Middle-Wage Jobs in Seattle/King County

2011 UPDATE

As a workforce intermediary seeking to better connect low-income individuals to living-wage jobs, Seattle Jobs Initiative (SJI) has focused its labor market research on identifying middle-wage jobs in our local economy. Training residents for these jobs provides an opportunity to meet the greatest skills shortage facing local employers while helping low-income and low-skill individuals advance into well-paying careers.

The purpose of this most recent work is to build on the history of information SJI has provided to identify and track middle-wage job opportunities in the Seattle-King County region. It offers another unique perspective on middle-wage jobs in the region by examining the nature of this category of opportunities and how it has changed over the last four years. Specifically, occupations that have maintained their middle-wage status through the rough economic terrain will be highlighted, and the strength of these opportunities based on both job and wage growth will be examined.

HISTORY OF SJI'S MIDDLE-WAGE JOBS RESEARCH

SJI's work on middle-wage jobs in the Puget Sound region began with our March 2008 report "Skills Required: Preparing Puget Sound for Tomorrow's Middle-Wage Jobs". This work built off research which showed that middle-*skill* jobs — those requiring some education and training beyond high school but less than a bachelor's degree — are and will continue to be abundant, making up roughly half of available jobs in the U.S.[1] and in Washington State.[2] The report drilled deeper to consider those middle-skill opportunities that can provide a middle-class income - what we term "middle-wage" jobs – while supporting Puget Sound economic growth in key industry sectors. SJI's findings confirmed that middle-wage jobs are a vital part of the local labor market, comprising **20 to 25 percent** of all jobs in the Puget Sound region and providing opportunities for many low-income and low- to middle-skilled workers to find employment and a pathway to a living wage.

Increasing interest in middle-wage jobs moved SJI to continue research into this important category of employment. In 2010, SJI took an in-depth look specifically at the important areas of Science, Technology, Engineering and Mathematics (STEM) as a key economic driver and potential creator of jobs for the greater Seattle area. These analyses revealed that, while both STEM occupations and middle-wage occupations are essential to economic health regionally, their intersection is surprisingly small, with only a handful of STEM occupations existing that provide family-supporting middle-wages without a four-year degree.

In early 2011, SJI released a series of one-page data sheets, updating statistics around key industry areas for the region. These one-pagers highlight definitions of industries and middle-wage occupations in the sectors of Green Jobs, Logistics, Health Care, Professional & Business Services, and STEM. In addition, each sheet provided employment estimates, future projections, and potential employers supporting these industries in Seattle-King County region. These quick reference tools aimed to serve as an accessible source of labor market information for a variety of consumers – job seekers, employment and training practitioners, and various workforce and economic development stakeholders – to support activities and strategies aimed at those sectors and occupations with the greatest potential for living-wage careers.

1. Harry Holzer & Robert Lerman. November 2007. "America's Forgotten Middle-Skill Jobs: Education and Training Requirements in the Next Decade and Beyond". The Workforce Alliance: Washington DC.
2. October 2009. "Washington's Forgotten Middle-Skill Jobs: 2009 – An Updated Look at Employment and Education Patterns in Washington." The Workforce Alliance: Washington DC.

REVISITING THE DEFINITION OF A MIDDLE-WAGE JOB

MIDDLE-WAGE JOB: Occupations requiring some training or education beyond high school, but not necessarily a four-year degree, and paying a living wage.

The above broad definition of a middle-wage job has been and continues to be the foundation of what SJI considers key opportunities for many low-income and low- to medium-skilled workers to find employment and a pathway to a living wage.

The wage portion of the definition has gone through some changes since its inception in SJI's original research. At that time, using data from 2004 with projections to 2014, the wage threshold for a middle-wage job was set at $17/hr. On an annual basis, assuming full-time work throughout the year, this hourly wage is equivalent to annual earnings of $35,360. In 2004, a two-earner family with both workers employed in jobs at $17/hr would have family earnings at about the median family income for King County.[3] Following these analyses, modifications were made to reflect both time and geographic changes. Specifically, for our STEM-based analyses and one-page data series, information was updated to reflect data for 2008. This increased the threshold for a middle-wage job from $17/hr in 2004 to $21/hr in 2008.

For this body of analyses, an additional modification has been made to the measure. In previous work, focus has been on using median **family** income as the wage threshold. These new analyses, however, take a look at median **household** income. While family income takes into account the earnings of those households made up of two or more people who reside together and who are related by birth, marriage or adoption, household income is more inclusive, including all the people who occupy a housing unit as their usual place of residence. Table 1 details household income and resulting breakdown thresholds for middle-wage jobs for these analyses.[4]

TABLE 1. Annual and Hourly Incomes for King County – 2007-2010

	2007	2008	2009	2010
Annual Household Income	$70,418	$70,474	$68,863	$66,174
Hourly Household Income	$33.85	$33.88	$33.11	$31.81
Hourly Individual Income †	$16.93	$16.94	$16.55	$15.91

† assuming two full-time workers in household. Source: American Community Survey, U.S. Census Bureau

The educational attainment component of the middle-wage job definition remains constant, with analyses focused on occupations that require less than a four-year degree, as defined by occupational analysts at the Bureau of Labor Statistics. Occupations are assigned to a single category that best describes the education or training needed to become fully qualified in a given occupation. Break-outs for these analyses follow the Bureau of Labor Statistics definitions on the following page for education and work experience.

3. Median Family Income in King County for 2004 was $71,814 (American Community Survey).
4. The present analyses are limited in part by a variety of missing information. In some cases, income or job numbers may be missing for a particular occupation in a particular year. When possible, proxy measures are used. For instance, for cases when an annual wage is available but no hourly wage is provided, the annual wage is divided by 2,080 hours in a work year to produce a parallel hourly measure. In other instances, judgment calls are made based on available information to determine if a particular occupation is a middle-wage job. For instance, if information is missing for an occupation for a particular year, but other years indicate wages at or above our data threshold, these occupations are included.

Most significant source of postsecondary education or training.

Postsecondary awards:

ASSOCIATE'S DEGREE. Completion of this degree usually requires at least two years of full-time academic study beyond high school. Examples include paralegals, chemical technicians, and dental hygienists.

POSTSECONDARY VOCATIONAL AWARDS. These programs lead to a certificate or other award, but not a degree. Some such programs last only a few weeks, while others may last more than a year. Occupations in this category include some that require only the completion of a training program and some that require individuals to pass a licensing exam after completion of the program before they can work. Examples include nursing aides, surgical technologists, and hairstylists and cosmetologists.

Work-related training:

WORK EXPERIENCE IN A RELATED OCCUPATION. Among the many occupations that require work experience is that of first-line supervisors or managers of service, sales, and production occupations.

LONG-TERM ON-THE-JOB TRAINING. More than 12 months of on-the-job training or, alternatively, combined work experience and formal classroom instruction are needed for workers to develop the skills to become fully qualified. This category includes formal or informal apprenticeships that may last up to five years. Long-term on-the-job training also includes intensive occupation-specific, employer-sponsored programs that workers must complete. Such programs include those offered by fire and police academies and schools for air traffic controllers and flight attendants. In other occupations – nuclear power reactor operators, for example – trainees take formal courses, often provided at the jobsite, to prepare for the required licensing exams. Individuals undergoing training usually are considered to be employed in the occupation. Also included in this category is the development of some natural ability – such as that possessed by musicians, athletes, actors, and other entertainers – that must be cultivated over several years, frequently in a nonwork setting.

MODERATE-TERM ON-THE-JOB TRAINING. Skills needed for a worker to become fully qualified can be acquired during 1 to 12 months of combined on-the-job experience and informal training. Examples include heavy and tractor-trailer truckdrivers and medical secretaries.

SHORT-TERM ON-THE-JOB TRAINING. Skills needed for a worker to become fully qualified can be acquired during a short demonstration of job duties or during one month or less of on-the-job experience or instruction. Examples include retail salespersons and waiters and waitresses.

Source: http://www.bls.gov/emp/ep_nem_definitions.htm#education. For more detailed information: http://www.bls.gov/emp/ep_education_tech.htm

2011 ANALYSES & COMPARISONS

Due to modifications in the definition of a middle-wage job, particularly around the wage component of this measure, there is some difficulty in making proper comparisons to previous analyses. However, we may see some strong general trends that are applicable to understanding how this occupational category has changed over the past four years.

In SJI's 2008 work, several industries were highlighted that were slated to potentially provide a gamut of middle-wage opportunities for the Puget Sound region. The Health Care industry ranked highest in terms of overall employment and as a supplier of middle-wage jobs. Both general labor market information and the present

analyses confirm that, despite negative effects of the recession on job growth for many local industries, Health Care remains a strong supporter of many middle-wage positions: Surgical Technologists, Registered Nurses, and Medical Secretaries lead the way in terms of strong accessible opportunities.

Conversely, the Construction industry – also highlighted in SJI's 2008 report – has been battered by the most recent economic downturn, altering the potential positive middle-wage job production associated with this industry in the original research. No middle-wage construction occupations currently reveal themselves in the data, in part due to their demand status. With many construction trades workers still on the bench, opportunities are scarce and highly competitive.

Other remaining bright spots for middle-wage jobs among sectors highlighted in SJI's 2008 report include Manufacturing, supported in large part by Aerospace, and Professional and Business Services. Manufacturing, while hit hard by the recession, has perked up, and middle-wage occupations such as welders and machinists continue to be in demand to support the growth of business in this industry. Professional and Business Services has also seen renewed energy in recent years in terms of job growth following some substantial losses. Secretaries, Paralegals, and a variety of Computer Support positions, for instance, provide opportunities for individuals to tap into this vital and growing industry sector through accessible middle-wage occupations.

In general, despite the rough economic climate brought on by the most recent recession and its dampening effect on the projections for middle-wage job growth set out in the original research, the above data update indicates that there are still a variety of opportunities available. Middle-wage jobs continue to support all industry sectors as they work to rebuild a strong local economy, and continue to provide living-wage opportunities for those with some education beyond high school but not necessarily a four-year degree.

Analyses are performed on four years of data from the Bureau of Labor Statistics for Seattle-King County. They are divided into four tiers:

TIER 1: **Middle-wage jobs reporting both job growth and wage increases over the four years examined.**

TIER 2: **Middle-wage jobs reporting job growth but no wage increases over the four year examined.**

TIER 3: **Middle-wage jobs reporting mixed growth and no wage increases over the four years examined.**

TIER 4: **Other jobs of note – reported a middle-wage at some point over the examined period.**

TIER 1: FIVE OCCUPATIONS LEAD THE WAY

A handful of occupations rise to the top, meeting the high marks of middle-wage jobs:

- Minimum hourly wage for each year examined.
- Job growth over the time examined.
- Wage growth over the time examined.
- In Demand occupations for Seattle-King County[5].

These occupations are strong options for employment both now and into the future. They report job growth even during the most recent economic recession, provide family-supporting wages, and do not require a four-year degree to be accessed.

5. Seattle-King County Demand-Decline list, 2011: https://fortress.wa.gov/esd/wilma/wdclists/WDAArea.aspx?area=000005

TABLE 2. Tier 1 Middle-Wage Jobs: Wage and Employment Growth – 2007-2010

OCCUPATION	EDUCATIONAL REQUIREMENT	2007 Jobs	2007 Median Hourly Wage	2008 Jobs	2008 Median Hourly Wage	2009 Jobs	2009 Median Hourly Wage	2010 Jobs	2010 Median Hourly Wage
Secretaries, except legal, medical, and executive	Moderate-term OJT*	10,670	$16.96	11,810	$17.22	12,490	$18.20	12,700	$18.69
Bus and truck mechanics and diesel engine specialists	Postsecondary vocational award	2,000	$22.63	2,220	$23.33	2,600	$24.18	3,190	$25.56
Biological technicians	Associate's degree	1,710	$18.78	1,810	$19.63	1,980	$19.74	2,160	$19.85
Surgical technologists	Postsecondary vocational award	530	$22.45	670	$23.07	580	$20.62	600	$22.17
Interpreters and translators	Long-term OJT*	400	$18.66	440	$19.18	580	$20.62	600	$22.17

* OJT: On-the-job training. Source: SJI analyses of Bureau of Labor Statistics Occupation Employment Statistics data.

PROFESSIONAL & BUSINESS SERVICES: Secretaries, except Legal, Medical, and Executive

A vital position in the Professional & Business Services sector, this occupational category includes a variety of titles: Administrative Assistant, Administrative Secretary, Office Assistant, Administrative Support Assistant, to name a few. These positions perform routine clerical and administrative functions such as drafting correspondence, scheduling appointments, organizing and maintaining paper and electronic files, or providing information to callers. This occupation ranks among those with the largest number of job openings, with 2,030 jobs added in the time period examined. While not identified in the previous analyses as a middle-wage option due to the previously high wage threshold, this new analysis confirms it as a strong and consistent opportunity for Seattle-King County job seekers.

Employees in these occupations need anywhere from a few months to one year of working with other experienced workers in the field. Opportunities should be best for applicants with extensive knowledge of computer software applications. Secretaries and administrative assistants are increasingly assuming responsibilities once reserved for managerial and professional staff.

LOGISTICS: Bus and Truck Mechanics and Diesel Engine Specialists

This position has repeatedly been identified as a middle-wage job opportunity in both the original 2008 research as well as the 2010 data update, and remains an occupation in demand for Seattle-King County in 2011. These occupations diagnose, adjust, repair, or overhaul trucks, buses, and all types of diesel engines.

Positions include mechanics working primarily with automobile diesel engines. Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. In addition to high school course offerings in automotive repair and electronics, programs in diesel engine repair are offered by many community colleges and trade and technical schools. Opportunities are expected to be very good for people who complete formal training programs; applicants without formal training will face competition for jobs. National certification, the recognized standard of achievement, enhances a diesel service technician's advancement opportunities.

STEM: Biological Technicians

Identified as a middle-wage job in SJI's 2010 update as well as a key STEM-based opportunity, Biological Technicians assist biological and medical scientists in laboratories. The above data show that this position added 450 jobs from 2007 to 2010, paying at least $18.50/hr. Responsibilities may include setting up, operating, and maintaining laboratory instruments and equipment, monitoring experiments, making observations, and calculating and recording results. An individual employed in such a position may also analyze organic substances, such as blood, food, and drugs. Though many individuals employed in these positions do hold a Bachelor's degree, there still exist opportunities for an individual with several years of work-related experience, on-the-job training, and/or vocational training to access these opportunities. Job opportunities are expected to be best for graduates of applied science technology programs who are well-trained on equipment used in laboratories or production facilities.

HEALTH CARE: Surgical Technologists

Surgical technologists were identified in the original 2008 research as a supplier of middle-wage jobs, and continue to surface as prime opportunities for living-wage careers. Surgical Technologists assist in operations, under the supervision of surgeons, registered nurses, or other surgical personnel. These individuals may help set up operating room, prepare and transport patients for surgery, adjust lights and equipment, pass instruments and other supplies to surgeons and surgeon's assistants, hold retractors, cut sutures, and help count sponges, needles, supplies, and instruments. Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. Training programs last 9 to 24 months and lead to a certificate, diploma, or associate's degree.

PROFESSIONAL & BUSINESS SERVICES: Interpreters and Translators

These individuals translate or interpret written, oral, or sign language text into another language for others. Interpreters and translators are employed in a variety of industries, reflecting the diversity of employment options in the field. About 28 percent worked in public and private educational institutions, such as schools, colleges, and universities. About 13 percent worked in healthcare and social assistance, many of whom worked for hospitals. Another 9 percent worked in other areas of government, such as Federal, State, and local courts. Other employers of interpreters and translators include interpreting and translation agencies, publishing companies, telephone companies, and airlines. Many interpreters and translators are self-employed; many freelance and work in this occupation only sporadically. Job prospects vary by specialty and language.

TIER 2: MIDDLE-WAGE OCCUPATIONS SHOWING GROWTH

The second tier in these analyses includes those occupations that both fit the middle-wage definition and have added jobs over the four years examined. The key difference between this group and the one prior is that wages did not increase over the time period. In fact, as the original table on wage definitions reveals, earnings decreased over this time period, an unfortunate reality of both the recession and years since its conclusion. All occupations are those identified as In Demand for Seattle-King County.

TABLE 3. Tier 2 Middle-Wage Jobs: Wage and Employment Growth – 2007-2010

OCCUPATION	2007 Jobs	2007 Median Hourly Wage	2008 Jobs	2008 Median Hourly Wage	2009 Jobs	2009 Median Hourly Wage	2010 Jobs	2010 Median Hourly Wage
ASSOCIATE'S DEGREE								
Paralegals and legal assistants	2,680	$24.38	3,280	$24.43	3,770	$24.34	3,810	$24.89
POSTSECONDARY VOCATIONAL AWARD								
Massage Therapists	840	$30.55	950	$28.98	1,130	$26.62	1,320	$28.20
WORK EXPERIENCE IN A RELATED FIELD								
First-line supervisors/managers of helpers, laborers, and material movers, hand	1,470	$22.97	1,720	$23.53	1,740	$23.19	1,770	$23.23
First-line supervisors/managers of housekeeping and janitorial workers	1,020	$18.20	1,110	$17.93	1,130	$17.71	1,260	$18.09
Chefs and head cooks	730	$22.18	770	$22.16	1,020	$18.55	1,200	$18.79
First-line supervisors/managers of landscaping, lawn service, and groundskeeping workers	750	$22.09	770	$22.75	810	$22.93	950	$22.75

Source: SJI analyses of Bureau of Labor Statistics Occupation Employment Statistics data.

TIER 3: MIDDLE-WAGE JOBS THROUGH GOOD AND BAD

The next list of occupations details the remaining middle-wage jobs that are identified as in demand for Seattle-King County in 2011. They have seen mixed results in terms of job growth and no growth in wages over the last four years. Still, they consistently present themselves as opportunities for individuals to pursue, paying family-supporting wages. Positions that reported relatively small employment numbers (less than 100 for more than one year) are not included on this list.

TABLE 4. Tier 3 Middle-Wage Jobs – 2007-2010

OCCUPATION	2007 Jobs	2007 Median Hourly Wage	2008 Jobs	2008 Median Hourly Wage	2009 Jobs	2009 Median Hourly Wage	2010 Jobs	2010 Median Hourly Wage
ASSOCIATE'S DEGREE								
Registered Nurses	22,010	$34.84	23,570	$36.29	24,690	$36.81	22,920	$37.33
Computer occupations, all other	4,670	$35.33	5,820	$40.30	6,070	$40.68	6,020	$44.30
Radiologic technologists and technicians	1,720	$30.24	1,800	$31.61	1,690	$31.53	1,780	$32.67
Medical and clinical laboratory technicians	1,340	$17.10	1,340	$17.75	1,300	$18.28	1,230	$19.29
Electrical and electronic engineering technicians	1,270	$26.90	1,170	$26.17	1,210	$26.96	1,170	$28.06
Respiratory therapists	730	$27.93	660	$29.95	720	$30.43	680	$31.61
Interior designers	600	$20.40	800	$23.65	620	$26.44	590	$23.70
Life, physical, and social science technicians, all other	580	$18.32	610	$19.32	670	$20.38	520	$22.87
Physical therapist assistants	430	$22.16	390	$23.51	370	$24.49	400	$24.59
Chemical technicians	240	$18.31	290	$17.15	190	$17.05	330	$18.22
POSTSECONDARY VOCATIONAL AWARD								
Medical secretaries	7,510	$17.63	7,560	$18.37	7,780	$19.06	1,320	$28.20
Aircraft mechanics and service technicians	4,040	$26.83	3,140	$28.87	3,070	$29.47	4,390	$25.87
Licensed practical and vocational nurses	3,340	$21.93	3,170	$22.40	3,190	$22.37	3,060	$22.93
Fitness trainers and aerobics instructors	3,300	$20.04	2,880	$18.85	3,190	$19.19	3,320	$20.03
Travel agents	2,340	$18.05	**	$17.05	1,220	$18.49	960	$19.59
Legal secretaries	2,140	$22.90	2,400	$22.75	2,250	$24.45	2,240	$23.54
Architectural and civil drafters	2,020	$21.32	2,200	$20.20	1,990	$20.43	1,270	$22.43
Electrical and electronics repairers, commercial and industrial equipment	1,680	$29.45	990	$31.38	830	$33.09	770	$33.37
Real estate sales agents	1,590	$21.94	1,610	$19.87	1,570	$17.88	1,190	$16.15
Health technologists and technicians, all other	1,490	$23.32	1,330	$24.23	1,470	$21.99	1,490	$21.97
Computer, automated teller, and office machine repairers	1,440	$19.73	960	$19.01	930	$18.00	820	$17.20

TABLE 4. Tier 3 Middle-Wage Jobs – 2007-2010, cont'd

OCCUPATION	2007 Jobs	2007 Median Hourly Wage	2008 Jobs	2008 Median Hourly Wage	2009 Jobs	2009 Median Hourly Wage	2010 Jobs	2010 Median Hourly Wage
POSTSECONDARY VOCATIONAL AWARD, CONT'D								
Security and fire alarm systems installers	870	$19.30	570	$19.13	420	$21.12	280	$24.03
Medical transcriptionists	780	$19.10	1,110	$17.76	910	$19.27	1,020	$17.97
WORK EXPERIENCE IN A RELATED FIELD								
First-line supervisors/managers of office and administrative support workers	13,950	$24.62	14,100	$25.17	13,400	$25.55	12,690	$26.18
First-line supervisors/managers of retail sales workers	9,500	$20.59	9,930	$19.33	9,040	$18.40	10,120	$19.58
First-line supervisors/managers of food preparation and serving workers	6,620	18.18	7,550	$17.56	7,500	$17.75	6,480	$17.92
First-line supervisors/managers of production and operating workers	5,350	$28.97	5,490	$30.69	5,000	$31.16	4,590	$30.66
Purchasing agents, except wholesale, retail, and farm products	5,020	$29.90	5,200	$30.43	5,080	$30.89	5,010	$31.43
First-line supervisors/managers of non-retail sales workers	5,020	$37.78	5,310	$36.22	4,820	$35.57	4,290	$34.77
Managers, all other	4,790	$49.96	5,040	$50.05	5,130	$49.17	4,410	$49.87
First-line supervisors/managers of mechanics, installers, and repairers	3,790	$32.24	3,720	$32.50	3,540	$33.33	3,760	$33.00
First-line supervisors/managers of transportation and material-moving machine and vehicle operators	2,780	$29.05	2,560	$29.36	2,480	$29.61	2,960	$27.34
Industrial production managers	1,200	$47.52	1,270	$48.45	1,220	$49.28	1,350	$47.39
Food service mangers	740	$36.19	1,000	$27.58	1,100	$28.74	**	$38.94
First-line supervisors/managers, protective service workers, all other	460	$25.97	490	$26.99	490	$28.02	600	$29.48
Real estate brokers	420	$33.18	480	$35.51	340	$38.89	350	$37.07
LONG-TERM ON-THE-JOB TRAINING								
Carpenters	14,470	$23.99	16,210	$24.54	13,810	$24.42	10,340	$24.85
Welders, cutters, solderers, and brazers	3,080	$20.94	2,560	$21.05	2,290	$21.47	2,060	$21.32
Machinists	2,730	$21.64	3,240	$22.57	2,980	$22.73	2,900	$23.34
Industrial machinery mechanics	1,860	$25.08	1,930	$26.00	1,640	$27.19	1,920	$28.77
Media and communication workers, all other	1,040	$23.64	1,010	$24.70	1,250	$25.50	830	$23.24

TABLE 4. Tier 3 Middle-Wage Jobs – 2007-2010, cont'd

OCCUPATION	2007 Jobs	2007 Median Hourly Wage	2008 Jobs	2008 Median Hourly Wage	2009 Jobs	2009 Median Hourly Wage	2010 Jobs	2010 Median Hourly Wage
LONG-TERM ON-THE-JOB TRAINING, CONT'D								
Musicians and singers	890	$22.46	900	$26.02	560	$26.22	680	$32.45
Butchers and meat cutters	850	$20.98	780	$21.86	610	$21.50	890	$20.19
Fine artists, including painters, sculptors, and illustrators	320	$22.42	260	$20.99	**	$24.20	180	$23.35
Home appliance repairers	**	$17.92	590	$18.71	560	$19.47	320	$22.81
MODERATE-TERM ON-THE-JOB TRAINING								
Bookkeeping, accounting, and auditing clerks	22,530	$17.60	24,640	$18.04	21,360	$18.47	18,590	$18.78
Sales representatives, wholesale and manufacturing, except technical and scientific products	19,320	$24.15	19,980	$25.42	17,850	$25.58	16,800	$28.89
Truck drivers, heavy and tractor-trailer	12,310	$19.41	11,840	$20.54	11,080	$20.69	10,160	$21.10
Executive secretaries and administrative assistants	11,930	$21.53	12,050	$22.36	10,840	$23.16	9,090	$24.00
Maintenance and Repair Workers, General	11,070	$18.71	10,100	$18.63	9,630	$19.85	9,830	$20.40
Sales representatives, services, all other	9,100	$26.12	8,630	$27.87	7,790	$28.08	7,220	$26.10
Sales representatives, wholesale and manufacturing, technical and scientific products	7,750	$34.23	7,260	$36.77	7,830	$35.11	6,780	$40.30
Billing and posting clerks and machine operators	5,740	$17.26	5,080	$17.59	4,570	$17.94	4,580	$18.46
Sales and related workers, all other	5,000	$20.13	4,820	$19.80	3,440	$18.32	2,750	$18.95
Inspectors, testers, sorters, samplers, and weighers	4,360	$21.93	4,760	$24.33	4,550	$24.77	4,420	$25.76
Dental assistants	4,080	$18.74	4,300	$18.56	4,560	$18.52	4,270	$19.43
Pharmacy technicians	2,200	$17.17	2,430	$17.77	2,970	$17.84	2,960	$18.17
Dispatchers, except police, fire, and ambulance	2,060	$19.02	2,070	$19.12	2,050	$18.77	1,690	$20.31
Advertising sales agents	1,890	$25.07	1,930	$23.86	1,650	$21.88	1,840	$22.14
Payroll and timekeeping clerks	1,850	$19.24	1,950	$19.64	1,960	$20.38	1,590	$20.84
Computer-controlled machine tool operators, metal and plastic	1,630	$20.51	2,060	$22.58	1,870	$23.80	2,020	$23.84
Cargo and freight agents	1,520	$23.17	1,810	$21.79	1,700	$21.97	1,470	$22.41

TABLE 4. Tier 3 Middle-Wage Jobs – 2007-2010, cont'd

OCCUPATION	2007 Jobs	2007 Median Hourly Wage	2008 Jobs	2008 Median Hourly Wage	2009 Jobs	2009 Median Hourly Wage	2010 Jobs	2010 Median Hourly Wage
MODERATE-TERM ON-THE-JOB TRAINING, CONT'D								
Computer operators	1,200	$19.53	1,150	$20.70	870	$21.36	820	$21.76
Construction and related workers, all other	520	$17.08	550	$18.55	620	$19.59	530	$20.70
Brokerage clerks	510	$19.16	580	$19.21	660	$19.95	560	$19.70
Pest control workers	270	$18.06	280	$18.29	280	$16.82	260	$19.67
SHORT-TERM ON-THE-JOB TRAINING								
Industrial truck and tractor operators	6,480	$17.12	6,460	$17.52	5,240	$18.41	4,570	$18.14
Production, planning, and expediting clerks	3,550	$20.68	3,940	$21.00	4,010	$21.57	3,140	$22.17
Loan interviewers and clerks	3,010	$18.26	2,130	$18.51	2,200	$19.24	1,880	$18.61
Human resources assistants, except payroll and timekeeping	1,920	$18.06	1,890	$18.61	1,660	$18.98	1,430	$19.19
Refuse and recyclable material collectors	630	$20.11	800	$21.05	1,040	$22.21	970	$22.46

TIER 4: OCCUPATIONS ON THE CUSP

The final list of occupations are those that have qualified as middle-wage jobs at some point over the time period examined, but have fallen below the threshold for a middle-wage at other points in time. All occupations reported below are identified as In Demand opportunities for Seattle-King County.

TABLE 5. Tier 4 Middle-Wage Jobs: Qualifying Occupations at Least Once – 2007-2010

OCCUPATION	2007 Jobs	2007 Median Hourly Wage	2008 Jobs	2008 Median Hourly Wage	2009 Jobs	2009 Median Hourly Wage	2010 Jobs	2010 Median Hourly Wage
ASSOCIATE'S DEGREE								
Computer support specialists	7,820	$23.23	7,720	$23.14	7,930	$23.63	--	--
Medical records and health information technicians	1,990	$16.50	1,980	$17.34	1,830	$17.93	2,220	$18.27
POSTSECONDARY VOCATIONAL AWARD								
Computer operators	1,200	$19.53	1,150	$20.70	870	$21.36	820	$21.76

TABLE 5. Tier 4 Middle-Wage Jobs: Qualifying Occupations at Least Once – 2007-2010, cont'd

OCCUPATION	2007 Jobs	2007 Median Hourly Wage	2008 Jobs	2008 Median Hourly Wage	2009 Jobs	2009 Median Hourly Wage	2010 Jobs	2010 Median Hourly Wage
LONG-TERM ON-THE-JOB TRAINING								
Coaches and scouts	2,980	$16.40	2,560	$17.93	2,530	$15.72	2,930	$14.75
Actors	670	$21.68	620	--	550	--	450	$15.58
MODERATE-TERM ON-THE-JOB TRAINING								
Customer service representatives	18,310	$15.60	17,440	$15.75	17,310	$15.90	15,570	$16.67
Medical assistants	4,120	$16.29	4,460	$16.63	4,780	$16.83	4,970	$16.77
Parts salespersons	1,800	$15.98	2,210	$16.41	2,010	$17.52	2,050	$16.57
Multiple machine tool setters, operators, and tenders, metal and plastic	630	$17.72	540	$18.78	340	$18.26	340	--
Welding, soldering, and brazing machine setters, operators, and tenders	60	$29.49	100	$18.28	230	$15.93	300	$16.79
SHORT-TERM ON-THE-JOB TRAINING								
Shipping, receiving, and traffic clerks	10,280	$15.02	10,960	$16.23	10,000	$16.34	8,490	$17.09
Security guards	8,630	$12.87	8,490	$14.82	7,970	$17.17	7,800	$17.83
Bill and account collectors	3,450	$17.22	3,360	$17.29	2,890	$16.36	2,850	$16.82
Bus drivers, school	3,240	$16.80	3,150	$17.38	3,450	$18.05	3,590	$18.66
Order clerks	3,090	$15.57	3,010	$15.96	4,270	$16.50	4,610	$16.76
Interviewers, except eligibility and loan	3,030	$14.96	2,980	$15.90	2,620	$16.34	2,420	$16.17
Reservation and transportation ticket agents and travel clerks	1,910	$17.09	2,250	$14.93	2,540	$13.98	2,030	$13.82
Healthcare Support Workers, All Other	--	$15.09	2,040	$15.33	2,410	$15.56	2,490	$16.40
Engine and other machine assemblers	1,800	$17.58	--	--	--	--	520	$16.15
Transportation workers, all other	1,270	$13.44	**	$18.99	680	$20.31	600	$19.83
Weighers, measurers, checkers, and samplers, recordkeeping	570	$17.03	590	$16.79	510	$14.57	550	$14.65

Sources: Bureau of Labor Statistics Occupational Outlook Handbook, O*Net Online, Workforce Explorer, EMSI, Bureau of Labor Statistics Occupation and Employment Statistics.