have decreased by nearly one job per acre over the last five years. In 2000, industrial lands produced an average of 4.8 jobs per acre, down from 5.7 in 1995. The decrease in job densities could be attributed, in part, to underutilization of recently developed sites and development of major big box retailers. Related factors that could affect lower employment density include a changing mix of employment uses and traffic level of service (LOS) standards requiring *trip caps* for some developments.

Firms located on industrial lands tend to be small employers. Of the 454 companies located on industrial properties, 371 (or 82%) have less than 20 workers. In fact only 11 companies have 100 or more employees.

Figure 30. Size of Employers Located on Industrial Lands (2000)



Source: E.D. Hovee & Company using City of Medford GIS files and Oregon Employment Department data.

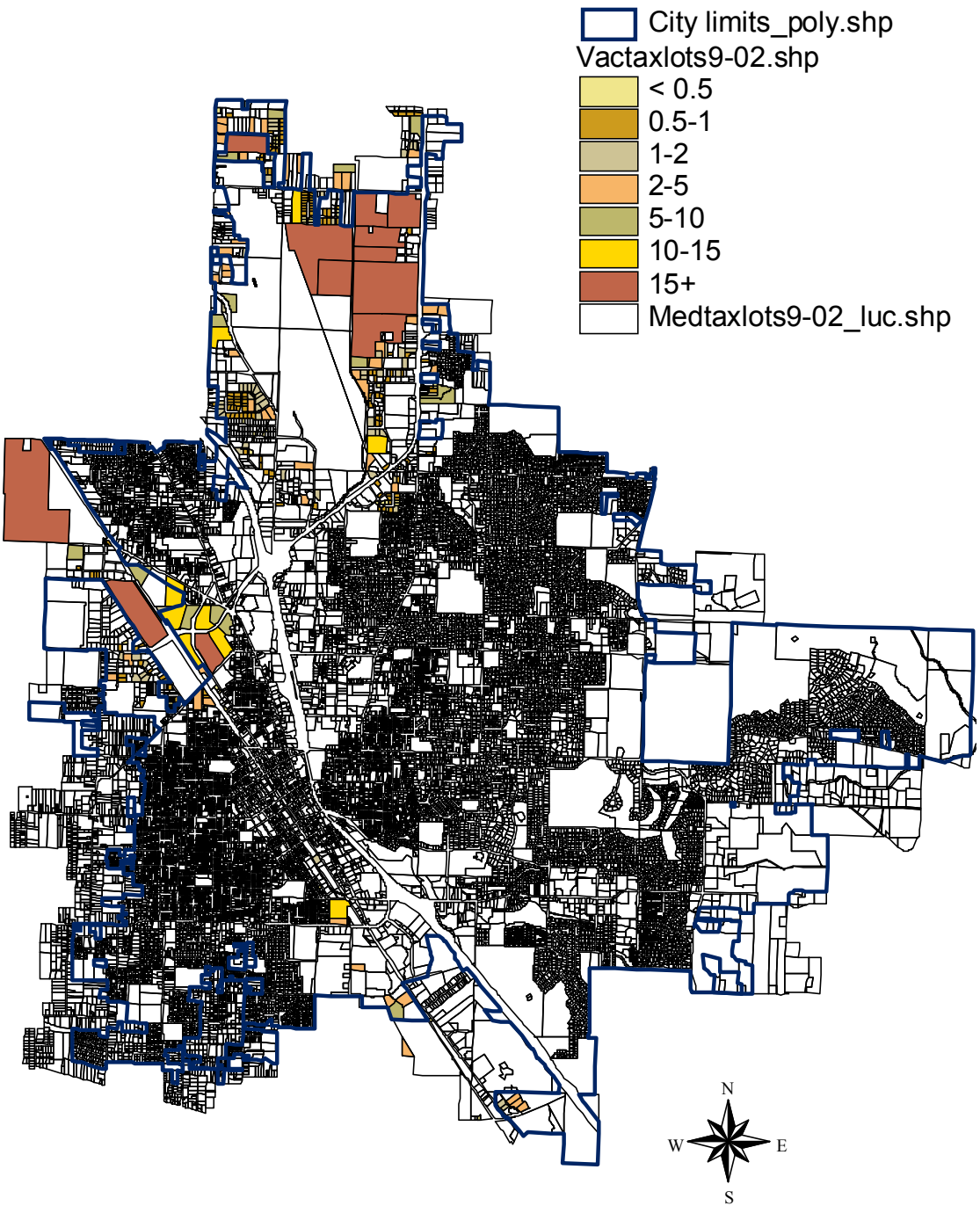
Vacant Industrial Properties. The profile of developed lands provides a glimpse of what is on the ground today. Vacant lands offer the potential of what could be built in the future.

Thirty-six percent (or 1,230 acres) of Medford's industrially designated acreage is vacant. Sites 10 acres or larger contain 785 acres, or 64% of the vacant industrial land inventory. Vacant properties are generally located at the airport or just west of the city limits (in the UGB) along Rogue Valley/Highway 99.

One-third of the vacant industrial land is zoned light industrial. Another 22% is zoned general industrial and less than 10% is designated heavy industrial. Nearly one-fourth of Medford's vacant industrial land is located outside the current City limits. Currently, the zoning code allows commercial use of land designated for light industrial purposes.

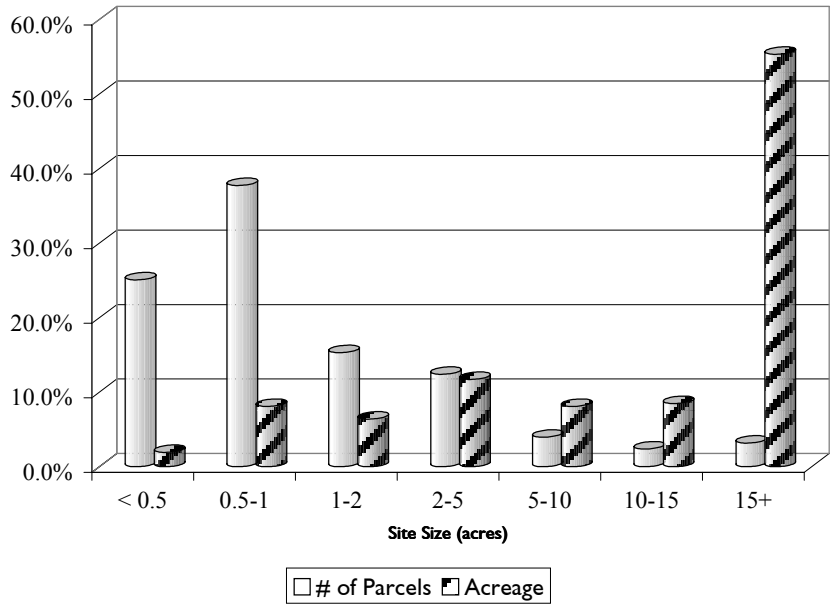
As the map on the following page indicates, the bulk of the existing vacant industrial inventory is located on the north side of Medford. Major sites are situated both east of the I-5 freeway (near the airport) and west (in conjunction with recently reconfigured highway access).

Figure 31. Comp Plan Designated Industrial Sites by Size (Vacant Sites)



Source: E.D. Hovee & Company using City of Medford GIS files.

Figure 32. Vacant Industrial Properties by Parcel Size



Source: E.D. Hovee & Company using City of Medford GIS files.

Constrained Vacant Lands. A major challenge for Medford is to provide land that can be viewed as *shovel-ready* or ready-to-build. Sites that are shovel-ready are those with adequate transportation and utility services and with no significant environmental constraints. While data is not readily available to depict infrastructure capabilities, it has been possible to screen sites on a preliminary basis that are *partially or fully affected* by identified environmental constraints – of flood plain location or wetlands.[8]

Sixty-two percent (or 766 acres) of Medford's vacant industrial acreage is affected by identified environmental constraints (i.e. lies partially or wholly within a 100-year flood plain or has some amount of wetlands on site). Ten properties of 10 acres or larger account for just over 590 acres of the environmentally constrained vacant industrial land. Thirty-two sites sized 2-10 acres in size account for another 115 acres.

The most significant portions of the unconstrained vacant industrial inventory appear to be located near the airport (primarily north side) and in the vicinity of the Medite property. However, as noted below, *brownfield* questions have been raised regarding the Medite property.

Figure 33. Vacant Industrial Properties with Environmental Constraints by Parcel Size

	GLUP			
Site Size	A	GI	HI	Total
< 0.5	0.07	2.55	0.62	3.23
0.5-1	0.00	17.45	1.83	19.28
1-2	0.00	31.33	5.35	36.68
2-5	0.00	63.96	5.79	69.76
5-10	5.50	25.01	15.77	46.28
10-15	0.00	11.05	14.51	25.56
15+	0.00	320.32	244.94	565.26
All Ind'l Sites	5.56	471.67	288.81	766.04

Note: Sites may be fully or partially constrained. The extent to which acreage affected may be partially developable is not as readily determined from the existing GIS data. Site classifications are noted as A – agriculture, GI – general industrial, HI – heavy industrial.

Source: E.D. Hovee & Company using City of Medford GIS files.

After removal of environmentally constrained parcels, Medford is left with only 464 acres of non-environmentally constrained industrial land. Eleven of the parcels, totaling 194 acres, are sites ten acres or larger.

However, five of the sites (67.8 acres) comprise the old Medite site and another 11.3 acre site is held by Pacific Power & Light (PP&L).[9] It is unlikely that the PP&L site will develop for employment uses, as it is more likely being held for future infrastructure capacity/improvements. The Medite site has drawn market interest, but redevelopment may be slow to materialize until environmental studies have been conducted and the site can be demonstrated to be clear of further responsibility for any potential hazardous material clean-up/liability.

Figure 34. Vacant Industrial Properties with No Environmental Constraints by Parcel Size

	GLUP			
Site Size	A	GI	HI	Total
< 0.5	0.00	12.75	7.68	20.43
0.5-1	0.00	60.69	19.53	80.23
1-2	0.00	31.72	10.14	41.86
2-5	0.00	52.19	22.07	74.26
5-10	0.00	24.69	28.48	53.17
10-15	0.00	20.65	58.03	78.68
15+	0.00	0.00	115.18	115.18
All Ind'l Sites	0.00	202.69	261.11	463.80

Note: Figures still include PP&L and Medite sites.

Source: E.D. Hovee & Company using City of Medford GIS files.

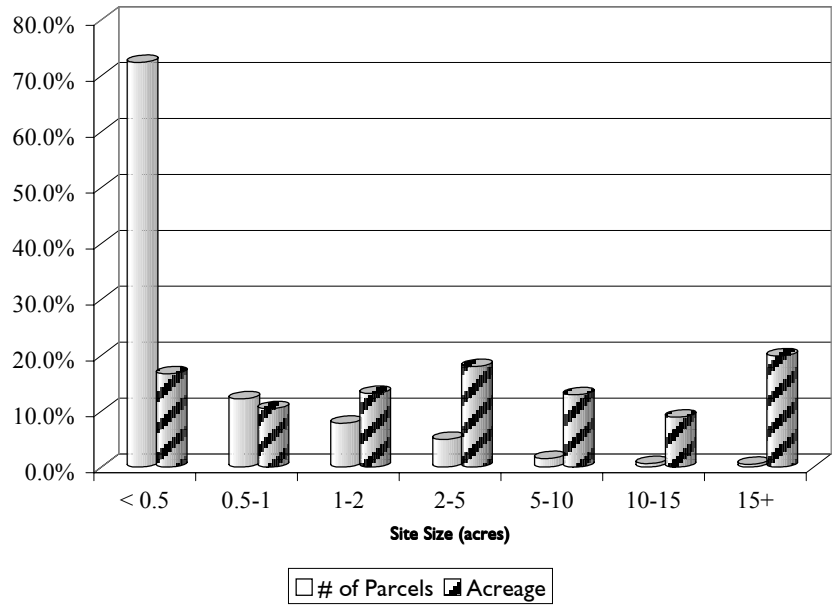
Thus, Medford is left with only 385 acres of industrial land free and clear of potential constraints – assuming that these remaining sites are served (or can be readily provided) with utilities and have good transportation access. This total is increased to 453 acres once environmental remediation questions related to the Medite property are resolved. Currently, Medford appears to have only *five* large readily developable industrial sites ranging from 10 to 35 acres in size.

COMMERCIAL LAND

A similar assessment has been made of Medford's commercial land inventory – both developed and undeveloped.

Property Size. Over 2,400 properties representing nearly 1,980 acres are classified as commercial under Medford's Comp Plan. Seventy-two percent of all commercially zoned parcels are less than half an acre in size. However, only one-sixth of commercial acreage is made up of sites half an acre or smaller. Unlike industrial, commercially zoned acreage is relatively evenly distributed among the seven site size classifications.

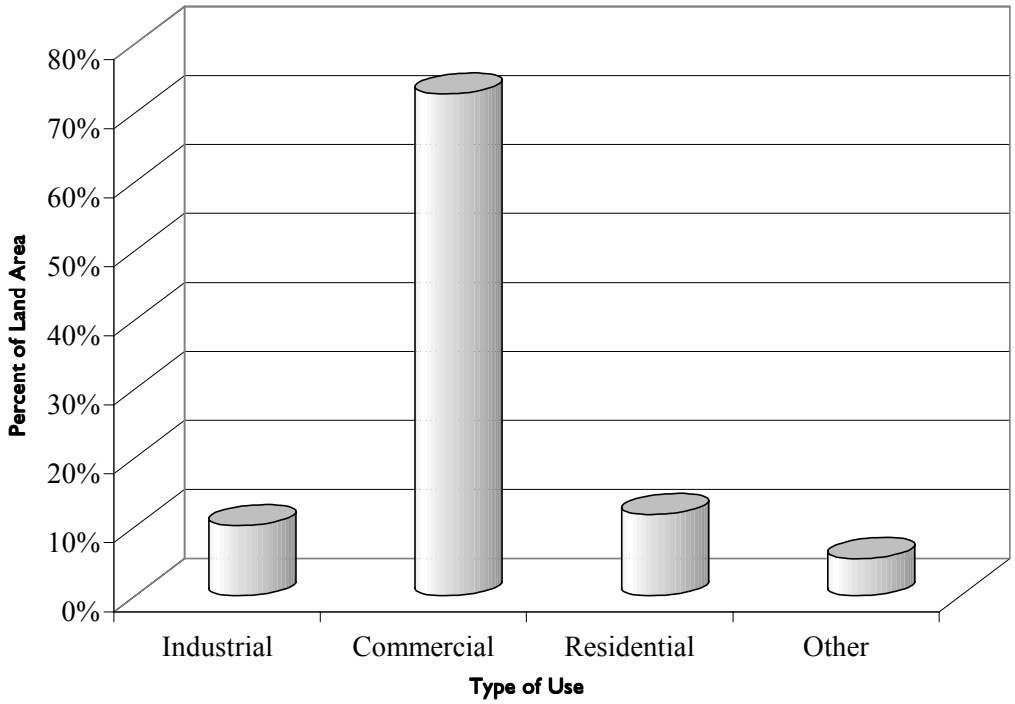
Figure 35. Commercial Comp Plan Properties by Parcel Size



Source: E.D. Hovee & Company using City of Medford GIS files.

Land Development. Over 1,900 commercial properties, comprising 1,330 acres, are developed in Medford. Sixty percent of the parcels (or 80% of developed commercial land) are designated General Commercial (GC). Nearly three-quarters of commercial land has commercial uses. Residential uses have only absorbed 12%, with industrial activity taking 10%. Erosion of commercial land primarily occurs within GC designated areas.

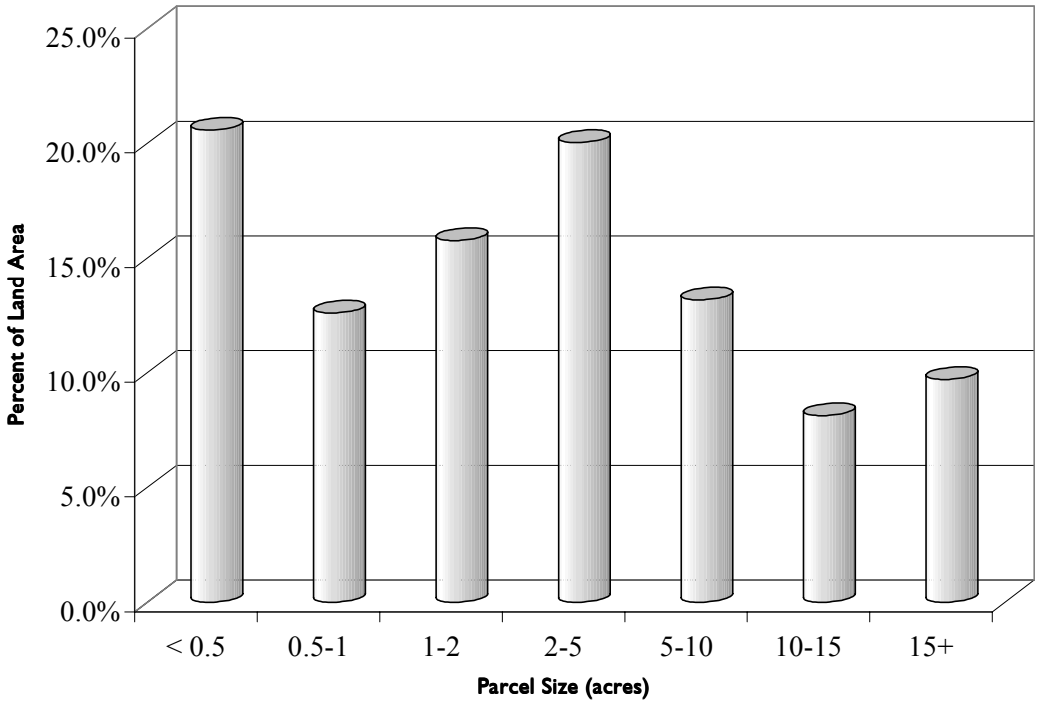
Figure 36. Developed Commercial Land by Use



Note: Estimates are preliminary and subject to change.
Source: E.D. Hovee & Company using City of Medford GIS files.

Parcel Size. Over one-fifth (21%) of developed commercial land occurs in parcels less than one-half acre in size. Properties sized 2-5 acres account for another 20% of developed commercial land followed by 1-2 acre parcels at 16%. Less than 10% of commercial acreage consists of properties over 15 acres in size.

Figure 37. Developed Commercial Land by Parcel Size

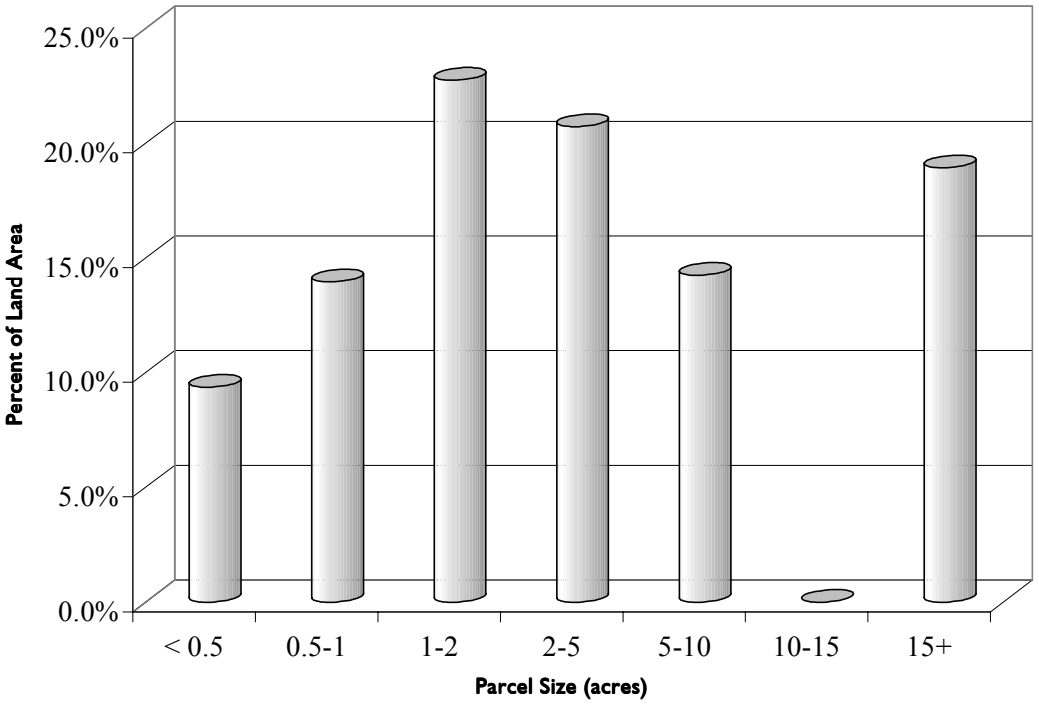


Note: Estimates are preliminary and subject to change.
Source: E.D. Hovee & Company using City of Medford GIS files.

Absorption. Almost 170 acres of commercial land was developed over the last 10 years – equating to average of 17 acres per year. Over 90% of development on commercial land was for commercial uses. Less than 3% developed as industrial and 1% as residential. Nearly 90% of recently developed commercial land has occurred within Commercial Medium (CM) designated areas, pursuant to the General Land Use Plan (GLUP).

Over the last 10 years, nearly 23% of developed commercial lands were parcels 1-2 acres in size. Parcels 2-5 acres comprise another 21% and properties greater than 15 acres capture 19%.

Figure 38. Developed Commercial Land by Parcel Size (1993-2002)



Note: Estimates are preliminary and subject to change.
Source: E.D. Hovee & Company using City of Medford GIS files.

Employment on Commercial Lands. Nearly two in three jobs within Medford are located on commercially designated lands. Retail is the largest employment sector, accounting for 39% of all jobs housed on commercial land. The service sector provides another 36%, with health care representing 54% of all service sector jobs on commercially designated sites. In total, 81% of all jobs located on commercial lands are commercial-related (i.e. retail, FIRE, and service sectors).

Seventy-six percent of Medford's commercial jobs are located on commercial lands. Fifty-five percent of government jobs are also located on commercial lands. Even though very little commercial land has been developed for non-commercial uses, 42% of all wholesale, 38% of TCU, and 28% of manufacturing jobs are located on commercial properties. This provides evidence of at least some traditional industrial-related uses developing at higher commercial densities – particularly for office-related use.

Nearly 6,060 jobs were created on commercial properties between 1995 and 2000. Job growth on commercial parcels outstripped total job growth in Medford, as employment allocated to non-commercial/industrial properties declined by 3,000 during this same time period. Services provided nearly three-fourths of the added jobs. Significant job growth in health care was the primary stimulus, accounting for the majority (57%) of the *total job growth* on commercially designated lands.

Over 4,200 jobs are located within downtown Medford (CC designated properties). Downtown accounts for 17% of all commercial-related jobs in Medford.

Government agencies are the largest employers in the downtown area offering nearly 1,900 jobs. There are 1,730 commercial-related jobs, services comprising 940 and retail with another 640. The downtown added 240 jobs over the last five years. Services and government were the primary source of downtown job growth.

Figure 39. Employment Characteristics of Commercial Lands (1995-2000)

	# of Jobs		Job		% of
Employment Sector	1995	2000	Growth	% Chg.	All Jobs
Agriculture	164	297	+133	+81.1%	29%
Mining	0	0	+0	+0.0%	0%
Construction	236	303	+67	+28.4%	23%
Manufacturing	783	778	-5	-0.6%	28%
TCU	620	741	+121	+19.5%	38%
Wholesale	890	684	-206	-23.1%	42%
Retail Trade	8,816	9,582	+766	+8.7%	86%
FIRE	796	1,375	+579	+72.7%	83%
Services	4,294	8,765	+4,471	+104.1%	68%
Government	1,766	1,896	+130	+7.4%	55%
All Industries	18,365	24,421	+6,056	+33.0%	64%
– Developed Land (Acres)	1,228	1,309	+81	+6.6%	
– Jobs per Acre	15.0	18.7		+24.7%	

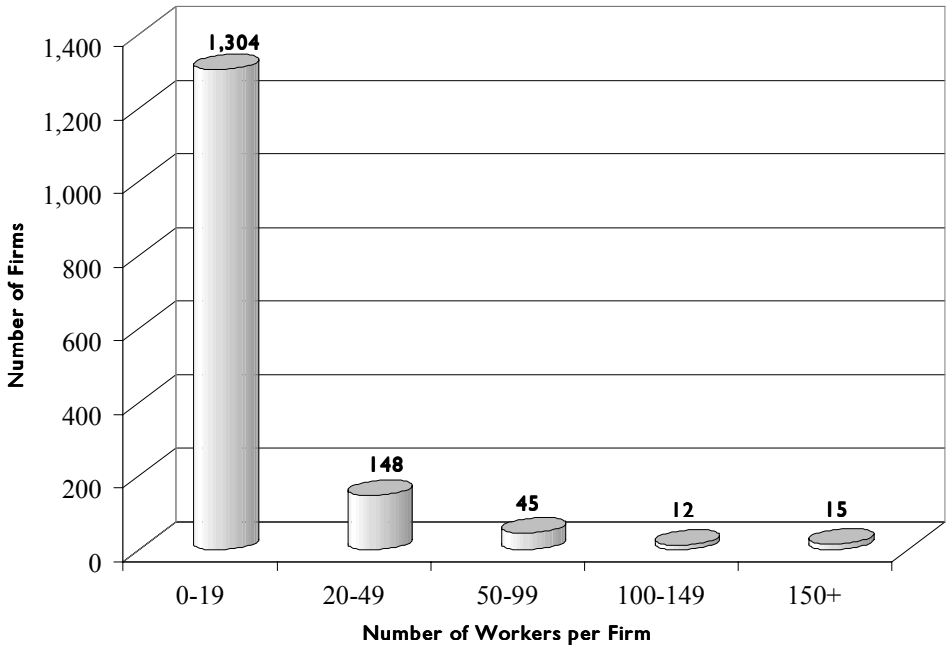
Note: TCU stands for transportation, communications, and utilities. FIRE denotes finance, insurance, and real estate. D indicates data that could not be disclosed due to confidentiality agreements.

Source: E.D. Hovee & Company using City of Medford's GIS files and Oregon Employment Department data.

Citywide job densities on commercial lands have increased by nearly four jobs per acre over the last five years. In 2000, commercial lands produced an average of 18.7 jobs per acre, up from 15.0 in 1995. The increase in job densities appears to be due to greater utilization of existing sites (i.e. job growth at already existing developed sites – health care) and stronger office development in general.

Commercial Firm Size. Firms located on commercial lands also tend to be small employers. Of the 1,524 companies located on commercial properties, 1,304 (or 86%) have less than 20 workers. However, 27 companies have 100 or more employees. The downtown area has 230 employers. Seven have 100 or more employees and 198 had fewer than 20.

Figure 40. Size of Employers Located on Commercial Lands (2000)

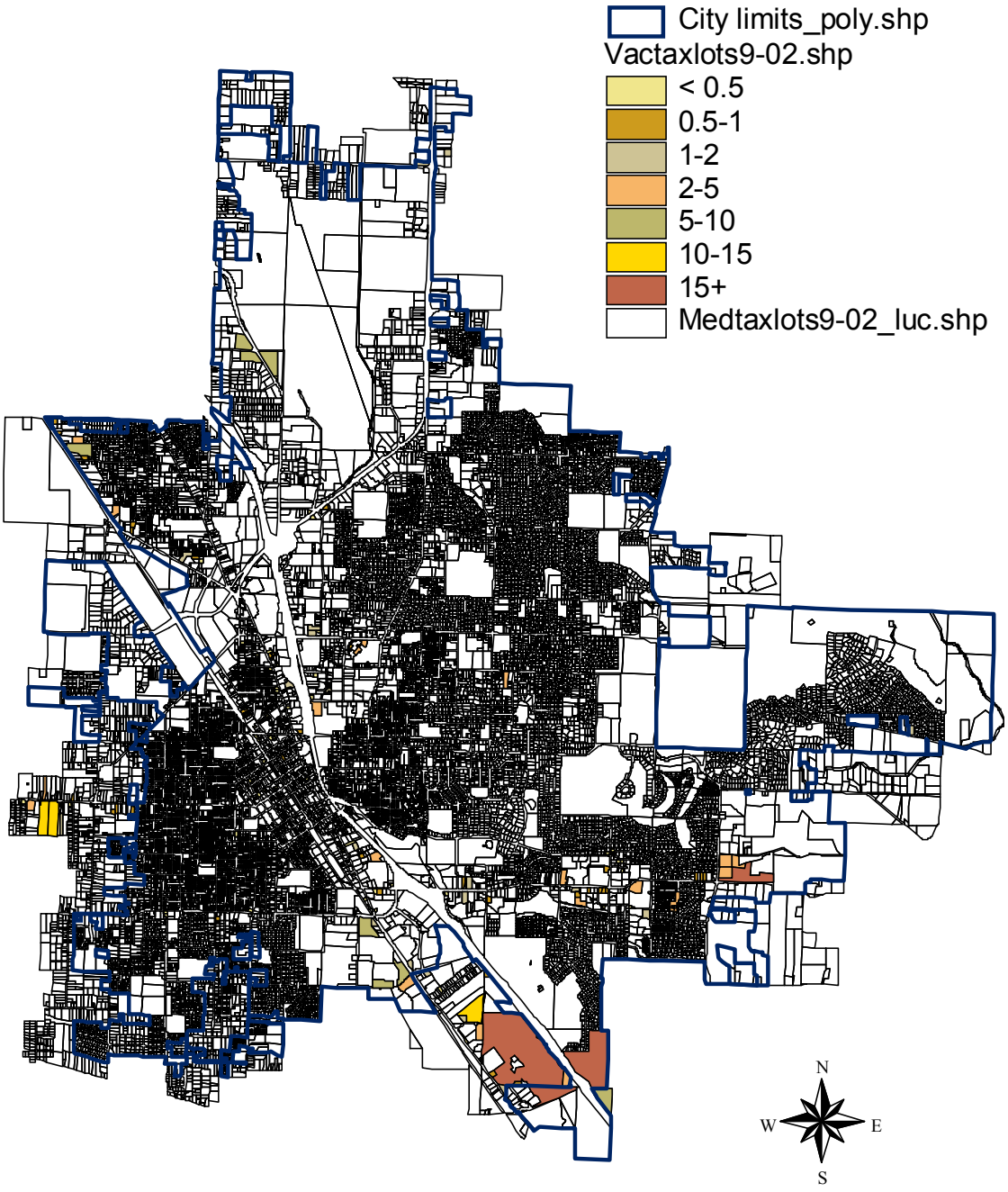


Source: E.D. Hovee & Company using City of Medford GIS files and Oregon Employment Department data.

Vacant Properties. Just over one-fifth (23%) of commercial Comp Plan acreage is vacant, with much of the vacant acreage located south of Medford's city center. Of the vacant 447.5 acres, over 50% are contained within seven sites sized 10 acres or larger. Three of the sites are located outside Medford's city limits, representing 146 acres. Another three sites comprising 81 acres are designated exclusively for forestry use (EFU). The seventh parcel (13 acres) is zoned rural residential 5 acres (RR-5).

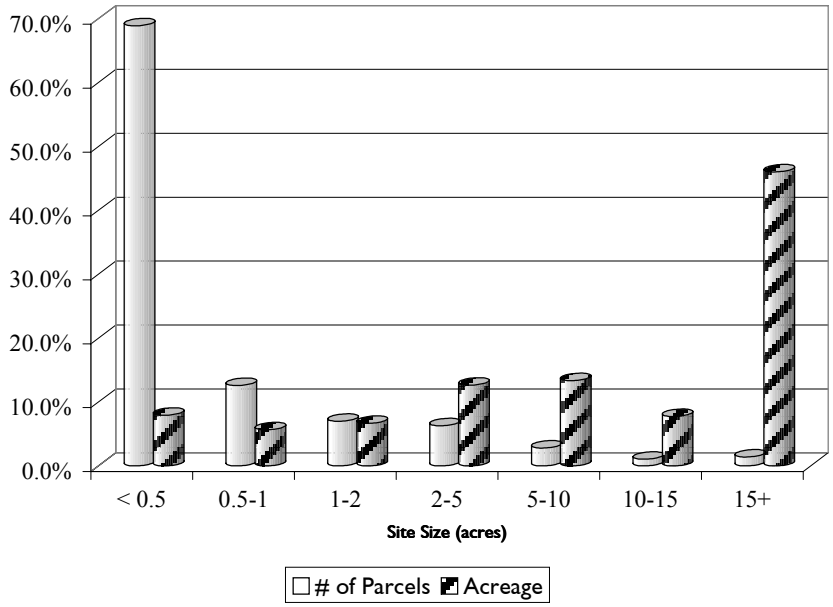
As is indicated by the map on the following page, most of the existing inventory of large vacant commercially-zoned sites is situated at the southern end of Medford. This contrasts with the industrial inventory, located primarily to the north. Lack of a geographically balanced inventory may place added commercial development pressure on industrial sites at the northern side of Medford – especially sites offering good freeway access and visibility.

Figure 41. Comp Plan Designated Commercial Sites by Size (Vacant Sites)



Source: E.D. Hovee & Company using City of Medford GIS files.

Figure 42. Vacant Commercial Comp Plan Properties by Parcel Size



Source: E.D. Hovee & Company using City of Medford GIS files.

Sixty-one percent (or 274 acres) of Medford's vacant commercial acreage has environmental constraints (i.e. lies within 100-year flood plain or has wetlands). Six sites of 10 acres or larger account for 225 acres of the environmentally constrained vacant commercial land.

Figure 43. Vacant Commercial Properties with Environmental Constraints by Parcel Size

	GLUP			
Site Size	CC	CM	SC	Total
< 0.5	0.00	3.00	0.52	3.52
0.5-1	0.00	4.76	0.94	5.70
1-2	0.00	7.26	3.71	10.97
2-5	0.00	6.79	4.06	10.85
5-10	0.00	18.26	0.00	18.26
10-15	0.00	34.66	0.00	34.66
15+	0.00	190.13	0.00	190.13
All Com'l Sites	0.00	264.86	9.23	274.09

Note: Commercial GLUP designations are CC – City Center, CM – Medford Commercial, and SC – Service Commercial.

Source: E.D. Hovee & Company using City of Medford GIS files.

After removal of environmentally constrained parcels, Medford is left with only 173 acres of non-environmentally constrained commercial land. Seven of the parcels, totaling 57 acres, are sites five acres or larger.

However, one of these sites is owned by Southern Oregon University (8.7 acres), two sites are designated as EFU (20.8 acres), and three are zoned industrial (18.6 acres).[10] It is unlikely that the Southern Oregon University site will develop as private commercial; however, it may produce added employment depending on University development interests.

Figure 44. Vacant Commercial Properties with No Environmental Constraints by Parcel Size

	GLUP			
Site Size	CC	CM	SC	Total
< 0.5	2.96	23.42	5.58	31.96
0.5-1	0.56	12.86	6.18	19.59
1-2	0.00	13.39	5.49	18.87
2-5	0.00	37.70	7.99	45.69
5-10	0.00	41.48	0.00	41.48
10-15	0.00	0.00	0.00	0.00
15+	0.00	15.82	0.00	15.82
All Com'l Sites	3.51	144.66	25.23	173.41

Note: Figures still include EFU sites.

Source: E.D. Hovee & Company using City of Medford GIS files.

The three industrial sites can currently develop as commercial; the City should review these properties in the future if it considers adoption of development restrictions on parcels zoned industrial. The two EFU sites are not likely to ever develop and, therefore, should be removed from the inventory. Elimination of the EFU sites leaves Medford with only 153 acres of commercial land free and clear of potential constraints – assuming sites are served with utilities and have good transportation access. Medford currently has no commercially designated and unconstrained sites larger than nine acres in size.

Downtown Options. To the extent that downtown Medford offers a viable competitive alternative to larger, vacant and as yet undeveloped sites elsewhere in Medford, the need for added commercial lands inventory could be reduced. Recent analysis of commercial development absorption and potentials has been conducted for the Medford Urban Renewal Agency (MURA). While beyond the direct scope of this study, an active downtown redevelopment program aimed at accommodating net new job growth could prove to be an important component of the city's overall economic development strategy.

In effect, redevelopment of smaller vacant and underutilized properties in Medford's downtown area could serve to reduce the need for added commercial *greenfield* sites – particularly for office and smaller scale retail uses. However, costs of development are often greater in a downtown area and the major impetus for new commercial uses in recent years has been to develop larger sites outside the downtown core.

BUILDING ABSORPTION

Future needs for industrial and commercial land can be assessed, in part, by a review of actual demand or *absorption* of building space in recent years. This method is then compared with an employment driven approach to forecasting future land needs.

Building square footage developed over the last 12 years is derived from two alternative sources. Medford's Planning Department completed an analysis in 1998 that identified developed industrial and commercial square footage between 1988-1997, with data since 1998 provided for this project. Subsequently, Bruce Ostley, consultant to the Medford Urban Renewal Agency (MURA), has analyzed office development trends between 1990 and 2002.

Industrial vs. Commercial. Between 1990 and 1997, just over 304,000 square feet of industrial space was developed per year. Commercial development occurred at a more brisk pace of 462,100 square feet per year. Over the last five years, industrial development has occurred at a slightly higher rate of 306,500 square feet per year; however, commercial development has slowed to an absorption rate of 325,900 annually.

Retail vs. Office. Retail accounts for 84% of commercial development. Between 1990 and 1997, retail space was being developed at an average of 413,700 square feet per year versus 48,400 per year for office. However, over the last five years, retail development has slowed significantly (233,800 square feet per year) as office development has posted significant growth of approximately 92,000 square feet per year.

Figure 45. Building Space Developed Since 1990

	Industrial	Commercial Space		
Year	Space	Retail	Office	Total
1990	337,611	262,951	28,919	291,870
1991	263,020	352,274	69,863	422,137
1992	164,324	457,338	12,159	469,497
1993	293,973	321,515	31,198	352,713
1994	384,177	649,316	35,904	685,220
1995	379,278	417,947	106,883	524,830
1996	446,566	424,332	72,853	497,185
1997	163,249	423,728	29,816	453,544
1998	296,795	325,355	75,678	401,033
1999	176,486	201,001	34,979	235,980
2000	586,093	129,320	115,128	244,448
2001	249,026	254,917	127,151	382,068
2002	224,188	258,570	107,194	365,764
Annual Averages:				
1990-1997	304,025	413,675	48,449	462,125
1998-2002	306,518	233,833	92,026	325,859
1990-2002	304,984	344,505	65,210	409,715

Note: All figures are in square feet of building area.

Source: City of Medford Planning Department and Bruce Ostley.

IV. ECONOMIC FORECAST

As of 2002, Medford has 66,090 residents – representing 35% of Jackson County's population base of 187,600.[11] As the largest urban center in Jackson County and Southern Oregon, Medford also serves as a regional employment and commercial center.

For the future, Medford is faced with not one but several possible economic scenarios. The community's economic future realized will, in part, be determined by a combination of past economic trends, Medford's current industrial and commercial land inventory, regional and local competitive advantages, and local policy decisions.

Consequently, a series of alternative job and land demand forecasts have been prepared for consideration by the City of Medford. The job target and land absorption results that Medford actually realizes depend on a realistic assessment of the community's current and prospective competitiveness and vision for its future, followed by implementation to achieve the vision.

ALTERNATIVE DEMAND FORECASTS

Before determining the type of jobs Medford wants to attract to its community, Medford must first identify the total number of jobs it anticipates planning for over the next 20+ years. Future growth projections are considered in the context of historic population and employment trends.

In the two decades from 1980-2000, Jackson County experienced more rapid growth than occurred statewide. Jackson County population increased by 37% versus a statewide increase of 30%. Similarly, Jackson County's job base increased more rapidly by 76% compared with statewide employment gains of 57%.[12]

Population growth over the next 20 years is expected to moderate but with further increases of up to 25%. Employment growth may also moderate but added job needs will still be substantial and may be accompanied by continued shifts in the mix of the local employment base.

Prior to determining a specific future rate of job growth, three alternative scenarios are recommended for consideration. A wide range of employment outcomes is possible, depending on the forecast approach selected.

- **Historic Growth Rate –** According to data collected from the U.S. Bureau of Economic Analysis (BEA), Jackson County's job base has been growing at a rate of 3.6% per year over the last three decades. Continuation on this trend would lead to the creation of 107,840 jobs, or a total employment base of 212,690 by 2020. Medford currently provides 36% of all Jackson County jobs. Given its regional role, it is reasonable to anticipate that Medford could continue to create 36% of Jackson County's employment opportunities, and therefore, add another 38,820 jobs.
- **Historic Annual Job Creation –** Over the last 30 years, Jackson County has been producing an average of 2,250 new jobs per year. The Oregon Employment Department is projecting an annual employment growth rate of 1.6% over the next 10 years, leading to the addition of 1,960 jobs per year. Given the slow economy during the early part of this decade, it is reasonable to assume that job growth for the first 10 years will come

closer to the State's forecast. However, a longer term annual average of 2,250 could still result from higher job growth in the later 10 years of the forecast period. The resulting effect for Medford would be 16,200 new jobs over the next two decades.

Figure 46. Projected Added Medford Jobs Based on Historic Trends (2000-2020)

	Historic Growth Rate	Historic Annual Job Creation
2000 IMPLAN Employment	104,845	104,845
Annual Growth Rate	3.6%	1.8%
2020 Employment	212,688	149,845
Employment Growth	107,843	45,000
Medford Share	36%	36%
Medford Added Jobs	38,823	16,200

Source: E.D. Hovee & Company using information obtained from Minnesota IMPLAN Group, U.S. Bureau of Economic Analysis (BEA), and Oregon Employment Department.

- **Regional Problem Solving Project –** Medford is participating in a long-range strategic planning project with the Rogue Valley Council of Governments and other government agencies within Jackson County. With this strategic plan, Medford is projected to receive over 47,900 new people by 2050, or 19,400 added households based on Medford's forecasted average household size of 2.47 persons per household. Planning participants have targeted an average jobs-housing ratio of 1.5, which is coincidently Medford's current average. For Medford to maintain its current jobs-housing balance, it would need to create 29,100 new jobs over the next +/-50 years, or 12,945 added jobs within the shorter time horizon of 2020.

Figure 47. Projected Added Medford Jobs Based on Regional Problem Solving Project

	2020	2050
x2 Pop Growth	21,317	47,914
Average Household Size	2.47	2.47
Added Households	8,630	19,398
Jobs-Housing	1.50	1.50
Added Jobs	12,945	29,097

Source: E.D. Hovee & Company using information obtained from Rogue Valley Council of Governments, Minnesota IMPLAN Group, U.S. Census Bureau, U.S. Bureau of Economic Analysis (BEA), and Oregon Employment Department.

Toward a Preferred Forecast. The three alternative forecast approaches indicate a range of possible outcomes – for an added 12,900, 16,200 or 38,800 jobs in Medford by 2020. Due to the current economic slowdown and longer-term aging of the population, the higher number would not appear to be a most likely forecast. Conversely, the Regional Problem Solving estimate may prove unduly conservative particularly if the City of Medford continues to attract a younger and more diverse population mix. Consequently, for purposes of this analysis, the forecast alternative of 16,200 added jobs in Medford is recommended on a preliminary basis for industrial and commercial land needs projections.

With this approach, Medford is likely to generate another 3,500 (1,960 x 5 x 36%) jobs by 2005. However, Medford should plan *for at least 16,200 jobs* within the next 20 years. Given the timing of the Regional Problem Solving project, Medford should also consider setting aside reserves of enough employment land to accommodate 29,100 to 38,800 over the longer 50 year planning horizon.

Employment Mix. The specific employment opportunities available in the future will depend, in part, on the lands available for development. Three employment land projections illustrate alternative focuses on job creation and land utilization. Each assumes a 20-year Medford job target of 16,200.

- **Current Mix –** Assumes employment growth occurs on lands according to current employment distribution. For example, 21% of Medford's employment is located on industrial land. Under this forecast scenario, commercial lands would accommodate 10,370 jobs, with 3,400 jobs allocated to industrial properties, and 2,430 to other lands (e.g. residential, agricultural, etc.).
- **Changing Share –** This forecast alternative presumes a focus on commercial development, assuming that Medford's economy continues toward commercial-related jobs, with a tightening of land use regulations that preserve industrial land for industrial-related jobs (i.e. manufacturing, distribution, wholesale, etc.). Allocations are consistent with growth trends over the last five years.
- **Industrial Land Focus –** Job creation on industrial properties would continue to occur at an annual rate of approximately 400 jobs per year. Commercial uses would still be permitted, but restricted to smaller, highly visible properties (parcels smaller than 5 acres). This forecast would result in a 50/50 mix of added jobs between commercial and industrial lands.

Figure 48. Medford Job Growth Allocations by Land Type

	Land Type			
	Com'l	Ind'l	Other	Total
20 Year Job Growth				16,200
Current Mix:				
Allocations	64%	21%	15%	100%
Added Jobs by Land Type	10,370	3,400	2,430	16,200
Changing Share:				
Allocations	75%	25%	0%	100%
Added Jobs by Land Type	12,150	4,050	0	16,200
Industrial Land Focus:				
Allocations	50%	50%	0%	100%
Added Jobs by Land Type	8,100	8,100	0	16,200

Source: E.D. Hovee & Company using information obtained from the City of Medford and Oregon Employment Department.

Each alternative employment mix forecast translates into a corresponding set of land demand projections. Current employment densities are assumed to continue into the future. Demand for

commercial land would range from 430 to 650 acres. Between 710 and 1,690 acres of industrial land could be required to meet future needs.

Figure 49. Medford Employment Land Demand Forecasts (Commercial vs. Industrial)

	Land Type		
	Com'l	Ind'l	Total
Employment Density	18.7	4.8	
Current Mix:			
Job Growth	10,370	3,400	13,770
Land Demand	555	708	1,263
Changing Share:			
Job Growth	12,150	4,050	16,200
Land Demand	650	844	1,494
Industrial Land Focus:			
Job Growth	8,100	8,100	16,200
Land Demand	433	1,688	2,121

Source: E.D. Hovee & Company using information obtained from the City of Medford and Oregon Employment Department.

Total industrial and commercial land demand is minimized at 1,263 acres with the current mix – which assumes a continued pattern of some employment growth elsewhere, rather than industrial or commercial lands. Examples could include schools, self employed and expansion of otherwise non-conforming uses.

Total 20-year land need is greatest at 2,121 acres with the industrial land focus. This assumes continued use of at least some industrial lands by commercial uses and/or much more active effort to increase industrial investment in the Medford area.

LAND DEMAND VERSUS SUPPLY

Even before considering development constraints, Medford may not have enough vacant employment land to meet future market demand. Medford currently has 1,678 acres (both industrial and commercial) of vacant employment lands, but demand over the next 20 years could range from 1,263 to 2,121 acres. After removal of constrained properties, Medford is left with only 538 acres, creating a potential deficit of 725-1,583 acres.

Figure 50. Land Demand/Supply with Alternative Forecasts

Employment Lands*	Current Mix	Changing Share	Industrial Land Focus
Land Supply (acres)	538	538	538
Land Demand (acres)	1,263	1,494	2,121
Surplus (+)/Deficit (-)	-725	-956	-1,583

*Note: Includes the total of commercial and industrial lands.

Commercial. Medford currently has an extremely limited supply of commercial land. With only 153 acres of unconstrained vacant commercial property, Medford is likely to experience a 280-

500 acre deficit through 2020. The lack of commercial property will increase market pressure to locate on industrial lands. However, there is only 65 acres of 1-5 acre industrially designated parcels, fulfilling 53% of commercial demand over the last decade. Unless Medford has a framework for remediation of development constraints (e.g. wetland or flood plain mitigation), land prices for vacant/unconstrained commercial land could escalate, having the effect of:

- Driving up industrial land prices as commercial demand competes with industrial
- Greater development of under utilized properties
- Pushing some commercial development outside of Medford

Industrial. Industrial land comprises 70%-75% of Medford's vacant employment property. However, 845 acres of the vacant 1,230 acres have development constraints.[13] Medford will need 708-1,688 acres to fulfill market demand over the next 20 years. With only 385 acres unconstrained, Medford could have a deficit of 320-1,300 acres.

Even with remediation of constrained properties, Medford could have a 460-acre deficit (under the industrial land focus scenario). Furthermore, the lack of large industrial sites could result in Medford continuing to lose industrial development opportunities to other communities, such as White City or to other Southern Oregon communities outside Jackson County.

V. POLICY ISSUES

Medford officials are faced with several policy decisions pertinent to securing the City's economic future. Both economic and regulatory are involved.

The policies presented in this section are derived from the economic analysis conducted in the earlier sections of this report. They represent the consultant's conclusions and therefore should not be construed as being endorsed by any other party. These policies are not comprehensive and are presented for purposes of discussing Medford's economic and policy options.

1. **Determine Medford's regional employment role.** Medford is the largest city in Southern Oregon, accounting for 15% of all residents and 24% of all jobs. Medford's current jobs-housing balance is 1.49 versus 1.24 for the entire region, 1.46 statewide, and 1.44 nationally – providing evidence that Medford serves as a regional jobs center.

   In order for Medford to continue as a regional job center, local officials should plan for an additional 16,200 jobs over the next 20 years and 30,000-38,000 over the longer 50-year *Regional Problem Solving* timeframe.

2. **Chart Medford's economic identity.** Medford is considered the region's center for commercial and health care services generating 31% of all commercial-related and 38% of health care jobs. However, Medford is not regarded as a primary provider of manufacturing/industrial activity, employing only 11% of all manufacturing workers in Southern Oregon. Furthermore, commercial development (including activity on industrial lands) is absorbing 24 acres per year, compared to 16 acres for industrial development.

   Medford has a multitude of paths that could be chosen – setting a direction for the community's economic future. First option is to "stay the course," which would translate into Medford continuing to serve the region as a commercial center. Between 64%-75% of all job creation would occur on commercial lands. A second alternative is to not only remain as the region's major commercial center, but also become more aggressive in attracting industrial investment. This translates into a 50/50 mix between jobs on commercial and industrial.

3. **Consider local socio-economics as part of a jobs development strategy.** Local and regional demographics should be considered as part of determining Medford's economic identity. Key characteristics include:

   - Latinos are a rapidly growing segment of Medford's population, accounting for 20% of citywide population growth over the last 10 years. As of 2000, Latinos comprised 9.2% of all residents in Medford.
   - Fifty-five percent of persons age 25 or older have at least some college education, versus 59% statewide.
   - Sixty-two percent of residents age 16 and older participate in the local labor force, slightly below statewide rates (65%) but higher than region-wide averages (58%).

- Southern Oregon has a higher proportion of management and professional workers than area employers require. However, regional employers exhibit greater demand for blue-collar jobs than the local labor force is able to supply.

Medford has a need for a diverse set of job opportunities. Medford should create a strategy for developing a skilled workforce to fill the deficiency in blue-collar occupations. As part of a workforce development strategy, Medford also likely will exhibit increased demand to provide access to a network of education and training resources to serve a growing minority population.

As part of its business recruitment/development efforts, Medford should seek companies that require managers and professionals to help fill the current void in employment opportunities for these occupations. Other occupational needs should not be ignored, as the aging regional population will create an increased demand for health care occupations.

4. **Focus economic development efforts where demonstrated competitive advantages are offered.** Medford has a number of business and industrial potentials for which it can competitively vie with other communities – segmented into three tiers of best, strong but challenging and locally competitive opportunities.

   These opportunities are consistent with the community's relative competitiveness for business investment. Medford also offers two additional distinct advantages that can serve to attract or expand existing industries:

   - *Relatively low cost supply of labor compared to the nation, especially larger metro markets.* Average covered employment wage in Jackson County is $28,700 versus $38,200 nation-wide. As indicated by the demographic analysis, the supply of labor locally is also favorable – with strong representation from younger adults.
   - *Inclusion of all commercial and industrial properties within its enterprise zone.* Enterprise zones exempt new investment from property tax for 3-5 years. Provided are business finance assistance, corporate tax credits, project development assistance (e.g. streamlined permitting, infrastructure support, project siting), and workforce development.

     Medford is also only one of four communities with a special *electronic commerce* overlay. This overlay provides additional tax benefits such as:

     - ✓ If increasing its full-time employment, an eligible business firm can have its newly invested property exempted from local taxes for three to five years in any enterprise zone.
     - ✓ This standard enterprise zone exemption is fully extended to any E-commerce business activity – situated in an E-commerce zone – even if the business would not normally be eligible. Also, the firm's personal property can qualify more easily for the exemption.
     - ✓ In addition, any business qualifying for the property tax abatement in an E-commerce zone can earn a tax credit on its State of Oregon income/excise tax return.

- ✓ This credit could be a very substantial incentive for certain businesses, equaling the lesser of $2 million or 25 percent of the total investment in E-commerce operations in the zone; unused portions of this credit may be carried forward up to five years for offsetting future income/excise tax liability in Oregon.

5. **Ensure Medford has an adequate supply of employment lands.** Medford may not have enough vacant employment land to meet future market demand. Medford has 1,678 acres (both commercial and industrial) of vacant employment lands, but demand over the next 20 years could range from 1,263 to 2,121 acres. After removal of constrained properties, this market analysis indicates Medford is left with as little as 538 acres, creating a potential deficit of 725-1,583 acres.

   Undoubtedly, existing developed sites will be able to accommodate a portion of this unmet demand. However, it is not likely that 25%-50% of current developed employment lands (3,020 acres) could absorb the entire deficit. Rather, a series of strategies that remove or mitigate the constraints facing two-thirds of its vacant inventory will likely prove necessary. This may include consideration of adding new employment lands to the existing urban growth boundary.

6. **Provide a competitive supply of both commercial and industrial land.**

   Needs for commercial and industrial lands both warrant consideration.

   Commercial: Due to a constrained supply of commercial land, commercial development has absorbed both commercial and industrial land at a 2:1 ratio – two acres of commercial land for every one acre of industrial utilization. Medford has only 153 acres remaining of vacant unconstrained land, with no properties greater than 10 acres and only 65 acres in 1-5 acre parcels.

   Medford will need 430 to 650 acres to satisfy anticipated market demand over the next 20 years. If development trends experienced over the last decade continue, 53% (or 230-350 acres) of demand will be for 1-5 acre sites. With only 65 acres of unconstrained 1-5 acre parcels, Medford is only capable of satisfying 19%-28% of expected market demand.

   The lack of sites will further increase pressure for commercial to develop on industrial sites. An active downtown redevelopment program could potentially reduce but is not expected to eliminate the deficit of sites for future commercial use.

   Industrial: Industrial development has been lagging for reasons including the parcelization of large industrial sites for smaller commercial development. This has had the effect of driving up land prices as well as reducing the competitive supply of large industrial sites.

   Medford has only five unconstrained parcels (or 115 acres) that are 10 acres or larger – three sites at 15 acres or greater representing 94 acres. Over the last decade, 37% of industrial land absorption occurred on 15+ acre sites. Industrial land demand projections range from 710-1,690 acres, translating into the need for 260 to 630 acres of 15+ acres sites. With only 94

unconstrained acres in 15+ acre parcels, Medford can only satisfy 15%-36% of demand for large sites.

Medford also has a limited supply of unconstrained industrial land. Of the vacant 1,230 acres, 845 acres are constrained. This leaves only 385 acres to fulfill 710-1,690 acres of demand. This is before considering industrial land that may be committed for unmet commercial demand.

7. **Consider revising zoning designations and land use regulations consistent with an adopted economic development strategy.** With commercial development spanning both commercial and industrial land, a limited supply of unconstrained employment land and significant parcelization of vacant industrial land (56% under 5 acres in size), Medford should consider rezoning a portion of its industrial land (parcels under 5 acres) to a *business park* type of zone. This would allow commercial development to continue on a designated portion of industrial lands as well as small scale industrial activity.

   At the same time, action could be taken to limit commercial development on properties 5 acres or larger. With a very limited supply of large industrial sites, the City of Medford has a growing need to reserve remaining large sites for primarily industrial uses. Allowing complementary office as a part of the industrial development might be considered given the type of industries for which Medford is competitive, its e-commerce overlay, and industries tending to be comprised of office activities.

8. **Incorporate development standards into Medford's land use regulations.** The development review assessment currently underway by the City of Medford offers an opportunity to consider changes appropriate for commercial and industrial land regulations. Land use regulations can be assessed from the perspective of improving Medford's competitive position for desired economic development and reducing unnecessary regulatory cost or uncertainty.

   Measures that might be appropriate to consider could include designation of added unconstrained industrial/commercial lands to meet forecast demand, clearer delineation of industrial, business park and commercial uses, infrastructure targeted to prime development sites, and maintenance of fast track permitting capability.

   The City could also consider limiting the parcelization of large industrial sites by providing planning options for development to *phase in* more systematically – pursuant to master plan, planned unit development (PUD) or similar development approval process. Objectives would be to preserve large sites, where possible, for larger business and industrial users and to improve coordination of phased development for multi-use or multi-firm sites.

ENDNOTES

[1] Locational questions are addressed in a general manner in this report. More detailed discussion of industrial/commercial siting is recommended as follow-up to this market report based on additional site constraint inventory analysis and direction on policy issues discussed at the conclusion of this analysis.

[2] Information for this report has been obtained from sources generally deemed reliable; however, the accuracy of information obtained from third party sources cannot be guaranteed. The opinion and conclusions of this analysis are those of the consultant only. They should not be construed as representing the opinion of any other party prior to express approval of this report – whether in whole or part.

[3] According to data provided by the Oregon Employment Department (OED), the City had 31,976 jobs within its city limits as of Year 2000. Adjusting OED data to include corporate officers, family workers, and proprietors brings the total employment estimate to 45,059. Adjustments were made by applying the ratio of Jackson County's BEA total employment estimate to OED covered employment estimates.

[4] IMPLAN is an input-output economic model originally developed by the University of Minnesota and the USDA Forest Service. Economic data sets are updated annually for every county in the United States.

[5] Information provided by the City of Medford Planning Department including GIS files is greatly appreciated. A preliminary draft of this report was reviewed with Economic Development and Planning Department staff prior to report completion.

[6] Two of these industrial parcels with residential use are located on the south side of Medford, outside the city limits. One parcel is located on the west side near Boise Cascade, and another is on the north side near the city limits.

[7] Current uses have been classified as industrial or commercial for specific parcels based on the property description provided by the Jackson County Assessor's office for each tax lot. Commercial uses cover several categories including professional office, retail and lodging.

[8] A more complete parcel-by-parcel assessment of site acreage is recommended for consideration as follow-up to this economic market analysis. This would be useful to more precisely estimate the portions of properties with wetland or floodplain designation together with the remainder suitable for development.

[9] The PP&L site is located at 925 Grape Street, just south of the downtown core.

[10] The Southern Oregon University site is situated at the northwest corner of the city at 3600 North Pacific Highway. The two EFU sites include one on South Pacific Highway and another located on East Barnett Road. One of the industrial sites is on the south side of Medford; the other two are north side.

[11] Source is for current population estimates is the Population Research Center at Portland State University.

[12] By comparison, employment in the 4-county Southern Oregon area increased by only 50% from 1980-2000.

[13] As noted, constraints identified with currently available GIS mapping include properties affected wetland or floodplain areas. Additional research would be appropriate to identify other potential constraints related to infrastructure access – notably, roads, water and sewer.