

# **The Greening of Oregon's Workforce**

***Jobs, Wages, and Training***

**SOSI ESD Zone B**

**April 23, 2010**

**Support Business & Promote Employment**

[www.WorkSourceOregon.org](http://www.WorkSourceOregon.org)



## We defined “Green Job” ...

- For our survey, a green job is one that provides a service or produces a product in any of the following categories:
  1. Increasing energy efficiency
  2. Producing renewable energy
  3. Preventing, reducing, or mitigating environmental degradation
  4. Cleaning up and restoring the natural environment
  5. Providing education, consulting, policy promotion, accreditation, trading and offsets, or similar services supporting any of the other categories

*Note: we wanted one or more of these things to be an “essential function” of the job.*



## We surveyed Oregon businesses ...

- In early 2009, surveyed 10,500 employers in all industries across the state
- We asked them the following:
  - How many jobs in 2008 included green activities as an essential part of the job
  - The minimum education required for these jobs
  - The types of special training, certification, or other requirements that exist for these jobs
  - The wages associated with these jobs
  - How many of these jobs they expect to have in 2010

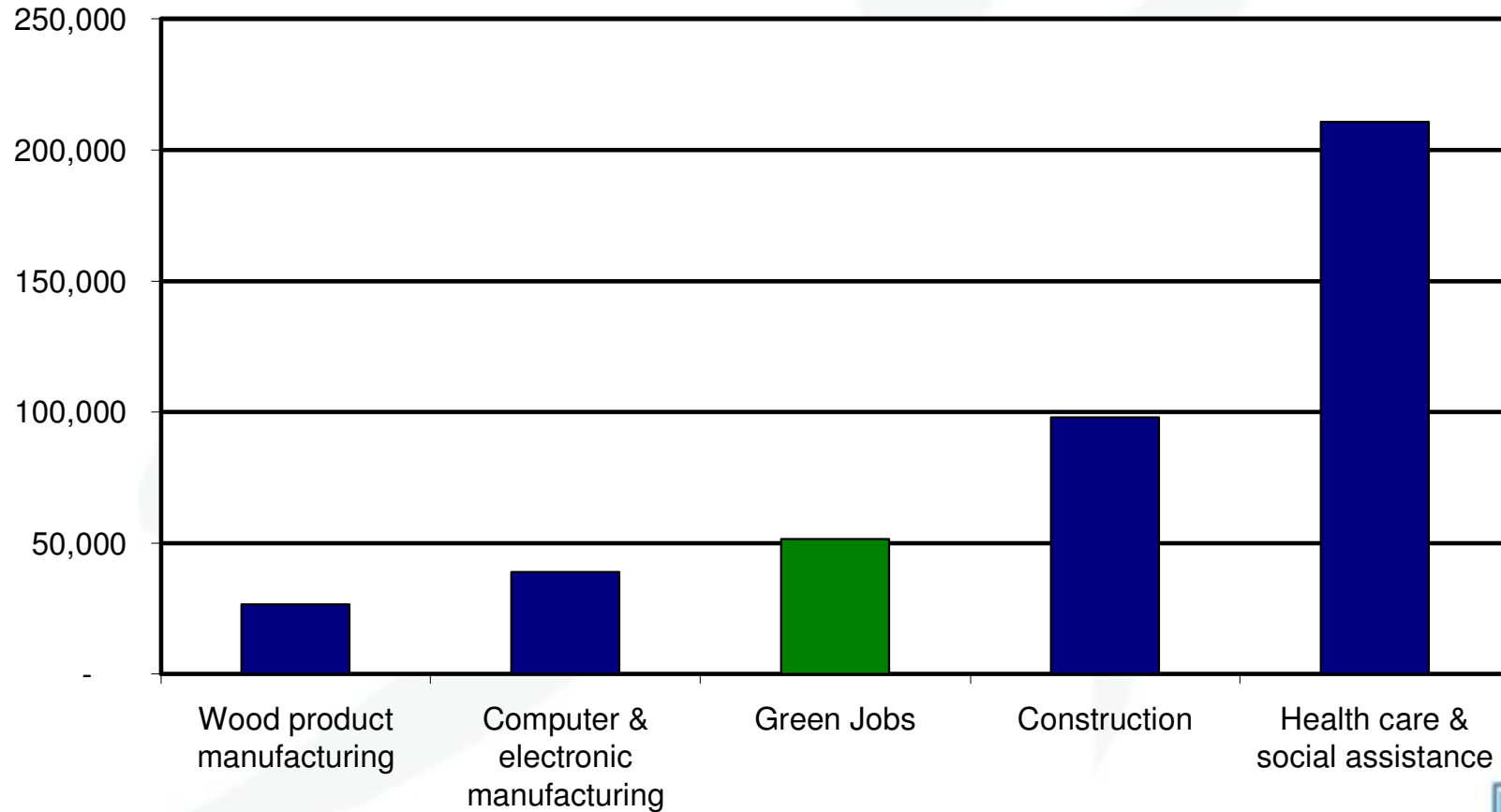


## Key Finding: Oregon has roughly 51,000 green jobs.

- 51,402 green jobs in 2008, spread across...
  - 5,025 employers
  - all major industry groups
  - 226 different occupations
- Represents about 3 percent of the employment in the private sector and state and local government
- To give perspective ... this is roughly the same as the number of employees working in Oregon's private hospitals.



## Oregon's Green Jobs Relative to Other Industries, 2008



Source: Oregon Employment Department, Quarterly Census of Employment and Wages (QCEW)



## Construction, wholesale and retail trade, and administrative and waste services account for about half of Oregon's green jobs.

<b>Industry</b>	<b>Green Jobs</b>	<b>Portion of All Green Jobs</b>
Construction	8,676	17%
Wholesale and Retail Trade	8,315	16%
Administrative and Waste Services	7,074	14%
Natural Resources and Mining	5,762	11%
Professional and Technical Services	5,411	11%
State and Local Government	5,063	10%
Manufacturing	4,228	8%
Leisure and Hospitality	2,260	4%
Other Services	1,555	3%
Educational and Health Services	1,353	3%
Transportation and Warehousing	573	1%
Utilities	403	Less Than 1%
Information	354	Less Than 1%
Management of Companies and Enterprises	252	Less Than 1%
Financial Activities	123	Less Than 1%
<b>Total</b>	<b>51,402</b>	<b>100%</b>



## Key Finding: Many green jobs are in blue collar occupations.

<b>Occupational Group</b>	<b>Green Jobs</b>	<b>Portion of All Green Jobs</b>
Construction and Extraction	10,381	20%
Production	6,512	13%
Farming, Fishing, and Forestry	5,838	11%
Transportation and Material Moving	5,255	10%
Architecture and Engineering	4,360	8%
Life, Physical, and Social Science	4,135	8%
Building and Grounds Cleaning and Maintenance	2,877	6%
Sales and Related	2,437	5%
Installation, Maintenance, and Repair	2,233	4%
Management	1,639	3%
Office and Administrative Support	1,570	3%
Protective Service	1,032	2%
Education, Training, and Library	790	2%
Business and Financial Operations	683	1%
Food Preparation and Serving Related	513	1%
Arts, Design, Entertainment, Sports, and Media	480	1%
Other	667	1%
<b>Total</b>	<b>51,402</b>	<b>100%</b>



## Eleven occupations had at least 1,000 green jobs.

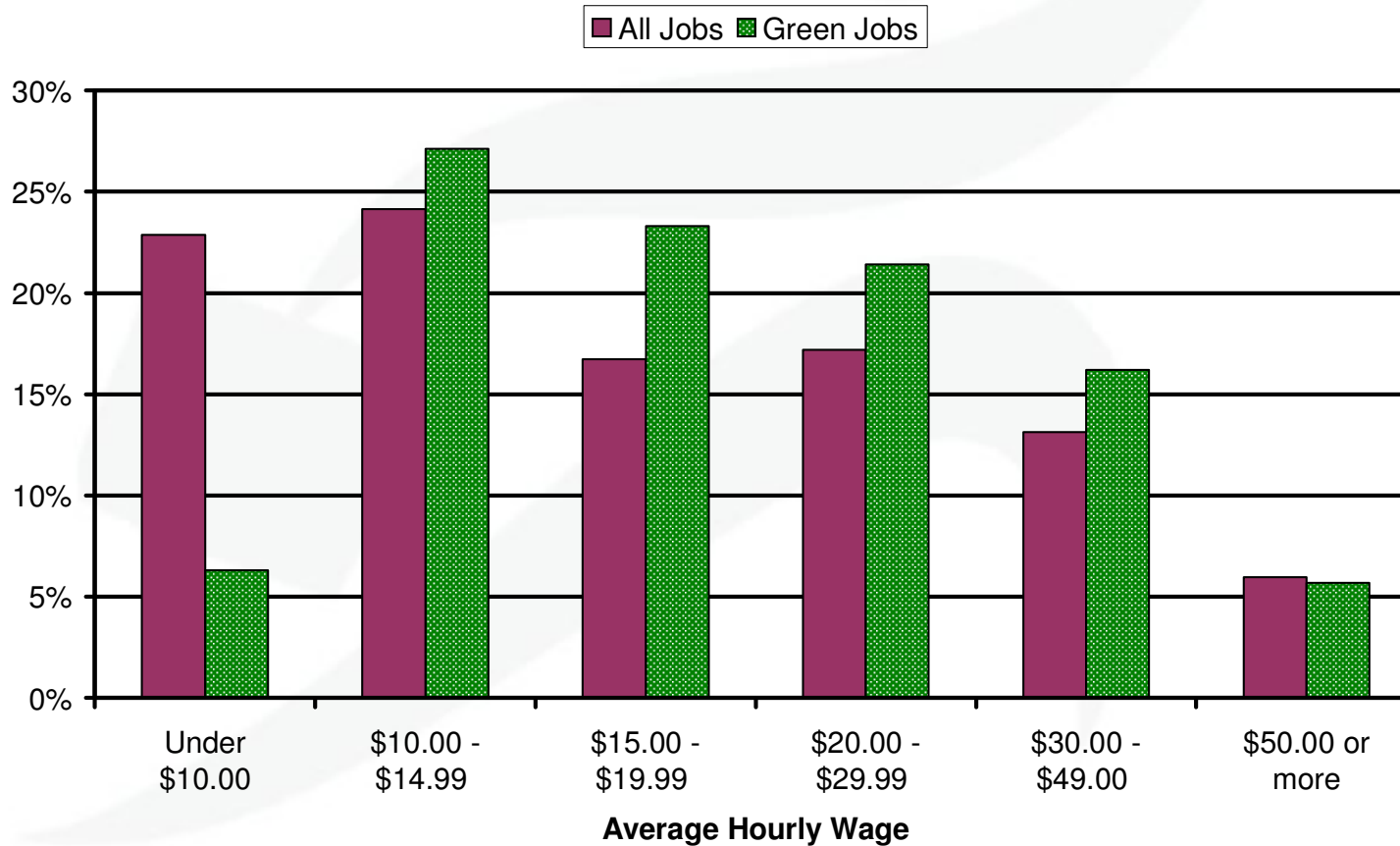
### Top 11 Occupations with More Than 1,000 Green Jobs Examples of Green Work From the Oregon Green Jobs Survey

Occupation	Selected Green Job Description and Employer
Carpenters (4,025 jobs)	"home weatherization" - local community action center "energy efficiency construction" - temp agency
Farmworkers and Laborers (3,189 jobs)	"herbsman" - 100% organic dairy "Assistant grower" - organic nursery
Truck Drivers (2,337 jobs)	"compost truck driver" - waste management company "truck drivers" - biomass company
Hazardous Materials Removal Workers (2,123 jobs)	"asbestos abatement worker" - remediation business "special waste technician" - at county waste center
Landscaping and Groundskeeping Workers (2,044 jobs)	"riparian crew leader" - local watershed restoration "restoration of native plants" - forestry consulting firm
Civil Engineers (1,889 jobs)	"civil inspector" - wind energy firm "LEED AP Project Engineer" - construction company
Production Workers (1,728 jobs)	"paper machine tender" - mill making 100% recycled paper "processing recycling" - oil recycler
Freight, Stock, and Material Movers (1,628 jobs)	"sorter" - recycling company "auto parts dismantler" - auto salvage yard
Retail Salespersons (1,149 jobs)	"sells systems, customer care" - solar panel retailer "retail manager" - organic nursery
Biological Technicians (1,115 jobs)	"Coho life cycle monitoring" - local watershed "fisheries technician" - tribal government
Fire Fighters (1,021 jobs)	"rehab after fires, forest hazard fuel reduction" - environmental consulting firm



## But very few green jobs pay very low wages ...

Percent of Green Jobs and All Jobs by Wage Group



Source: Oregon Employment Department



**Key Finding: “On average, green jobs tended toward slightly higher wages than jobs across the entire economy.”**

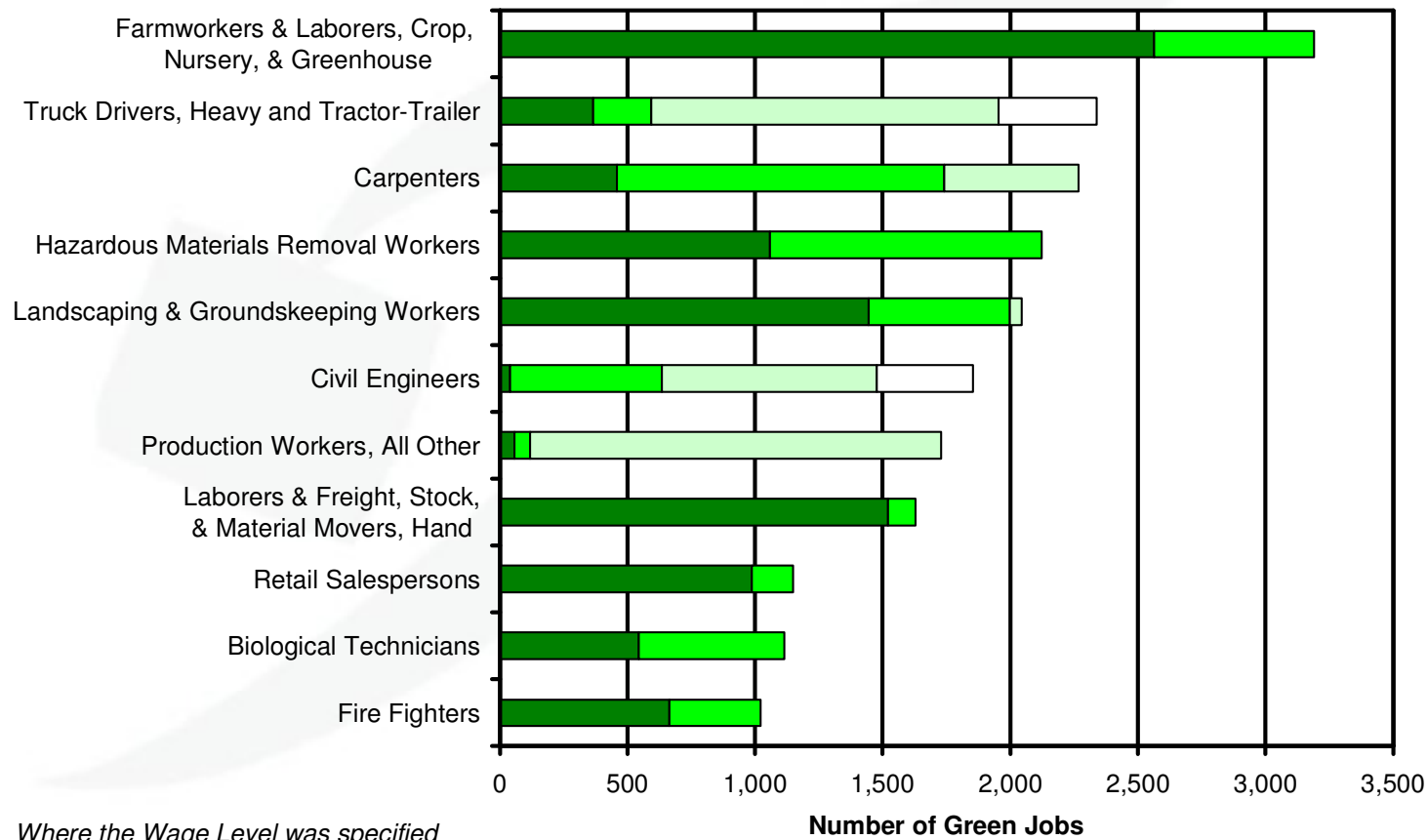
- Average wage for all jobs: \$19.92 per hour
- Average wage for green jobs: \$22.61 per hour
- Half of all jobs pay \$15.22 or more per hour
- About 2/3 of all green jobs pay \$15.00 or more per hour
- Occupation mix explains some of the difference, but not all



# Green wage levels depend on the occupation

## Top 11 Green Occupations by Hourly Wage

■ Less Than \$15   
 ■ \$15 to \$24.99   
 ■ \$25 to \$49.99   
  \$50 or More

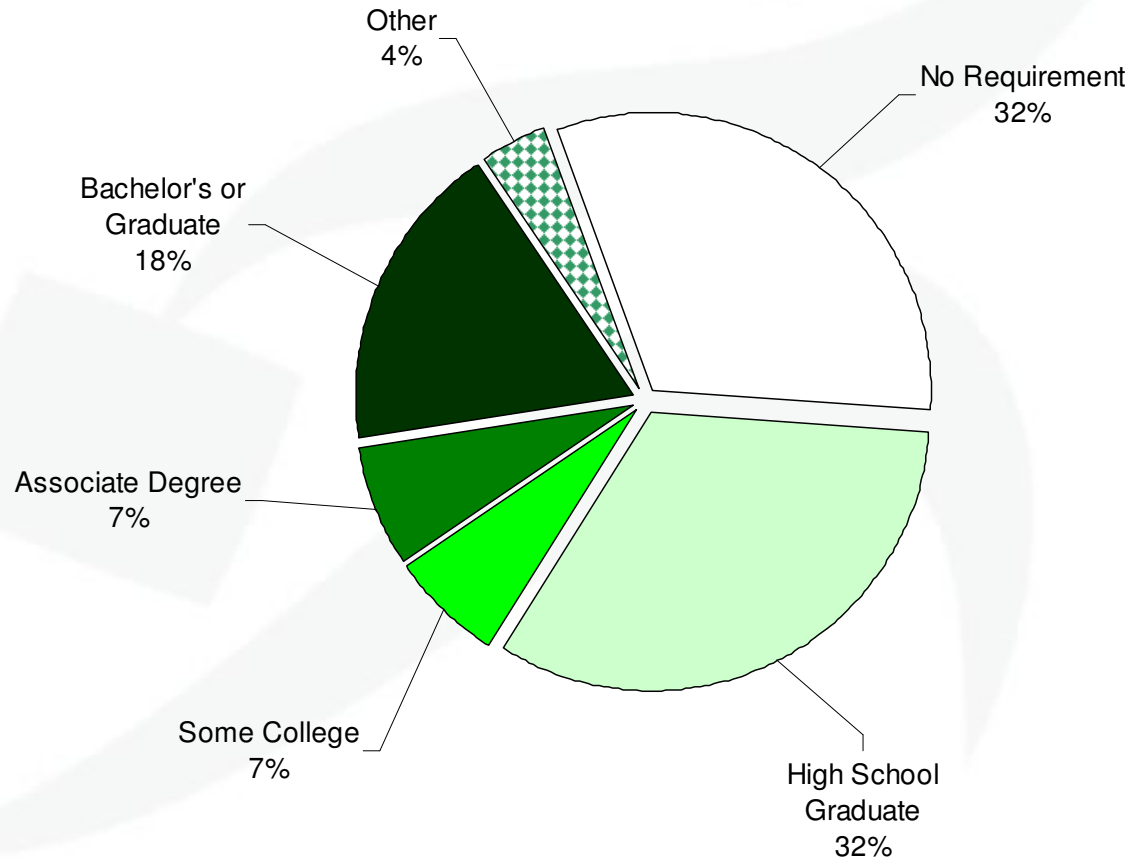


Where the Wage Level was specified



# Key Finding: Two-thirds of green jobs require no education beyond high school.

Green Jobs by Minimum Education Level Oregon, 2008

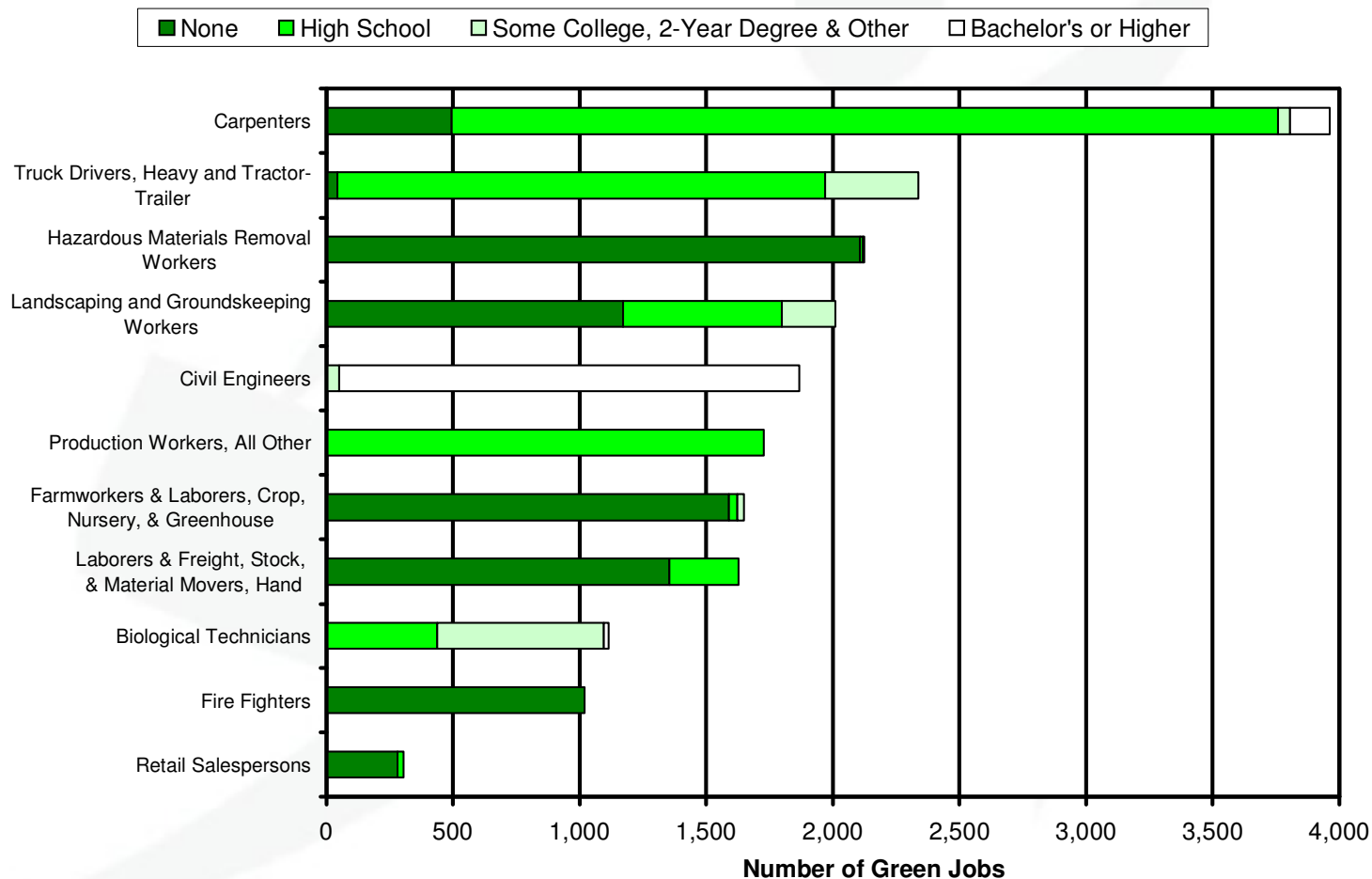


*Where the Minimum Education Level was specified*



# Education requirements vary widely by occupation.

## Top 11 Green Occupations by Minimum Education

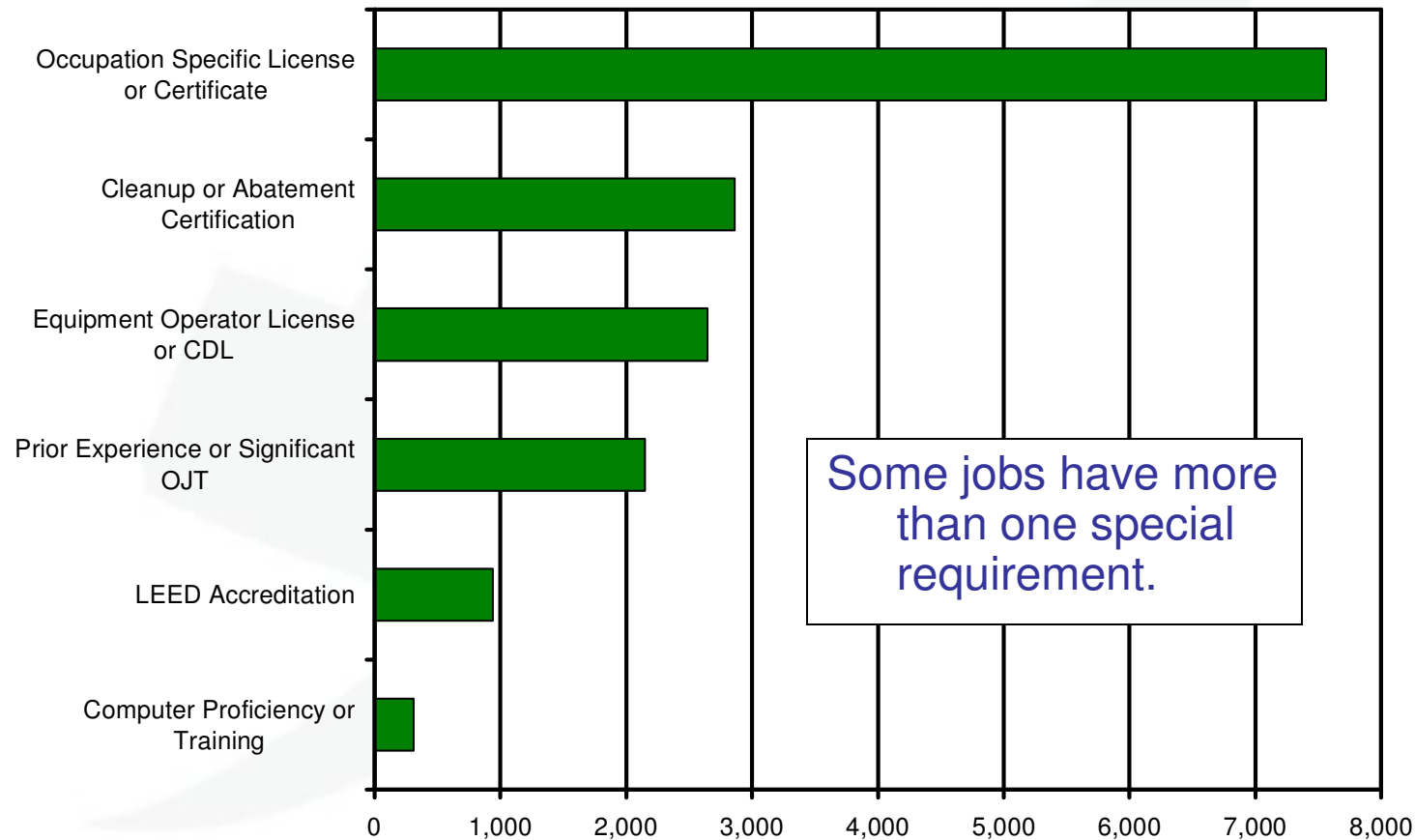


Where the Minimum Education Level was specified



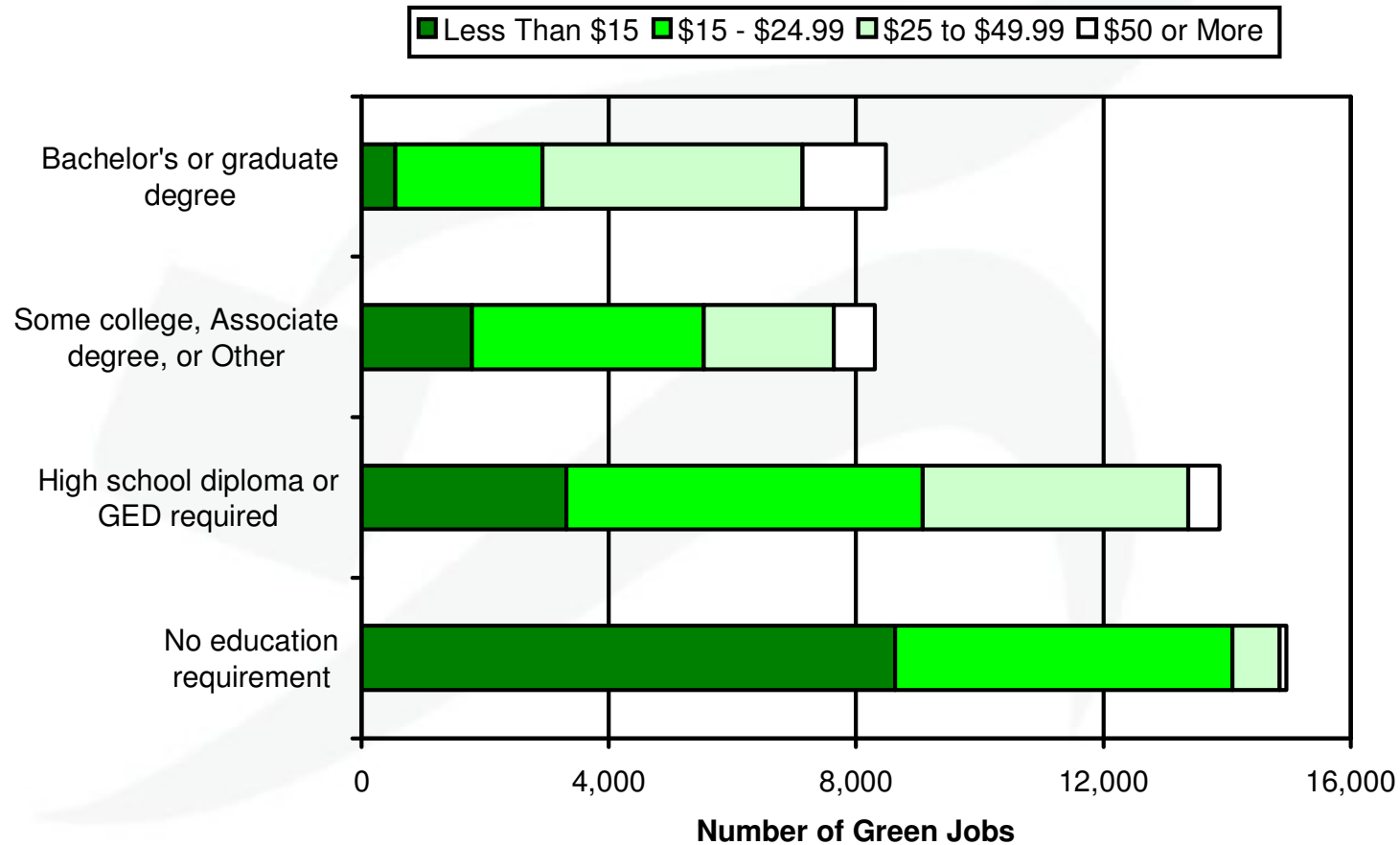
# Key Finding: About one-third of green jobs require some kind of special license / certificate.

## Green Jobs by Required License or Certificate



As is true with the whole economy ... jobs requiring more education usually pay higher wages.

Green Jobs Requiring Education Pay Higher Wages



Where the Minimum Education Level was specified



## Key Finding: Employers project a 14% increase in green jobs between 2008 and 2010.

### Employer Projections of Green Jobs by Occupation

Occupational Group	Total Workers 2008	Projected Workers 2010	Change	Percent Change
Farming, Fishing, and Forestry	5,838	7,960	2,122	36%
Transportation and Material Moving	5,255	7,025	1,770	34%
Production	6,512	7,625	1,113	17%
Architecture and Engineering	4,360	5,243	883	20%
Construction and Extraction	10,381	11,077	696	7%
Protective Service	1,032	1,543	511	50%
Life, Physical, and Social Science	4,135	4,338	203	5%
Installation, Maintenance, and Repair	2,233	2,402	169	8%
Education, Training, and Library	790	952	162	21%
Management	1,639	1,791	152	9%
Building and Grounds Cleaning and Maintenance	2,877	3,026	149	5%
Business and Financial Operations	683	797	114	17%
Community and Social Services	157	263	106	68%
Computer and Mathematical	244	301	57	23%
Healthcare Practitioners and Technical	165	178	13	8%
Personal Care and Service	20	27	7	35%
Food Preparation and Serving Related	513	514	1	0%
Legal	81	81	0	0%
Arts, Design, Entertainment, Sports, and Media	480	465	-15	-3%
Office and Administrative Support	1,570	1,376	-194	-12%
Sales and Related	2,437	1,827	-610	-25%
<b>Total</b>	<b>51,402</b>	<b>58,811</b>	<b>7,409</b>	<b>14%</b>



## Oregon's Green LMI Improvement Grant

- December 2009 – May 2011 (18 months)
- \$1.25 million
- Provided by national Employment and Training Administration (ETA)
- Working with many partners
  - Oregon Workforce Investment Board (OWIB)
  - Department of Community Colleges and Workforce Development (DCCWD)
  - Oregon Career Information System (CIS)
  - Other workforce, education, and training entities



## Goals of the Green LMI Improvement Grant

- To build on Oregon's initial green jobs survey to get detailed information on green occupations and industries of particular interest
- To provide direct labor market information with a strong focus on making that information usable for developing training programs and for career planning
- To invest in system information and infrastructure that will provide long term benefits to Oregon's workers and employers



## The Green LMI Grant has Five Major Components

1. In-depth Study of Green Occupations
  2. Employment Analysis of Companies in Specific Green Sectors
  3. Analysis of Agricultural and Self-Employed Green Jobs
  4. Special Reports and Publications
  5. AutoCoder and Green Jobs Extractor for WorkSource Oregon Management Information System (WOMIS)
- DCCWD & CIS will also complete other major components



## Special Reports and Publications

- 10 stand-alone reports focused on green occupations
- 12 green jobs-related articles
- 20,000 brochures
- 2,000 posters
- 2 survey reports
- New dedicated page (soon): [www.QualityInfo.org/Green](http://www.QualityInfo.org/Green)
- Also posted to our [blog](#) and [twitter](#) accounts



## The Standard Occupational Classification (SOC) taxonomy has been updated...

- Two new occupations in the 2010 SOC:
  - 47-2231 Solar photovoltaic installers
  - 49-9081 Wind turbine service technicians
- Data collection on these starts in late 2009
- First estimates likely to be in 2013 (for 2012)



**Charlie Johnson**  
**Green Jobs Economist**  
**Charlie.B.Johnson@state.or.us**  
**(503) 947-3098**

**Our “Greening” report is available on-line:**  
**<http://www.qualityinfo.org/pubs/green/greening.pdf>**

**Support Business & Promote Employment**

**www.WorkSourceOregon.org**

