Washington State Snapshot

Construction was one of Washington's biggest stars in terms of economic for many years, especially in regards to employment growth. Over 215,000 people worked in Washington's construction cluster in 2001. This figure increased 25% to over 268,242 by 2008. Employment began dropping in 2008 as a result of issues in the sub-prime loan market and a stalled housing market. The industry experienced even more drops in employment, a 27% decrease from 2008, as a result of the Great Recession. Construction continues to be weak[1], showing the greatest declines from 2010 to 2011 as compared to other clusters. The chart below shows the dramatic increase and decrease in construction growth as compared to the national growth rate.

Slow economic growth will hinder growth in this cluster and it could be years before construction industries return to full health. The silver lining is that effects of the current economic climate and housing market have been more moderate in Washington that in many other parts of the country and the construction industry is showing signs of rebounding.

Snohomish County Snapshot

The North American Industrial Classification System (NAICS) is the current industry classification standard in the United States. The table below depicts NAICS codes[2] for the Snohomish County construction cluster.

NAICS Code	Industry Title
2361	Residential building construction
2362	Nonresidential building construction
2371	Utility system construction

2372	Land subdivision
2373	Highway, street, and bridge construction
2379	Other heavy construction and civil engineering construction
2381	Foundation, structure, and building exterior contractors
2382	Building equipment contractors
2383	Building finishing contractors
2389	Other specialty trade contractors

Employment

The Snohomish County construction cluster employs over 21,000 workers. Employment within the cluster decreased 3% from 2001 and 1% from 2011. Data forecasts that construction jobs will remain steady through 2015. The table below shows industry makeup and average earnings per worker in each industry within the construction cluster.

NAICS Code	Industry Title	2012 Jobs	2015 Jobs	% Change	Earnings Per Worker
2361	Residential building construction	2,751	2,660	(-3%)	$56,053
2362	Nonresidential building construction	917	836	(-9%)	$67,624
2371	Utility system construction	908	876	(-4%)	$78,904
2372	Land subdivision	239	241	1%	$66,814
2373	Highway, street, and bridge construction	665	679	2%	$70,179
2379	Other heavy construction and civil engineering construction	348	359	3%	$60,057
2381	Foundation, structure, and building exterior contractors	3,417	3,360	(-2%)	$53,090
2382	Building equipment contractors	4,384	4,636	3%	$66,721
2383	Building finishing contractors	5,109	5,181	1%	$40,373
2389	Other specialty trade contractors	2,641	2,650	0%	$47,606
		21,379	**21,380**	**0%**	**$55,090**

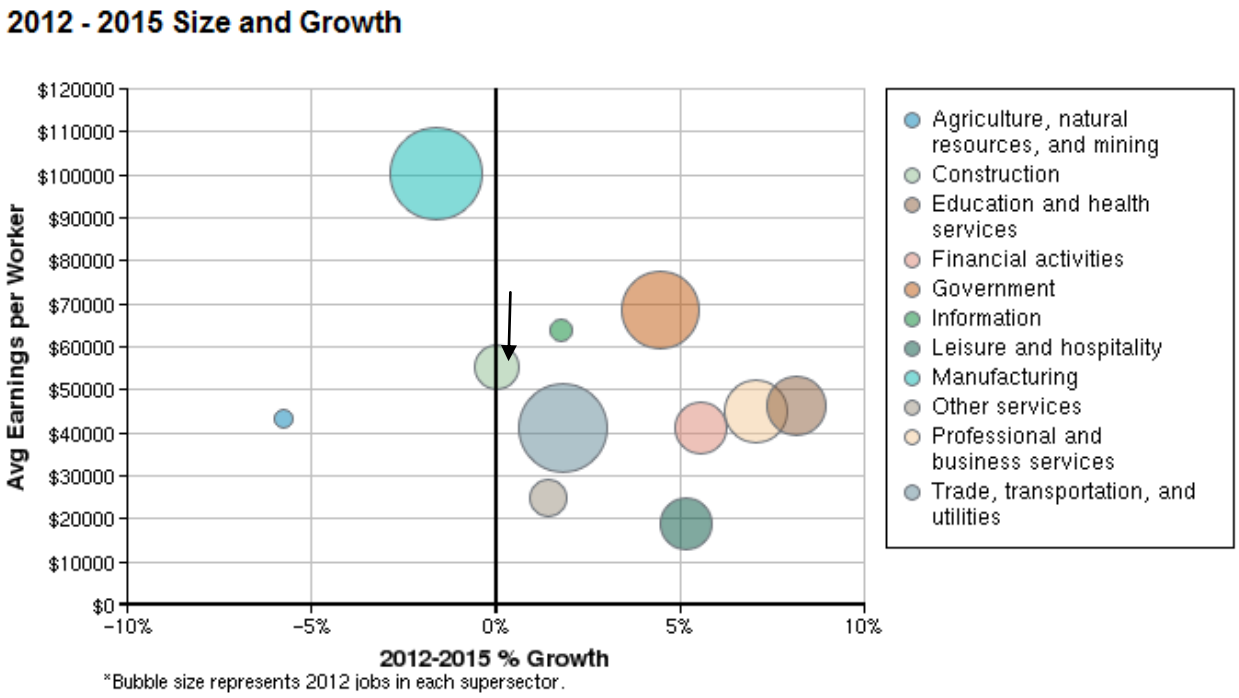
The table below shows the job forecast among the Snohomish County construction cluster's top ten occupations.

SOC Code	Occupation Title	Jobs	% of Industry
47-2031	Carpenters	3,5420	16%
47-2061	Construction laborers	1,958	9%
11-9021	Construction managers	1,467	7%
47-2141	Painters, construction and maintenance	1,385	6%
47-1011	First-line supervisors/managers of construction trades and extraction workers	1,349	6%

47-2111	Electricians	1,315	6%
47-2152	Plumbers, pipefitters, and steamfitters	889	4%
47-2181	Roofers	754	4%
47-2073	Operating engineers and other construction equipment operators	548	3%
47-2081	Drywall and ceiling tile installers	400	2%

An aging workforce is a challenge facing most clusters in Snohomish County. Construction is quickly running out of time as industry baby boomers prepare for retirement; the average construction worker is 52 years old. Construction employers can expect a large-scale exodus of older workers[3] in coming years. In an industry where retirement tends to come early and knowledge is passed down on the job, it is critical that more young people enter into the construction cluster[4], especially as demand for workers continues to rise as the economy begins to rebound from the economic crisis.

The figure below shows that while construction (indicated with an arrow) is forecasting moderate growth in the number of workers through 2015 and moderate average earnings per worker compared to other industries.



Spending and Activity

The construction issue that made news headlines across the nation was the slump in the housing market followed by the Great Recession. Fortunately, there has been increased spending and activity[5] in the construction of nonresidential buildings. Spending in this area increased near the end of 2011 leading to

an annual statewide spending rate of $816.4 billion, the highest level in nearly two years. The brisk pace of nonresidential building in the region helped cushion the construction cluster from the impact of the housing slump. Spending on nonresidential construction in the Seattle area jumped 3.3% in 2011 compared to the 0.8% increase in residential construction. The ongoing boom in construction of nonresidential buildings has resulted in heavy construction being a hotspot of this cluster in Snohomish County. The other hotspot, green building, is highlighted below.

Hotspot – Green Building

Green building refers to the design, engineering, construction, and management of the built environment that incorporates passive solar, energy efficient products, energy management tools, sustainable materials, and other design and building techniques that make buildings more resource efficient to build, operate, and maintain. Green building includes architecture and design, engineering, construction and installation, and building or facilities management (green building maintenance) and pertains to residential, industrial, and commercial buildings.

Green building is the fastest-growing trend in the construction cluster[6]. Green building is also the largest clean technology industry in the Puget Sound region with an estimated 8,800 jobs and at least 38% of all clean technology employment in the region. It is a significant part of the economy. In an economic climate where other sectors have seen minimal employment growth, clean technology has seen an annual average employment growth rate of 4.2% since 2002 with green building specifically seeing even higher growth rates. The green building industry is one of the greatest competitive advantages for the Puget Sound region.

Green building will continue growing[7] in 2012; there is nothing on the horizon that will stop this trend. People are greening buildings of many types and scales and barriers to building green diminish more each year. The Cascadia Region Green Building Council[8] is one of the three original chapters of the U.S. Green Building Council[9] and covers Oregon, Washington, and British Columbia. The Council's mission is to promote the design, construction, and operation of buildings in the Pacific Northwest that are environmentally responsible, profitable, and healthy places to live, work, and learn. Seattle adopted a sustainable building policy and became the first city in the nation[10] to adopt LEED[11], the Council's green building rating system, as the municipal design standard and performance measurement tool. In Snohomish County, the Sustainable Development Task Force of Snohomish County[12] is dedicated to facilitating the adoption of sustainable development strategies and the construction of green building projects throughout the county.

A major green building trend reshaping the construction industry is the growth of retrofitting, especially in the Puget Sound. Evidence suggests that retrofitting will grow sharply in the Puget Sound region. According to Dean Allen, CEO of the Seattle-based and nationally recognized McKinstry[13], retrofitting of

commercial buildings is 70% of the company's business activity versus green construction which is 30%. This sentiment is echoed by the Master Builders Association of King and Snohomish Counties[14] which has seen a decline in new construction but an increase in the need for energy efficiency testing, planning, and implementation.

Education and Training

O*NET Online[15] offers a profile of each occupation in the construction cluster[16] including: common tasks and activities performed by workers, tools and technology used in the workplace, KSAs (knowledge, skills, and abilities) required to be successful, levels of education and training required to be competitive, work styles and values most commonly found among top workers, national and state wage and employment trends, and related occupations for individuals looking to enter construction from another cluster or looking to exit construction and move into another cluster. These occupation profiles provide rich information and are a valuable first step to exploring a career in construction.

Construction jobs offer high salaries and excellent upward career mobility. Even so, companies in the construction cluster have trouble recruiting employees with adequate skills and experience. Even though informal on-the-job training followed by formal on-the-job training is common, workers must enter into their on-the-job training with basic skills such as technical competence, ability to follow directions, ability to work independently, and creative problem solving. Challenges related to an insufficient number of skilled workers in the construction career pipeline have not gone unnoticed. Several local education, training, and workforce development programs have been established to increase awareness of careers in the construction cluster and train and recruit qualified workers to fill current and future workplace vacancies.

Local partners joined forces in 2007 to offer high school students a Construction Carnival[17]. The event, which has repeated several times since, offers a day of hands-on demonstrations and features members of the building and construction trades with a goal of exciting high school students about careers in this cluster. With teams of journeymen on site to answer questions and offer students the opportunity to try their hands at a number or jobs, the hundreds of high school students who attend are afforded the change to see and feel what it's like to work in construction. The event leaves a lasting positive impact on students, and goes a long way toward shattering the impression that the Construction cluster only offers low-paying, cyclical jobs. Instead, students learn they can start an apprenticeship at $20 per hour while learning an exciting trade.

Washington State Skills Centers[18] are an integral part of the K-12 school system, operating as an extension of the high schools within a local region by providing high school students industry defined technical education combined with job preparation skills. The purpose of any Skills Center is to give

students the academic and work skills required to successfully enter the job market or enroll in advanced educating and training. In Washington State, 85 school districts are members of a skills center consortium. The Sno-Isle Tech Skills Center[19] offers technical training for high school students in Snohomish County. Sno-Isle offers courses in different career pathways, including trade and industry, and prepares students to be successful in a high-tech workforce and/or go on to further education and training. The Construction Trades course[20] is run as realistically as possible to resemble a construction company, thus allowing students to be introduced to cluster occupations.

Apprenticeships[21] are another method of climbing the construction career tree[22]. People who complete apprenticeship programs earn an average of $53,000 per year plus benefits and can move into supervisory positions in just a few years. The apprenticeship model helps participants attain high performance through a combination of formal instruction and hands-on learning.

At the post-secondary level, the Everett Community College apprenticeship program[23] actively promotes and increases apprenticeships and Edmonds Community College offers several course of study through its Construction Management[24] and Construction Industry Training[25]. Cascadia Community College offers a variety of green economic professional technical programs[26] that qualify students for jobs in the green building economy as well as engineering programs[27] that could lead to a career in construction.

In addition to recruiting more young workers, the construction community has also rallied around attracting more women into the trades. Less than 3% of workers in the construction cluster are women, a figure Washington Women in Trades[28] hopes to increase. Washington Women in Trades is a community-based, non-profit organization whose mission is to improve women's economic equity and self-sufficiency through access and success in high-wage, high-skilled careers in construction, manufacturing, and transportation. The organization's most publicly visible project has been the Washington Women in Trades Career Fair[29] held every spring at the Seattle Center.

Apprenticeship and Nontraditional Employment for Women[30] (ANEW), based out of Seattle, provides outreach and training to low-income women and minorities who may not otherwise know of the opportunities available in construction or who face barriers to employment in the cluster. Established in 1980, ANEW is the longest continually operating pre-apprenticeship training program in the country.

Additionally, construction workers looking to move into higher level positions could benefit from participating in various forms of continuing education to develop the KSAs needed to become a supervisor or manager.

Innovation, Entrepreneurship, and Sustainability

Innovation in the construction cluster offers the potential for significant benefits to companies and communities. The Construction Center of Excellence[31] (CCE) at Renton Technical College is Washington's innovation hub for this cluster. The CCE reaches over 3,600 stakeholders in Washington and over 370 partners in 45 states in the nation. The primary charge of the CCE is to: 1) serve as a point-of-contact and resource hub for industry trends, best practices, innovative curriculum, and professional development opportunities and 2) maximize resources by bringing together workforce education and industry partners in order to develop highly-skilled employees. Some of the CCE's innovative new endeavors[32] in 2010-2011 included the first annual STEM conference, continuation of the Veterans Pathways to Apprenticeship program, and the sixth annual energy and construction best practices summit. The CCE also hosted a number of events focused on green building and sustainability. Additional information about sustainability in the construction cluster can be found in the green building hotspot section, above.

Conclusion

This cluster will rebound despite the current slump it is facing. This rebound will take a number of years. However, when it does, demand for construction workers will improve and competition for jobs will be high as contracts start coming in and businesses begin hiring.

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