

# Permaculture Outcomes Survey

Compiled for WTECB on behalf of Pierce County, WA WDC

Survey submittal: Friday, April 22, 2011

(Narrative and budget submittal per WTECB RFP: Friday, March 18, 2011)

## Survey Summary

The Permaculture Outcomes Survey was commissioned in response to WTECB's request of April 13, 2011 for data comparing education levels and previous occupations of Permaculture trainees against Pierce County UI 'exhaustee' demographics<sup>1</sup>, as well as providing information on employment outcomes for Permaculture trainees.

The survey was developed by FullWorld Consulting staff with advanced credentials in both quantitative and qualitative social research from the Department of Social Science and Public Policy at King's College, London.

The 8+ U.S. PDC (Permaculture Design Course) programs who participated distributed the survey to their past-student databases in their entirety. Four respondents were from Australian APT (Accredited Permaculture Training) programs.

## Survey Conclusion Highlights

- 180 Permaculture trainees from participating PDC programs responded
- Overall long-term employment rate for Permaculture trainees: 91.1%
- Overall Employment rate before training (intake): 87.7 %
  - Overall employment percentage points gained: 3.4
- Intake employment rate for non-college graduate trainees: 74.6%
- Long-term employment rate for non-college graduate trainees: 90.4%
  - Non college-graduate percentage points gained: 15.8
- 59.8% of employed respondents have wages corresponding to \$30,000 annually or above
- Respondents have diverse education and occupational backgrounds
- Respondent currently use permaculture training across sectors
- Respondents from construction, landscape, and excavation reinforce Employer statements to WTECB indicating value of training to these workers, a high proportion of Pierce County UI exhaustees.

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<sup>1</sup> There are important limitations to considering the overall unemployed Pierce County population whom the Pierce County WDC serve, only in terms of UI exhaustees. This issue is given attention under "The UI Exhaustee Summary" below.

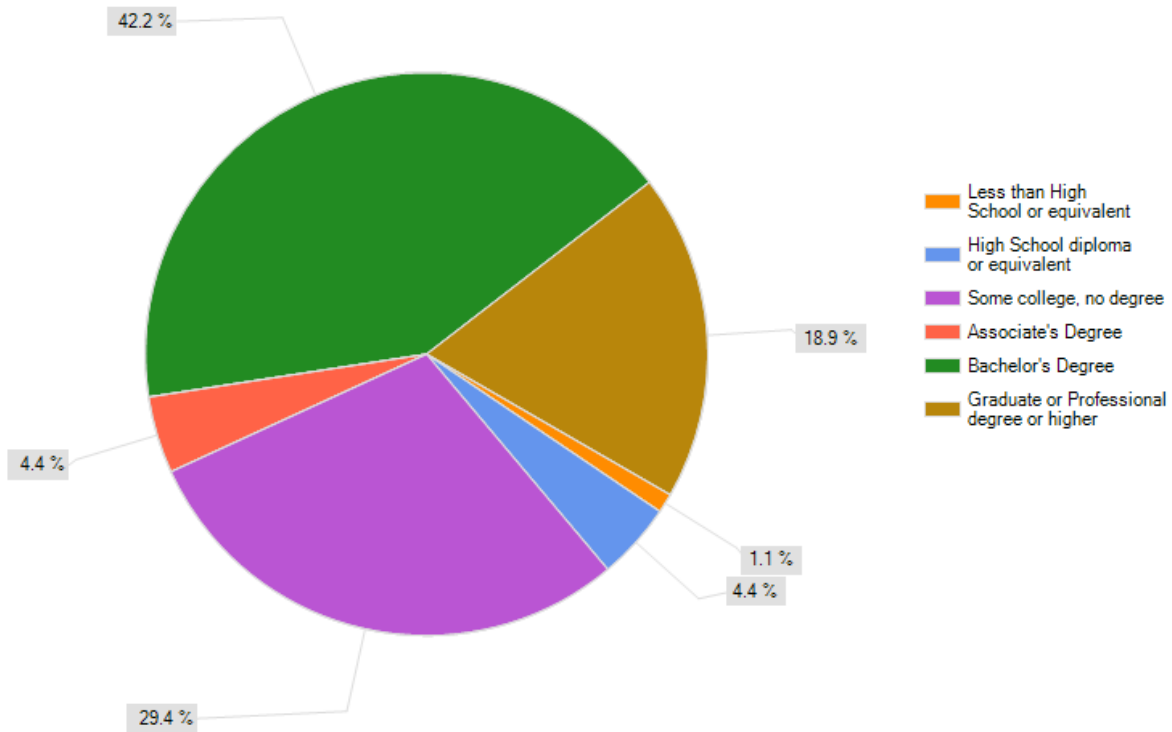
- Respondents report a 95.6% satisfaction rate<sup>2</sup> with the value of permaculture training in their careers

## Intake demographics

Overall survey response (n= 180)<sup>3</sup>

Q1: What was your education level when you first received permaculture training?

Participant Education Level at Start of Permaculture Training (n=180)

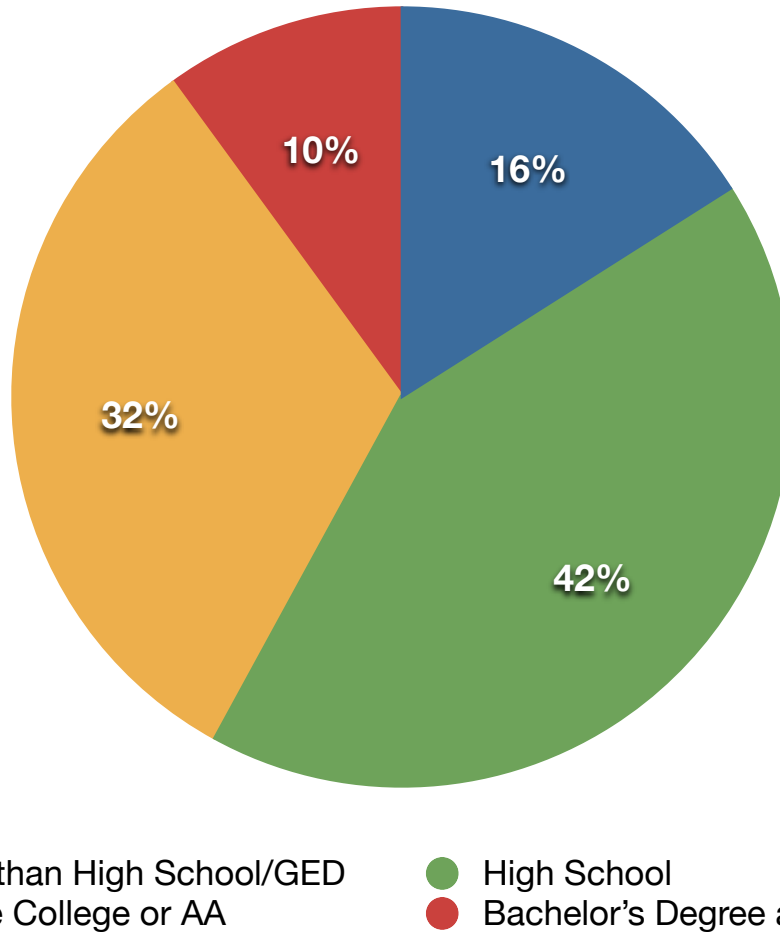


## UI Exhaustee Education Levels

<sup>2</sup> Corresponding to a rank of 3 or higher on a 5 point Likert scale.

<sup>3</sup> 129 respondents were from the Pacific Northwest, 47 from the rest of the US, and 4 from Australia, where permaculture is an accredited degree program offered at most major universities and many minor colleges.

## Pierce County UI Exhaustee Education Levels



**Q2: If you had attended college before you first took permaculture training, what was your area of study? (n=165)**

- 1.Early childhood education
- 2.Horticulture
- 3.filmaking
- 4.Construction management and engineering
- 5.Conflict resolution
- 6.Child and Youth Care / Community Health
- 7.Horticultural Therapy/School and Community Support Worker
- 8.Ecology, Botany, Mycology
- 9.environmental studies
- 10.Environmental Science
- 11.Horticulture
- 12.Latin American Studies, Fine Arts
- 13.liberal arts, fine arts, environmental issues, philosophy and religion
- 14.Local ecology, anthropology, and sustainable agriculture.

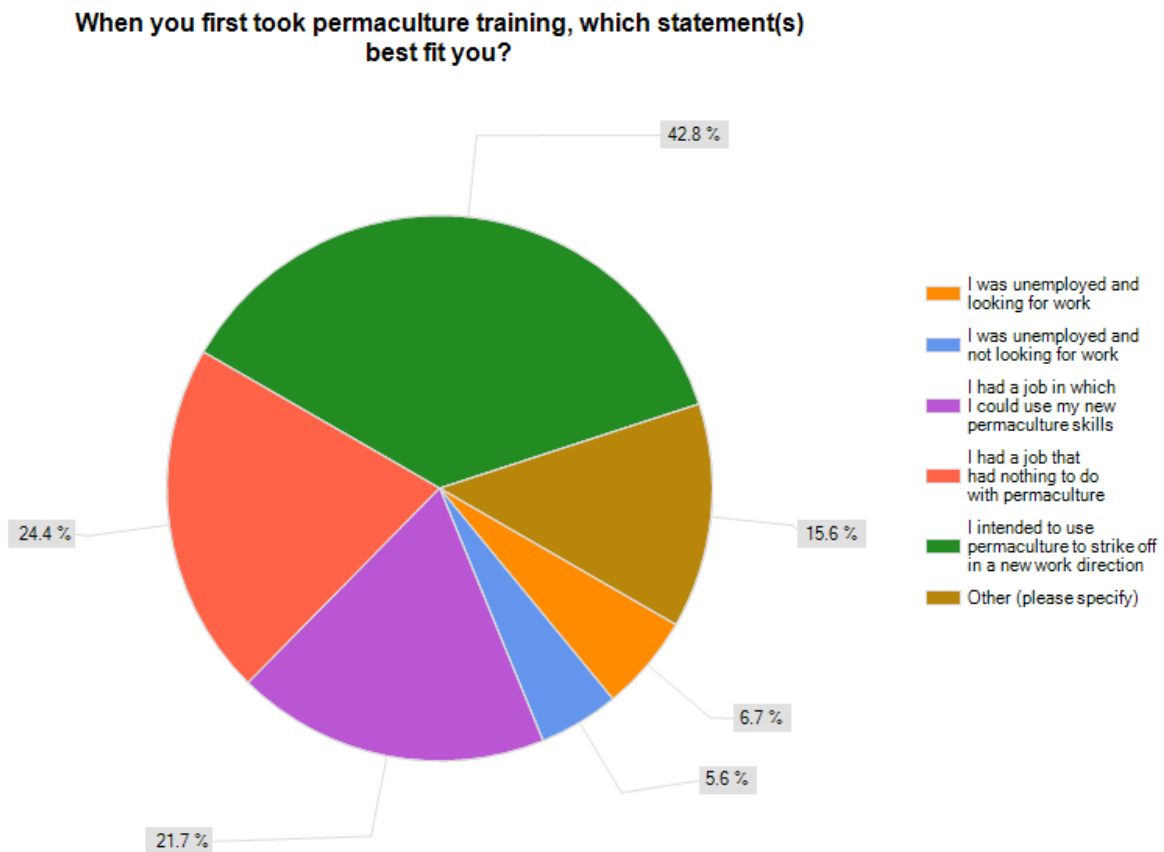
- 15.horticulture
- 16.Spanish, Ethnobotany, Philosophy
- 17.Psychology
- 18.international studies
- 19.General - Spanish - Environmental Science
- 20.Accounting augmented with additional training in nonprofit management, redesign and fraud investigation
- 21.Advertising
- 22.Ecological City Development and Studio Arts
- 23.Business and accounting
- 24.History/Teaching Certificate
- 25.sustainability
- 26.Environmental Studies
- 27.BS in Biochemical Pharmacology - diverse assortment of Biology, Chemistry, Pharmacology, Physiology, Microbiology, etc.
- 28.Human Biology
- 29.Psychology Sociology and Art
- 30.Environmental Horticulture
- 31.Biochemistry
- 32.Psychology & Environmental studies
- 33.Women's studies
- 34.Anthropology
- 35.Began finishing general education requirements
- 36.Ethnic studies, social work
- 37.Ecological Design
- 38.horticulture
- 39.geography and women's studies
- 40.philosophy and education
- 41.librarian science
- 42.Anthropology B.A. Environmental Studies B.A.
- 43.Environmental Science and Biology
- 44.Community development and labor relations (economic and political science)
- 45.Maths, physics, history, Finnish language, political science, geography, religion
- 46.Pharmacy
- 47.Human resources, humanities, psychology
- 48.psychology
- 49.nursing
- 50.Business
- 51.3-D Design, Graphic Design
- 52.architecture
- 53.Philosophy & math
- 54.Horticulture
- 55.Organic sustainable design- agriculture and architecture
- 56.English, Philosophy, Theology
- 57.Chinese Language and Literature
- 58.History

59.architecture  
60.Environmental Biology and Chemistry  
61.Sustainable Agriculture/Sustainable Community Development  
62.Horticulture, Social Work, Horticultural Therapy  
63.sociology  
64.Anthropology  
65.Sociology | Natural Resource Mgt. | Business  
66.Microbiology  
67.Biology  
68.Computer information systems  
69.Earth Sciences  
70.Microbila ecology  
71.Nursing  
72.Horticulture  
73.Appropriate technology  
74.Psychology and philosophy  
75.General AA  
76.Geography  
77.Botany and Art  
78.Business  
79.Education  
80.Wildlife biology  
81.Community Health  
82.Computer Information Systems  
83.Social work  
84.Art  
85.Religion and Education  
86.Fine Art and Design  
87.Library Science MS, Theater and Drama BA and MS  
88.Major in Spanish Major in "Global Studies, Cultural Competency and Latin America"  
89.Only some college-once way back, Native American Studies, and again later Psychology-never made it thru-don't like the structure of college.  
90.Chef training  
91.Leisure studies and services  
92.General/Legal Assistant  
93.Food policy, agriculture  
94.Art  
95.Anthropology  
96.Natural Science & Environmental Studies  
97.Psychology and technical theater  
98.Science  
99.Arts, anthropology  
100.International Relations; Teaching Profession  
101.Studio Art  
102.Environmental studies

103. Graphic Design, CAD  
104. Music  
105. Software development.  
106. Undergrad - computer science BA; minor visual arts media/communications  
Grad - whole systems design  
107. Auto diesel mechanics  
108. Art and Exercise and Health  
109. Biology  
110. Third World History  
111. Math & computer science.  
112. Fine art  
113. Counseling Psychology with an interest in spirituality  
114. Documentary photography (BFA)  
115. Biology  
116. Land and Food Sciences  
117. I had a self designed major entitled "The Ecology of Health" It combined anthropology, human ecology and environmental studies.  
118. Environmental studies  
119. Environmental Studies  
120. Nursing  
121. Psychology, English  
122. Psychology and exercise physiology  
123. Environmental Science and Earth Science  
124. Biology  
125. Environmental Engineering  
126. Physics  
127. Theatre Arts, Film & Video emphasis  
128. Botany, Ecology, Genetics  
129. Green design  
130. I took permaculture training while I was in college as part of a class. I was studying Environmental and Cultural Studies.  
131. Bachelor in Fine art  
132. City planning  
133. Naturopathic medicine (ND) and Psychology (MA)  
134. Business Management  
135. Bachelor of Commerce, International Economics  
136. Emergency Administration and Disaster Planning  
137. Photography / Education / Ecology / Politics  
138. Engineering  
139. Fine Arts  
140. Applied Human Ecology, BS Environmental Science at Huxley College of Environmental Studies, WWU.  
141. Literature (BA), Religious Studies (BA)' Library and Information Science (MLIS)  
142. Chemistry  
143. Counseling  
144. Communications

- 145.Sociology
- 146.Architecture
- 147.B.S. in Elementary Education
- 148.Nutrition and Midwifery
- 149.Graphic Design
- 150.Biochemistry
- 151.Chemistry (BA), Education (M.Ed.)
- 152.Mathematics, music
- 153.Ethnobotany, microbiology, biology, anthropology
- 154.Project management
- 155.Latin Am. Sociology; Chemical Dependency Counseling; Environmental Studies
- 156.Sustainability Studies, Sociology
- 157.Environmental science, ethnobotany
- 158.Architecture
- 159.Foreign Service
- 160.Business
- 161.History, soil science, plant nutrition
- 162.Natural Resources & Environmental Studies
- 163.Chemistry, biostatistics
- 164.Theology
- 165.Electrical engineering

**Q3: When you first took permaculture training, which statement(s) best fit you? (n=180)**



Respondents chose “Other” 15.6 % of the time in response to Q3. Of respondents selecting “other” 25% were students. The remainder were underemployed, employed in more than one part time job, retired, or self-employed. Representative responses in the “Other” category included:

*“I intended to expand into my community and bring Permaculture ethics to the work place.”*

*“I wanted additional skills to enhance my business consulting practice”*

*“I was self employed -- permaculture was a deep complement.”*

*“I was underemployed and intended to help my marketability.”*

*“I understood that permaculture provided the skills we would need in the future.”*



*“All jobs can use permaculture.”*

*“I ran a business that needed a permaculture component.”*

**Q4: If you were employed when you entered permaculture training, what was your job? (n=136)**

1. Teaching preschool
2. Outreach Staff at City of Portland Bureau of Environmental Services
3. Garden educator
4. Construction project manager and consultant
5. I was a communications manager and I was completing my doctorate in conflict resolution
6. Teaching Assistant at University of Victoria
7. I run a small permaculture based landscaping company and support adults with developmental disabilities.
8. Volunteer coordinator at a permaculture education and research farm
9. Retired, volunteer
10. Childcare
11. Garden designer
12. Art gallery guard
13. Community Organizing
14. Financial consultant
15. I was working for a retail shop and starting a bodywork practice
16. Leadership Development and Business Consulting
17. Remington House RTC. Remington House incorporates Horticultural Therapy as part of our educational curriculum. The Growing Project. TGP is a 501 c3 in Ft. Collins that focuses its energy on educating our community on food security issues, as well as educating others to become more food sufficient.
18. Student
19. Analytical Chemist
20. Conventional Landscape Maintenance
21. Outdoor educations
22. Seasonal river guide
23. Landscape Designer, installer and maintenance person
24. Arborist
25. Administrative Assistant for the Oregon State University Food Innovation Center
26. Teaching violin at home
27. Union organizer
28. I owned and operated a sustainability oriented moving company.
29. Massage therapist
30. Landscaping
31. I was seasonal grunt labor doing annual vegetable farming.
32. A graduate (MEd) student and teaching assistant at a university
33. Employee in a big software company.
34. Working with a commercial beekeeper to manage hives for honey production.
35. Landscape and gardening
36. Farm laborer
37. Computer Programmer Analyst & Database administrator

- 38.Waitress
- 39.Boat builder
- 40.Registered nurse
- 41.Retail - Clothing store
- 42.Self employed graphic designer
- 43.Gardener, designer & chef
- 44.Manager at a Health Food Store
- 45.Park Maintenance Supervisor
- 46.Construction Lending
- 47.I was working as an intern at an educational center
- 48.Pilates Instructor
- 49.Horticultural Therapist, horticulture services business
- 50.Director of service learning at high school and latin america travel program instructor
- 51.Farming
- 52.clinical laboratory science
- 53.System administrator
- 54.Pilates Instructor
- 55.Organizational consultant
- 56.Garden Design, Farmer
- 57.Teaching gardening and appropriate tech
- 58.Dir of Sponsorship, Digital Media
- 59.Library page
- 60.Flight attendant
- 61.Worked in a store as a buyer
- 62.Caregiver
- 63.Stay-at-home Homeschooling Mom
- 64.Crew member on an Organic farm.
- 65.Artist
- 66.Barista
- 67.Firefighter
- 68.Systems Administrator/Computer Consultant
- 69.Social Worker
- 70.College Art Instructor
- 71.Higher Education
- 72.Public Service Assistant at the Whatcom County Library
- 73.Librarian
- 74.I was an English and Spanish tutor.
- 75.Sales/teaching at a yarn store.
- 76.Self employed as a personal chef
- 77.Bookkeeper
- 78.Court clerk
- 79.Massage therapist and paramedic
- 80.Organizational Manager at Turtle Lake Refuge, Gardener and Housekeeper
- 81.Natural Resource Technician
- 82.Landscaper, gardener
- 83.Agricultural worker
- 84.Janitor
- 85.6-12th grade Humanities Teacher
- 86.Teaching preschool
- 87.Nursing

88. Community organizer/activist
89. Software development.
90. Software quality assurance and testing contractor.
91. Excavation
92. Photographer
93. Carpenter/Landscaper
94. Waitressing
95. Teaching/healing/facilitating
96. Prior to training I was teaching English as a foreign language in Japan.
97. Genetics research
98. Massage Therapist
99. I was "under employed" at best and was doing odd jobs while in college. Selling wood stoves, chimney sweeping, odds and ends.
100. College administrator
101. Raw food chef/barista
102. Biology and General Science Lecturer in Further Education
103. self-employed
104. Engineering manager
105. Owned a retail book store.
106. General laborer on construction projects
107. Farm intern
108. Basic landscaping
109. I worked as a lab technician in a dark room (photography-before digital)
110. Chef and teaching people with disabilities
111. Production garden
112. Physician
113. Real estate acquisitions for a boutique development firm.
114. Investment Banker, followed by Music Production on the side
115. Barista
116. Cooking
117. Elder companion
118. Student
119. Librarian
120. Technical writer
121. Counseling
122. Administrative Assistant. Previous experience (14 yrs) in Marketing and Public Relations.
123. Farmer
124. Health Information Management Coordinator at a major hospital in Pierce County
125. Telecommunications Technician - Civil Service
126. Private in home Elder Care
127. Screen printing
128. Self employed vermiculturist/educator
129. Self-Employed Outdoor Educator
130. I was working in environmental non-profit fundraising.
131. Student.
132. Architect & Landscape Designer
133. Soil scientist with the California Department of Forestry studying soil erosion in timber harvest areas
134. Outdoor Educator - Self-employed

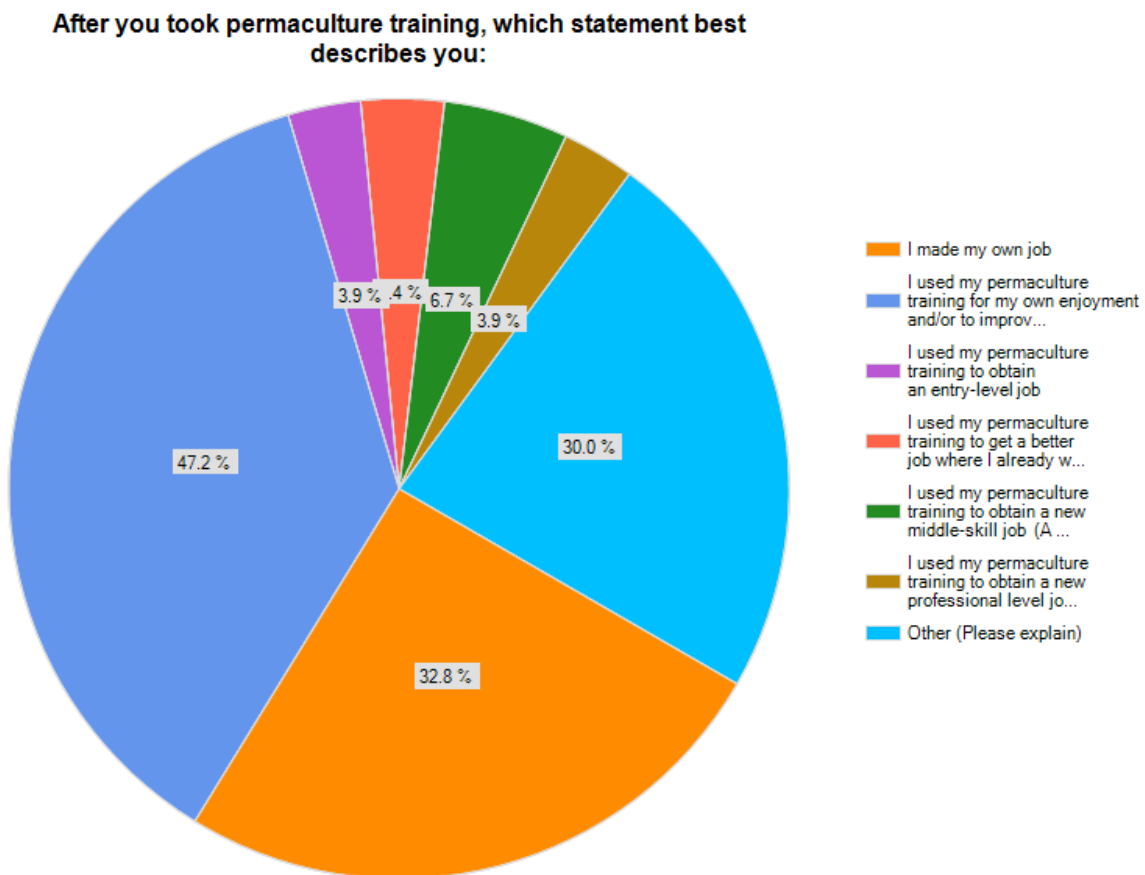
135.Data analysis. I took it for personal interest and felt it is the best efficient and natural way of agriculture.  
136.Americorps volunteer

The answers to Q2-4 support the proposition that there is no specific pre-existing skill set (“baseline” skill set) required to benefit from permaculture training, either in terms of education level and type, or job experience. Respondents came from occupations across the range of sectors represented in both Pierce County UI exhaustee and overall UI recipient demographics, and had an extremely diverse educational background.

Q4 gives an intake unemployment rate of 24.4% (44/180). Students are not included in the unemployment rate.

## Training Outcomes

Q5: After you took permaculture training, which statement best describes you?



Of the respondents who answered “Other” (n= 54), eighteen (33%) indicated that they used permaculture to obtain a job which they didn’t fall into categories 3-6. Common explanations in this group included:

*“First I made my own job. The experience I gained from that helped me obtain a new middle skill job,”*

*“Started a small farm and gardening business,”*

*“My job started as an entry level job and has recently expanded to include some sustainable, edible garden design projects.”*

Twelve respondents in the “Other” category (22%) said that they used their training to obtain a promotion or expand their own business, creating either backfill position or new jobs, or increased the profitability of their self-employment. Representative quotes include:

*“I integrated my permaculture training into my business and offered new services”*

*“I used my permaculture training to augment my current job (professional development), where I teach people about water quality impacts and solutions,”*

*“I integrated my permaculture training into my business and offered new services,”*

*“As a self employed landscape gardener, I found that permaculture training propelled me into design work for my aging body at increased pay. I have begun to teach permaculture concepts in workshops earning a better rate of pay than before.”*

## **Training Outcomes- Employment Status**

**Q7 “If you're employed, what is your current job? (If unemployed, put "none").”**  
(n=180)

Q7 measured an overall post-training unemployment rate of 8.9 %, as compared to 12.3% before permaculture training, for a 3.4 point overall gain.

A more comparable comparison sample is the pool of respondents without a college degree (n=63). For this group, intake unemployment was 25.4%. Long-term unemployment (more than 3 quarters since training received) was surveyed at 9.6%. This is a 15.9 percentage point reduction in unemployment for the PDC respondents that most closely correlate with Pierce County UI exhaustees.

The overall Permaculture unemployment reductions correlate most closely with the long term 4.6% gain for exiters from job prep programs, as described in the WTB's 2011 Workforce training results. In fiscal year 2010, 6,507 Washington adults participated in WIA adult programs, with a 14.7% recidivism rate. OF the 5,550 who exited the program, 4606 found jobs with an average wage of \$13.90 an hour.<sup>4</sup> These participants were trained at an average cost of \$2550 per person. The proposed permaculture design certification can be achieved for \$1200-1800 per person on average. Wage data for PDC trainees are detailed below.

The long-term employment rate of 91.1% for PDC trainees (90.4% for non-college grads) compares with an overall employment rate of 60% (62% for completers), for the 2005-2006 Workforce program year.<sup>5</sup>

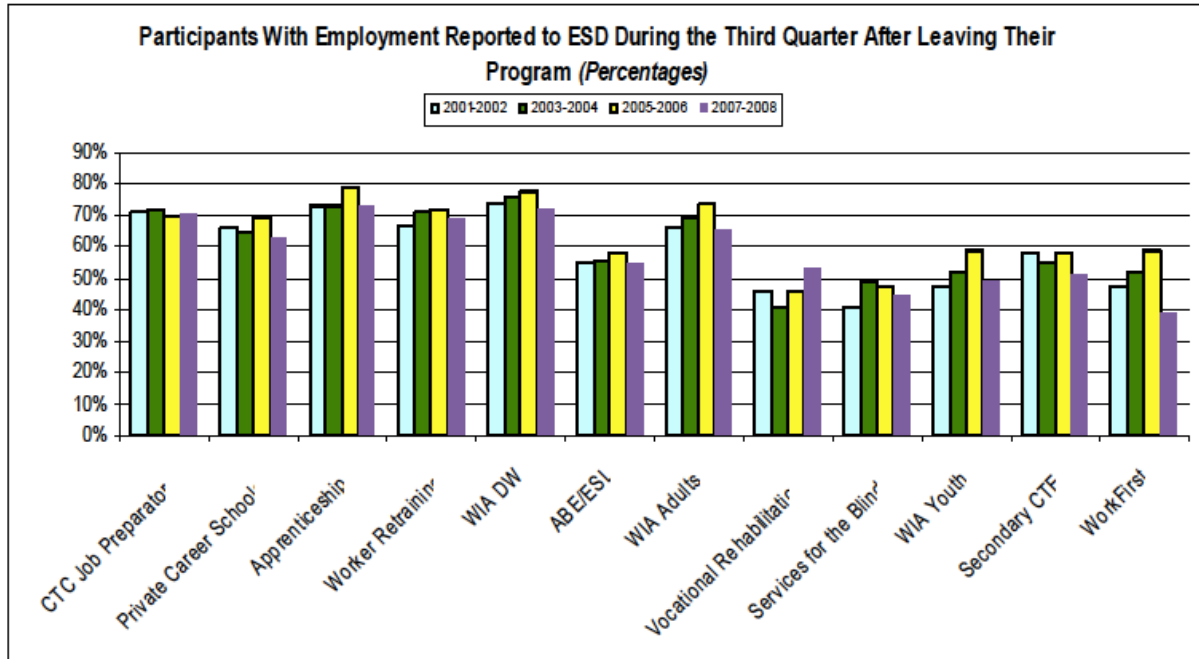
There is reason to suppose that surveyed PDC trainees most closely correlate with Workforce worker re-training programs; a high percentage of respondents used permaculture training to change occupations, create a new job, or alter their job significantly. This program had a long-term employment rate just over 70% in the 2007-2008 program year.

The WTECB may correlate these participants differently, so, for the sake of wider comparison, the measured overall employment rate of 91.1% for Permaculture Trainees compares with the following rates across current WTB workforce training programs:

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<sup>4</sup> See "Workforce Investment Act: Adult Program" <http://www.esd.wa.gov/newsandinformation/factsheets/index.php>

<sup>5</sup> See <http://www.wtb.wa.gov/WashingtonStateCoreMeasures.asp>



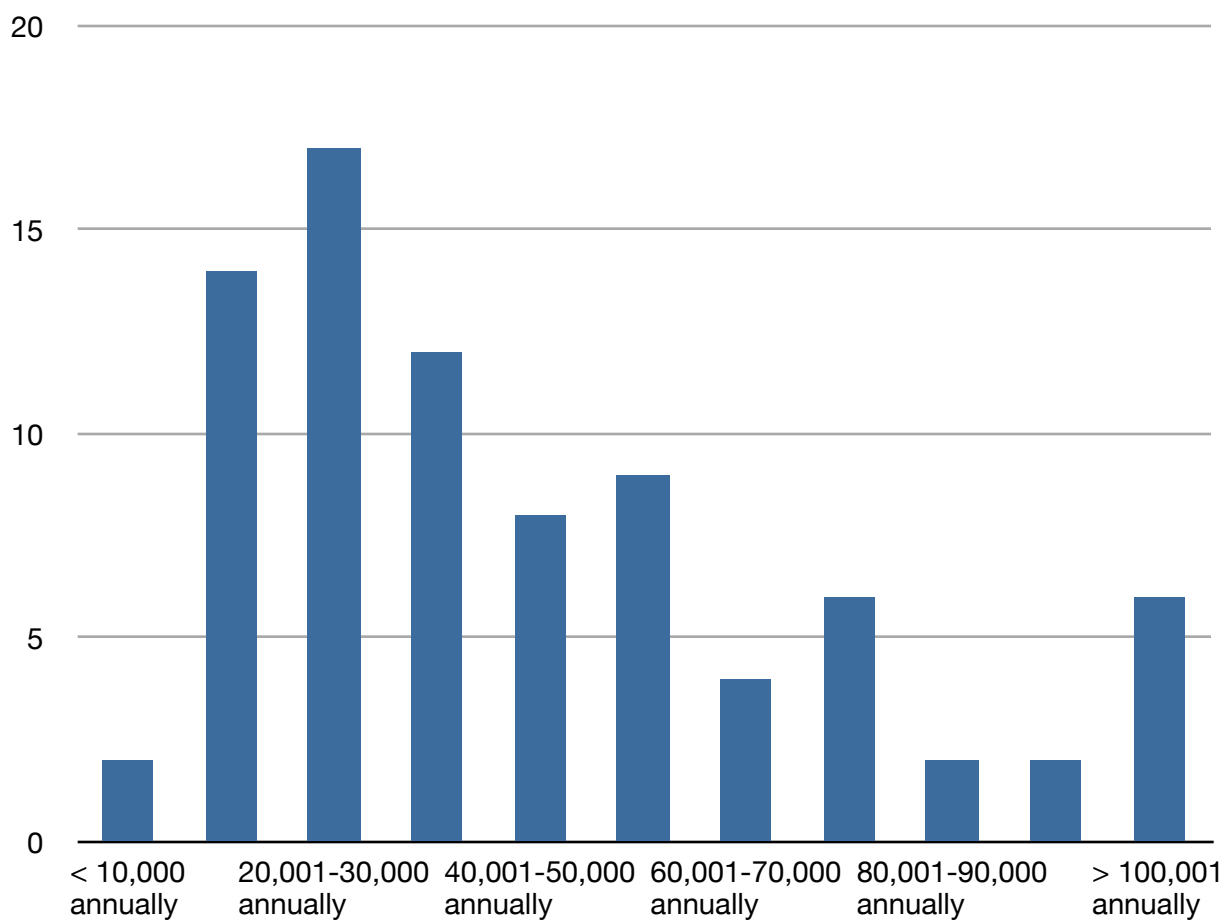
Of the 63 PDC respondents without a college degree, 57 are currently employed in an occupation that uses their permaculture training. UI exhaustees in Pierce County have a high proportion of non-college graduates, so this 90% long-term employment rate for PDC respondents in this category is encouraging.

## Wage Data

### Q8 “Please tell us your current wages” (n=147)

The mean annual wage reported by Permaculture trainees was \$49,815. The median reported wage was \$38,760. This compares to a median wage of \$18,287 for all WTB enrollees, and \$22,075 for completers, as reported at <http://www.wtb.wa.gov/WTR2008.asp>

## Wages for Currently Employed Permaculture Trainees



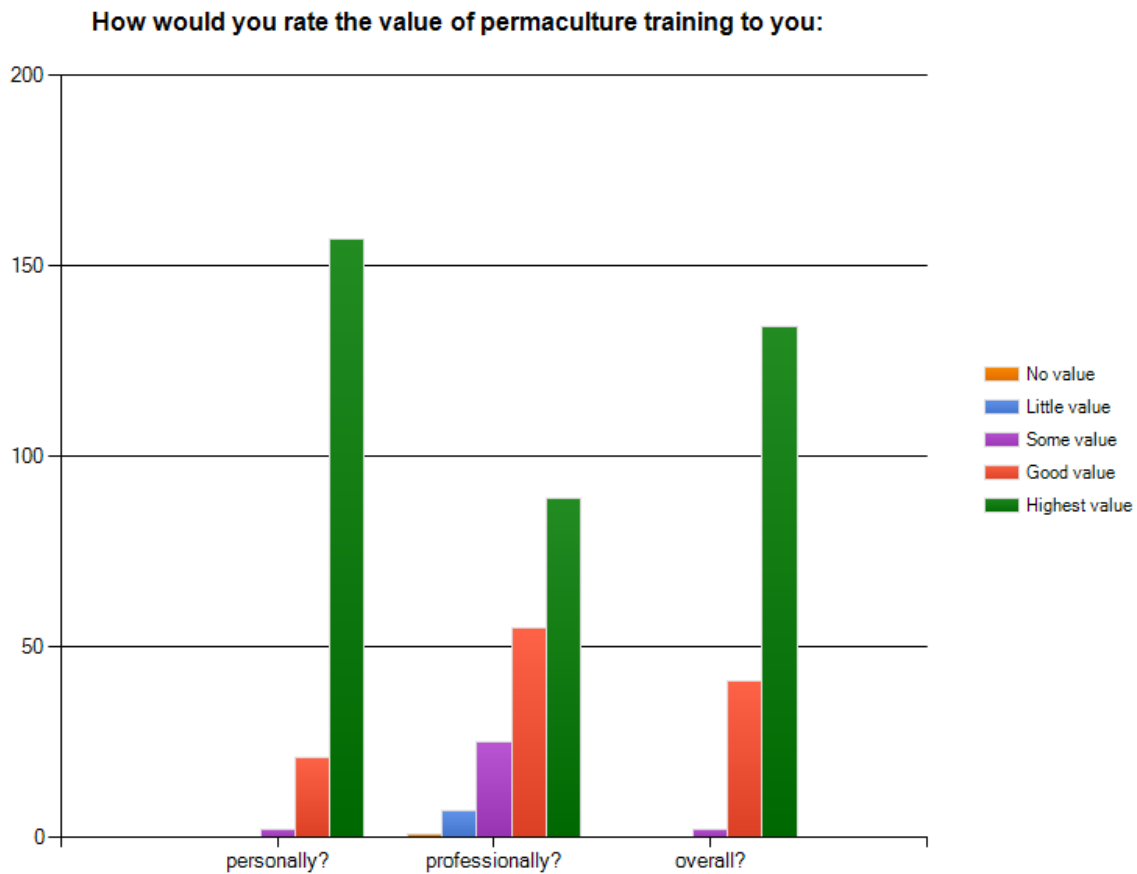
## Trainee Satisfaction

### Q9 How would you rate the value of permaculture training to you?

QA 5-point Likert scale was used to provide an interval scale indicating the level of professional, personal, and overall usefulness of permaculture training to participants. 81.4% percent of respondents said that Permaculture training was of either “Good” (31.1%) or “Highest” (50.3%) value to them professionally, corresponding to positions 4 and 5 on the Likert scale (n=180).

When asked about their overall satisfaction with training (more directly comparable to the results found in the WTB’s assessment data given at <http://www.wtb.wa.gov/WTR2008.asp>) 98.9% of respondents rated the value of training as either “Good value” (22.9%) or “Highest value” (76.0%). This compares to a 90% satisfaction rate measured by WTB for its training programs, which excluded WorkFirst participants.





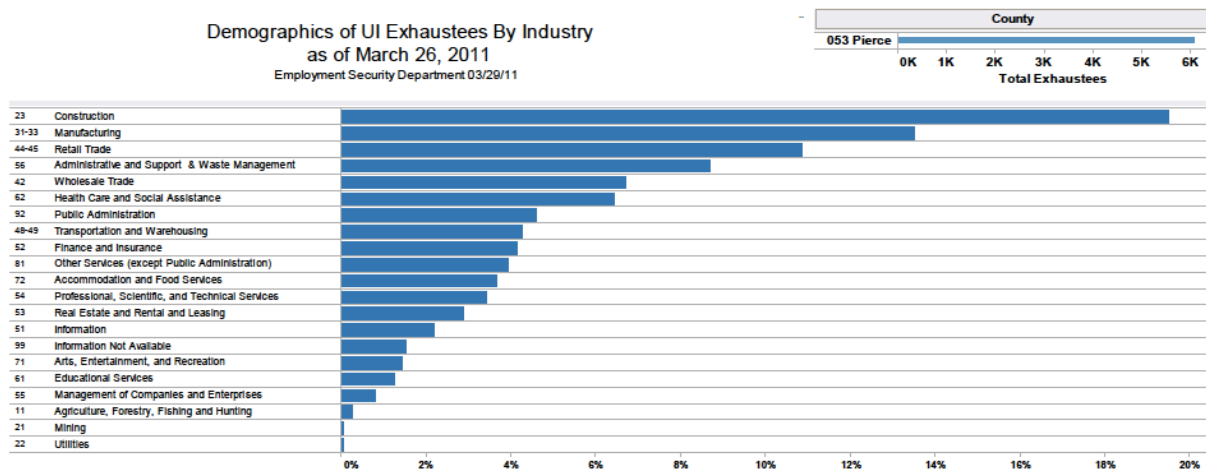
**The UI Exhaustee Summary:**

The UI exhaustee data provided by the Washington State Employment security department represents all unemployment claimants who have exhausted their benefits from July 2008 through March 26, 2011. The data is available only in graphical form, without the raw data from which it is drawn. Some of the values in this analysis are therefore necessarily approximations.

It is important to note that, with a 36% reciprocity rate, the actual number of unemployed workers in Pierce County as of March 2011 (42,300<sup>6</sup>) is more accurately approximated as 117,500 individuals in need of jobs. Naturally, the demographic data provided by the UI exhaustee report (demographics on ~6000 workers) do not reflect the overall demographics of this group. This is especially important because, as borne out by the survey results, permaculture trainees are quite likely to attain self-employment or the

<sup>6</sup> <http://www.workforceexplorer.com/cgi/dataanalysis/?PAGEID=94&SUBID=161>

creation of a new business<sup>7</sup>, demographics not reflected in the UI exhaustee or total claimant data at any time.<sup>8</sup>



Ninety percent of the UI Exhaustees in Pierce County have an Associates degree level of education or less, while 60.7% of Permaculture trainees had a bachelor’s degree or higher. This supports the position that funds are needed to expand permaculture training offerings to unemployed workers. Comparison of the demographics of UI exhaustee and PDC trainees indicate that higher earners have had the easiest time accessing and affording private permaculture training, and subsequently benefitting from improved employment and wage outcomes.

A key point is that the PDC trainees *without a college diploma* reported larger employment increases (and wage increase as a proportion of overall earnings) than their more highly educated counterparts.

Construction industry employees have experienced the most job losses in Pierce County since the beginning of the recession. As detailed in the two previous submissions to WTECB, as well as letters of support from green builders, architects, and design firms, workers with existing construction training are an excellent fit for permaculture training and have a high degree of lateral mobility across ‘green’ construction, landscaping, and excavation firms post-training.

If job growth in these sectors resumes, permaculture training can reasonably expected to offer unemployed workers in these fields an enhanced ability to be re-hired. If it does not, then this training is a bet-hedge, allowing lateral movement into other sectors and occupations, both in terms of the foundation (systems) training and the specific skill sets

<sup>7</sup> See FullWorld Consulting, Permaculture Survey Data (PII Redacted), 2011

<sup>8</sup> See “Percentage of workers qualifying for unemployment insurance” <http://www.esd.wa.gov/newsandinformation/factsheets/index.php>

it provides. This issue is detailed at length in the first proposal submitted to WTECB on March 18, 2011.

## Conclusions

- 180 Permaculture trainees from participating PDC programs responded
- Overall long-term employment rate for Permaculture trainees: 91.1%
- Overall Employment rate before training: 87.7 %
  - Overall employment percentage points gained: 3.4
- Intake employment rate for non-college graduate trainees: 74.6%
- Long-term employment rate for non-college graduate trainees: 90.4%
  - Non college-graduate percentage points gained: 15.8
- 59.8% of employed respondents have wages corresponding to \$30,000 annually or above
- Respondents have diverse education and occupational backgrounds
- Respondent currently use permaculture training across sectors
- Respondents from construction, landscape, and excavation reinforce Employer statements to WTECB indicating value of training to these workers, a high proportion of Pierce County UI exhaustees.
- Respondents report a 95.6% satisfaction rate<sup>9</sup> with the value of permaculture training in their careers

When considered along with the three narrative proposals requested by WTECB, 36 letters of support and commitment, and voluminous references on the content and value of permaculture training, it is our sincere hope that this survey will allow you to fund this small step toward making Permaculture training available to the Pierce County workforce.

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<sup>9</sup> Corresponding to a rank of 3 or higher on a 5 point Likert scale.