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## Massachusetts Marine Trades Workforce Assessment 2005

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# **MASSACHUSETTS MARINE TRADES WORKFORCE ASSESSMENT 2005**

28 November, 2005



Prepared by the

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in collaboration with the

**SOUTH COASTAL WORKFORCE INVESTMENT BOARD**

**MASSACHUSETTS MARINE TRADES ASSOCIATION**

and

**MASSASOIT COMMUNITY COLLEGE**

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## Executive Summary

In 2005, a partnership between the South Coastal Workforce Investment Board, the Massachusetts Marine Trades Association, Massasoit Community College and the Urban Harbors Institute (UHI) of the University of Massachusetts Boston, developed and distributed a survey focused on the status, needs and future challenges faced by marine businesses in the South Coastal region of Massachusetts. The Urban Harbors Institute analyzed the responses and prepared this report to present the results.

The overall aims of the 2005 Marine Trades Workforce Assessment Survey were:

- to determine the extent of the marine industry's labor needs in the South Coastal region of Massachusetts;
- to ascertain which skill sets are most in demand and for which there is a lack of qualified people;
- to assess the state of recreational marine employers;
- to identify the current and future challenges faced by the industry;
- to ascertain the needs for formal training and certification;
- to ascertain the most favorable types of training and the seasons when such training should be offered;
- to develop a statistical foundation for future initiatives; and,
- to compile crucial information to help stabilize the marine industry in Massachusetts and encourage it to grow.

Additionally, it was hoped that the survey would provide data that could be used to help dispel some of the myths or misconceptions that some have about the marine industry in general and, in particular in Massachusetts.

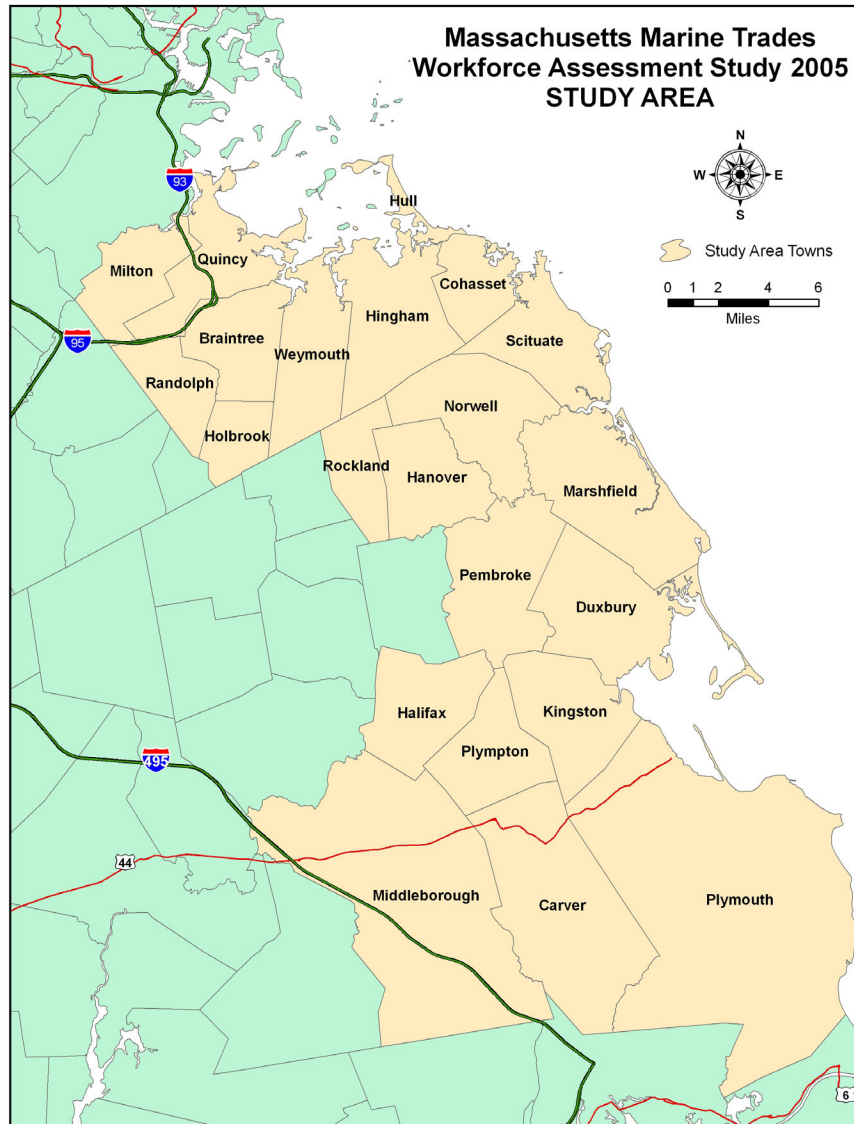
A total of 90 surveys were successfully delivered to marine and marine-related businesses within the study area. As the survey was largely focused on the labor needs within the industry, the majority of those businesses targeted were ones that would be expected to require personnel with particular skills unique to the marine industry. However, a smaller number of "marine-related" businesses were also surveyed as it was felt that while they may not require personnel with these particular skill sets, they could provide addition unique insight into the status of the industry and the challenges it may face in the future.

After a significant follow-up effort, a response rate of almost 47% was achieved.

While the report contains the full analysis and results, the key findings are presented below. These are followed by a number of recommendations, which were developed through a series of meetings between representatives of the partner organizations.

## Key Findings

- Many people believe that marine businesses need to be located on the waterfront. However, this study shows that almost 30% of the businesses surveyed are located inland, away from the water. The increasing use of hydraulic trailers means that, as long as access to the waterfront remains, the need for waterfront locations may continue to reduce. It is thought that this trend may continue and that more businesses may move inland as waterfront property prices rise. Additionally, many marine businesses do not require direct water access as the sale or repair of items such as engines, canvas repair etc. can occur at inland locations
- Many of the marine businesses tend to be diverse, in that the majority of them are involved in a number of marine-related enterprises (e.g. a boatyard associated with a marina and a dealership). There are relatively few companies that are involved in only one type of business venture.
- Many of the marine businesses that responded, have been in operation for significant periods of time – the longest being 58 years. Many of the other, marine-related businesses appear to have only been in operation for 10 years or less. To this end, many of the marine businesses could be thought of as traditional industries.



- The majority of marine businesses surveyed are relatively small operations. On average, the businesses have less than 7 full-time, year-round employees and less than 10 employees of any sort. This is significant when it comes to the workload, ability to send employees for further training and the ability of businesses to grow.
- There is a common misconception that the majority of marine trade jobs are seasonal and part-time. While those within the industry know that this is not the case, this survey provides data to support their view. The marine businesses reported that almost 70% of their employees are hired year-round and 66% of employees are both year-round and full-time. What is of particular interest is that for the skilled marine positions (Master Technicians, Diesel Technicians, Inboard Gas Engine Technicians, Outboard Technicians and Sterndrive Technicians) there are very few seasonal employees. The majority (94%) of people working in such positions are employed year-round.
- While many jobs are both full-time and year-round, there are some jobs that are clearly more seasonal than others. These include boatyard laborers, dock/gas dock attendants and boat washers/cleaners. This is not unexpected as many of these activities occur outdoors (and therefore less so in the winter) or are directly linked to the seasonal variation in recreational boating activity (e.g. dock/gas dock attendants). What is particularly significant is that the

technician positions are generally those for which employers require previous qualifications or certificates. It therefore appears that employers tend to retain their most qualified employees.

- The survey revealed that is a current, and a predicted future need for more qualified marine technicians. The 27 marine businesses that responded to the survey, reported that between them, they are currently looking to hire 41 qualified technicians of various sorts. They also predicted that in five-year's time the need for qualified marine technicians may increase by over 25%.
- Therefore, within the study area, there may be an immediate need for an additional 1.5 qualified technicians per marine business. This is predicted to rise to 2.2 technicians per business in five-years. If this is true throughout the state, then there is a high un-met demand for more skilled marine technicians and this is likely to increase in the future.
- The current and predicted need for qualified marine technicians is of particular interest in that these are all well-paying jobs. The Wages Survey suggests that the minimum hourly rate for such technicians is \$15-\$20 per hour and the maximum is \$30 per hour. While the number of responses to the wages section of the survey was low, insiders within the industry suggest that wages can be significantly higher for qualified, skilled technicians with a good work ethic. It is also important to note that many of these positions require significant overtime, which is paid at time and a half.
- The survey shows that there is a significant need for more qualified people and that the current lack of such people is a significant limitation on the ability for marine businesses to grow. Over 77% of the marine businesses felt that this was the case.
- Clearly, the marine businesses feel that the lack of qualified personnel is a significant hindrance to their ability to thrive. This, coupled with the need for qualified technicians, suggests that the marine industry offers significant opportunities for those with the relevant qualifications.
- Almost 87% of the marine businesses reported that they are finding it difficult to find qualified new employees with the same skills that are being lost through retirement. This suggests that there is a risk that some of the traditional skills may be lost in the future unless relevant training can be developed.
- The majority of those surveyed feel that a Master Technician position is the hardest to fill and that all technician positions rank within the top five positions for which it is difficult to find qualified personnel.
- Most of the qualified people currently employed have received training or certification from vocational schools or directly from manufacturers.
- While many employers prefer new employees to have previous qualifications or experience, the majority also actively encourage and financially support current employees in seeking further qualifications. This is significant, as an employee's value is increased as they undertake further training or receive additional certifications. This allows them to receive higher wages and also to be charged out at a higher rate.
- The main reason that a few employers do not support further training or certification is that their workload is too great to be able to cope with employees being absent. No employers feel that the cost of training was prohibitive.
- The employers expressed overwhelming support for the idea for local educational centers that could train people in a number of different marine trades. Currently much of the training is offered out of state and this requires employees to take significant amounts of time off. As many businesses report few employees and high workloads, such local centers could reduce the amount of time training would take and so encourage employers to send more of their employees for further training.
- Local educational centers should offer off-site, classroom / workshop-based courses as these were the clear preference expressed by the employers. There was also a clear preference for

such courses to be offered during the winter as it is reported that this is the only time of year that there is a slight lightening of the workload. At all other times of the year, training would significantly reduce a company's ability to cope with the volume of work. This is exacerbated by the fact that the marine businesses tend to have few employees and so, if people are absent for training, the workload is significantly increased on those who remain.

- A further sign that businesses are struggling to cope with their workload and a lack of qualified employees is that the most common reasons for businesses to sub-contract work were due to lack of in-house expertise and due to the excessive workload.
- The common tasks that were sub-contracted were electrical or electronics work, fiberglass projects, canvas work and detailing.
- The survey showed that the greatest challenge faced by the marine industry in the South Coastal region of Massachusetts is a lack of good/qualified personnel and this is predicted to remain true in the future.
- Businesses were then asked to identify what new challenges will influence the demand for specific skill sets in the future. Over half suggested that increasing technology, especially in the field of electronics, will be the most important influence. The second most common response was that increasing computerization will mean that computer skills will be needed. Correspondingly, many respondents felt that computer skills will be a key skill that will be needed in the industry in the future and that diagnostic/troubleshooting skills and the ability to develop new courses to address technological advances will also be essential. Other essential needs were customer service skills, basic knowledge and skills, and a good work ethic.
- While the response rate to the Wages Survey was low, it appears that, on average, the two highest paid positions were those of Service Manager (averaging \$28.26 per hour) and Lead Technician (\$24.83 per hour). The lowest average wages are for Dock Hands (\$11.00 per hour), General Laborers (\$14.52 per hour) and Dock Masters (\$16.50 per hour). These reflect the average wages reported but the maximum hourly wages reported varied significantly with the highest being over \$60 per hour for a Service Manager, followed by almost \$41 per hour for a Parts Manager and \$35 per hour for a carpenter. None of these rates reflect potential overtime rates that are paid at time and a half. Working overtime is common within the marine industry and can contribute significantly to an employee's annual income.
- While entry-level wages were not particularly high, they tended to be higher than the minimum salary for similar jobs based on data from SalaryExpert.com. It is important to remember that, within the marine industry, an entry-level employee who is quick to learn and has some experience or qualifications is likely to be promoted rapidly. As discussed previously, many marine businesses actively support employees receiving further training. This can often involve attending manufacturer's courses that are located in other states. As an employee becomes more experienced and qualified they become able to leverage higher wages. Many other types of businesses are not so concerned about helping their employees better themselves.
- The comparison of the 2005 survey data with salary information from SalaryExpert.com suggests that the marine industry is generally offering competitive wages for the South Coastal region of Massachusetts. However, as the number of responses was low this cannot be stated categorically. It is also important to remember that the survey salaries do not include the potential for overtime and that working overtime is a common occurrence in the marine industry. A comparison of ABBRA data from 2001 and MMTA data from 2002 suggests that at that time, the Massachusetts wages were generally comparable to those being paid elsewhere.

## Synopsis

The 2005 Massachusetts Marine Trades Workforce Assessment Survey clearly shows that the marine businesses in the South Coastal region of Massachusetts are currently unable to grow due to a severe lack of qualified technicians. On average, there appears to be current need for approximately 1.5 more technicians per business and this un-met demand is expected to grow in the future.

Qualified technician positions are well paid and this means that there are significant employment opportunities in the area for personnel with the relevant marine trade skills. Marine industry employers are keen to support their employees in efforts to gain further qualifications that may lead them to becoming a Master Technician. However, the fact that many of these companies are small means that it is not always possible to support further training as the remaining employees would not be able to deal with the excessive workload.

Currently, much of the training is offered out of state, which means that employees must be absent for significant periods of time. Such periods of time could be greatly reduced if educational centers were to be established within Massachusetts. Such center could offer courses in a number of marine trade skills and use on-site, classroom / workshop teaching methods. The establishment of such centers would encourage employers to assist their employees in gaining further qualifications and would also help to attract other people into the marine industry.

The popularity of such courses would be greatly enhanced by offering courses during the winter when the amount of work being done by marine businesses is somewhat reduced.

The overall benefits of developing local educational centers are three-fold:

- They could offer cost-effective, experiential learning to those who are interested in becoming employed in the marine industry in Massachusetts;
- They could assist in increasing the skills and qualification of those who are currently working in the marine industry; and,
- The resulting increase in the number of qualified marine technicians would allow many of the mainly small marine businesses to expand and therefore, hire more staff. Thus increasing the demand for more qualified technicians, support staff and other less skilled positions.

It is clear that if the marine industry in the South Coastal region of Massachusetts is to be able to expand, there is a significant need for more qualified technicians. The potential for employment as a year-round, full-time marine technician is great and such positions offer significant financial opportunities for those with a good work ethic and a willingness to do overtime.

If the patterns and needs within the South Coastal region are mirrored in other areas of Massachusetts, then the marine industry offers immense employment potential that can only be realized through a concerted effort to encourage people to enter the industry and to expand educational opportunities such those offered by Massasoit Community College. As the reputation of such courses such increases, so to will the employment potential of their graduates. While entry level positions in the marine industry are not particularly well paid, the industry is unique in that most businesses are very nurturing of keen, fast-learning employees with a good work ethic and such employees can expect rapid advancement, financial support for further training and qualification and the opportunity to earn significant income as their skills and experience increase.

## **Recommendations**

The Massachusetts Marine Trade Workforce Assessment survey has reinforced a key goal set by the Board of the Massachusetts Marine Trades Association, working on behalf of the recreational marine trades industry, a few years ago. The MMTA aims to work to meet the challenge of a local and national growth inhibitor for the recreational marine trades - the profound shortage of marine technicians.

To this end, the following recommendations are proposed:

- ✓ To continue to pursue regional, sectoral initiatives as a means of assessing marine trades workforce development needs and leveraging the information to expand training opportunities for both incumbent and future marine trades employees.
- ✓ To expand the survey sample statewide to assess anew the needs of Massachusetts recreational marine trades businesses.
- ✓ To pursue the development of apprenticeship programs for the marine trades as a way to bridge the gap between classroom education and a fully developed career path thereby expediting

advancement, wages, employers return on training investments, and providing more experienced employees for marine trades businesses.

- ✓ To expand the connection between educators and the marine trades to coordinate and facilitate internship opportunities for students of marine trades programs through employer visits to classrooms, student visits to businesses, and possibly, the hosting of a marine trades job fair.
- ✓ To further assess the specific needs and job skills that are lacking and to develop programs that will more directly result in the placement of individuals in the marine trades.
- ✓ To continue to counter the common misconceptions that jobs in the New England marine trades are seasonal, low paying, and/or unavailable. In short, to more effectively market recreational marine trades jobs and careers.
- ✓ To support and promote vocational marine trade courses and to work to establish educational centers that offer training in a number of marine trades. Such training should be geared to meet the limitations on when employees may be available and to structure courses in a manner that will attract more students.

## **1 Background**

In fall, 2004 a partnership was created consisting of the South Coastal Workforce Investment Board, the Massachusetts Marine Trades Association, Massasoit Community and the Urban Harbors Institute of the University of Massachusetts Boston. In December 2004, the partnership submitted a grant funding request to the Commonwealth Corporation to conduct a marine trades workforce assessment of the South Coastal region of Massachusetts.

Early in 2005, through the generosity of the Massachusetts Department of Workforce Development and administered through the Commonwealth Corporation, the Massachusetts Marine Trades Workforce Assessment Initiative was funded that allowed a snapshot survey of the marine trades within a specific geographic area.

The effort began with the selection of Tina Marie Giambro of Squantum Marine Consulting to conduct the actual survey. In collaboration with the Urban Harbors Institute a survey instrument was developed, distributed, and returned. The data analyzed were independently analyzed by the Urban Harbors Institute.

The purpose of the survey instrument and the findings was to determine the extent of un-met marine business labor needs, assess the state of the recreational marine employers and develop a statistical foundation for future initiatives.

In addition to the marine businesses survey, an additional survey was conducted by Massasoit Community College to identify the expectations and desired outcomes of those students enrolled in the College's Marine Service Technician program.

## **2 Aims and Objectives**

The aim of this project was to better understand the current status of the marine industry in the South Coastal region of Massachusetts and to try to determine the future needs of those involved in marine trades.

The overall aims of the 2005 Marine Workforce Development Survey were:

- to determine the extent of the marine industry's labor needs in the South Coastal region of Massachusetts;
- to ascertain which skill sets are most in demand and for which there is a lack of qualified people;
- to assess the state of recreational marine employers;
- to identify the current and future challenges faced by the industry;
- to ascertain the needs for formal training and certification;
- to ascertain the most favorable types of training and the seasons when such training should be offered;
- to develop a statistical foundation for future initiatives; and,
- to compile crucial information to help stabilize the marine industry in Massachusetts and encourage it to grow.

In order to collect these data, a comprehensive survey was developed by the Urban Harbors Institute of the University of Massachusetts Boston, in collaboration with the Massachusetts Marine Trades Association.

In addition to the Workforce Survey, a Wages Survey was also developed. This was a follow-up to a similar survey that was conducted in 2002 by MMTA and aimed to determine how the current wages within the industry compare to those in other industries.

An addition data gathering effort was conducted by the Massasoit Community College, which has a long-term partnership with the Massachusetts Marine Trades Association. Several years ago, the Association asked the College to help in attracting and then training new employees for the many recreational marine positions that go unfilled each year. To this end, the College developed a marine 45-hour Boating Trades Overview Course that has been running for several semesters. In 2005, the College began a 475-hour Marine Technician Program. Training is a key component of a competitive and healthy marine industry. Therefore the Massasoit Community College conducted a survey of current students and recent graduates of these courses to gauge their views about training needs and the opportunities offered by the marine industry.

### 3 Introduction to the Survey and Analysis

The Urban Harbors Institute of the University of Massachusetts Boston, in conjunction with the Massachusetts Marine Trades developed a survey designed to gather data that could be used:

- to ascertain the current status of the marine workforce;
- to identify the challenges that the marine industry faces at this time and in the future; and,
- to determine the need for and types of training that is, and will be needed in the South Coastal region of Massachusetts.

As recipients of the survey were likely to include marine businesses of various sizes as well as self-employed sub-contractors, the survey was divided into two sections. The first, for the marine businesses aimed to reveal the types of skill sets current employees had and the needs and predictions for how those may change in the future based on the current and future challenges faced by the industry. The second section was designed to be completed by self-employed contractors. These can be found in Appendix 1.

As the survey was going to be distributed to marine industries throughout the South Coastal region of Massachusetts, it was decided to incorporate a supplemental survey focused on the wages paid to those in the marine workforce. This survey was based on two previous surveys that had been conducted: in 2001 the American Boat Builders and Repairers Association conducted a national survey, and in 2002 the Massachusetts Marine Trades Association conducted a similar survey throughout Massachusetts. The supplemental wages survey can be found in Appendix 2.

At the start of this project, a listing of marine-related businesses was compiled and, where possible, the types of businesses were identified. This provided a distribution list to which the survey was then circulated. A total of 126 surveys were distributed via e-mail and mail to a list of marine and marine-related businesses within the South Coastal area of Massachusetts. Of these, 36 were returned as undeliverable either due to incorrect contact information or because the businesses had moved or closed, leaving a total of 90 surveys that reached their destination. These surveys were followed up with e-mails, telephone calls and site visits in order to ensure that the greatest response possible could be achieved. Business owners were informed that they could reply anonymously if they so wished and that all individual responses would remain confidential.

With all surveys the response rates vary considerably and are influenced by the length of the survey, the seasonal activities of the target group and the level of effort expended in following up after the distribution. A total of 45 responses were received, of which 42 were comprehensive and were used for analysis. This represents a response rate of almost 47% for those surveys that were delivered successfully. This rate is good for a survey such as this.

As is common in the marine industry, many owners are involved in a number of different types of businesses. For example, at one location there may be a boatyard with an associated marina, retail outlet and a dealership. This complicates the interpretation of the results in that for many of the questions, respondents provided multiple answers. As can be seen in the results sections, while the analysis was carried out on 42 responses, the total number represented in graphs and tables often exceeds this number. This can be seen in Figure 1 and Figure 2. Figure 1 represents what were believed to be the types of businesses to which the survey was distributed. Sixty-one of these businesses (45% of the total number of surveys distributed) had been identified as incorporating a boatyard or vessel repair facilities. A further 45 were dealers and 36 offered marina facilities. Therefore the sum of the number of boatyards, marinas and dealer is greater than the total number of surveys distributed. The reason is that 26 of those businesses contacted were identified as being a combination of a boatyard, marina and a dealership. The businesses that were targeted were largely identified as those most directly involved in the marine industry and would therefore be best placed to provide the necessary data for this study. The “other” category in Figures 1 and 2 included a variety of marine-related businesses including surveyors, vessel operators etc.

Figure 2 shows the number of types of businesses types identified in the 42 responses received. Once again, the total number shown in the figure exceeds the total number of responses as many of the owners who responded incorporate multiple business types on their properties. Twenty of the responses (48%) identified a boatyard or boat repair as comprising part of their business. While twelve respondents

classified some or all of their business as “other”, they were still marine-related to some extent (this is discussed further in the next section). All the other business types identified were clearly marine industries.

While there are similarities between Figures 1 and 2, there are also clearly some differences. These may reflect the fact that some of the businesses that were targeted had changed or diversified. However, what is more likely is that the initial list of target businesses did not fully capture all the different types of enterprises that were occurring at any location at the time. For example, the number of businesses that were originally identified as being involved in engine sales was fewer than the number that responded that they sold engines.

However, Figure 1 and 2 clearly show that the survey captured many marine and marine-related businesses types and it is felt that the data contained in the responses generally reflects the views of the marine industry within the survey area.

The analysis of the survey data was undertaken in two ways. Firstly, analysis was carried out on all the responses, and secondly, the same analysis was repeated using only the responses from what would be considered “marine businesses”. The second analysis discounted responses from businesses such as consultants, insurance agents, media / publication businesses, vessel operators and those solely involved in storage or transportation. Instead it focused on the businesses that were most likely to employ people with skills specific to the marine industry. These would include: Master Technicians, diesel, inboard gas engine, outboard and sterndrive technicians, as well as riggers, canvas workers and fiberglass technicians. The businesses included boatyards, marinas, dealerships etc. The reason for the second analysis was that the main aim of the survey was to ascertain what the present and future demands were for those skilled in specific marine trades and the needs for further training in these fields. While all the responses are of interest, responses from the “marine-related” businesses may not fully reflect the views and needs of the marine industry itself.

Where relevant, the results of all the surveys will be discussed, followed by the results from analysis of only the “marine” businesses. This will be followed by a discussion focused on whether any differences are apparent and whether these differences are of interest or are significant. In order to prevent confusion between these two sets of analyses, figures using data from all the responses will be shaded in lighter colors, while those showing data only from the marine businesses will be shaded more brightly.

Of the 42 useable responses, 32 were from those that could be identified as businesses that might require specific marine trades. Such businesses included boatyards, marinas, boat builders, canvas makers/repairers, boat equipment retail, brokerage/yacht sales, dealers and those involved in engine sales.

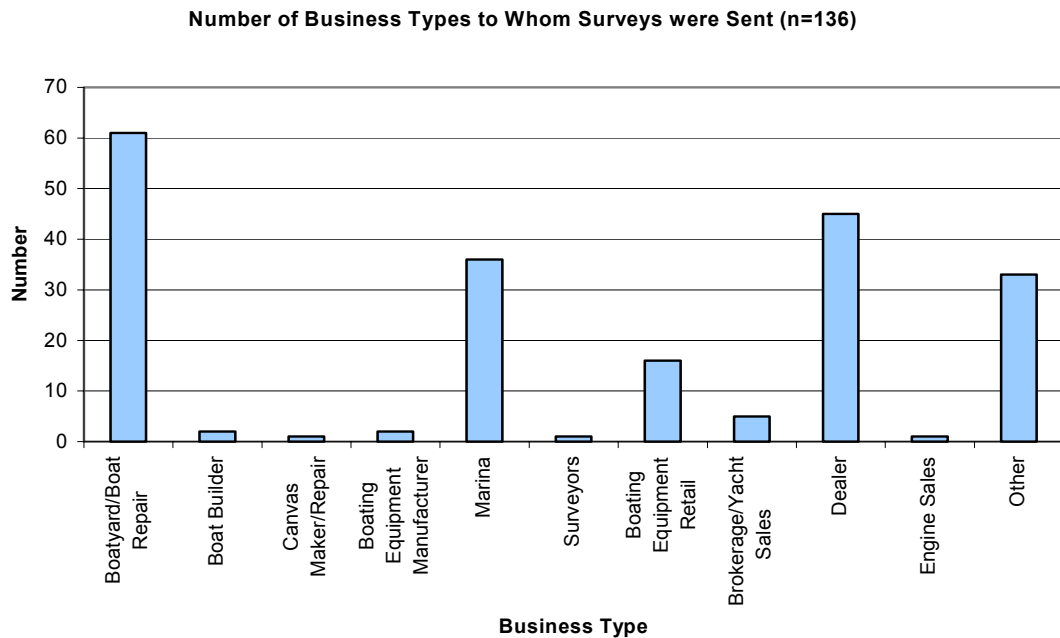


Figure 1: The types of businesses to which the survey was distributed.

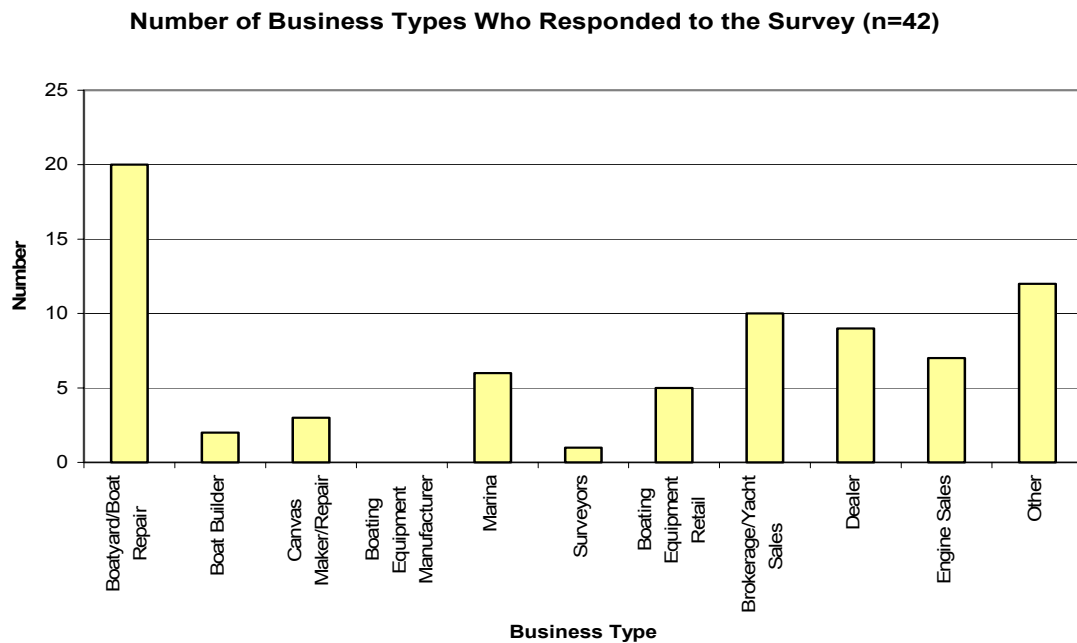


Figure 2: The types of businesses from which completed surveys were received.

## 4 Results from the Business Responses

### 4.1 Types of Businesses

The survey listed a number of marine and marine related business types and asked the respondents to identify all those types that formed part of their business (Figure 2).

Of the 42 responses that were analyzed, 27 reported only one type of business in which they were involved. Ten of these were marine-related rather than pure marine industries. The other 17 include:

- 7 boatyards/boat repair businesses;
- 3 canvas makers or repairers;
- 1 marina;
- 3 brokers/yacht sellers; and,
- 3 dealers.

Fifteen respondents listed 2 or more business types in which they were involved. Of these 15, fourteen were either boatyards or marinas with marine retail, brokerage or dealerships associated with them, and one was involved in brokerage/yacht sales and was also a dealership (Table 1). Three of the 15 were also involved in a marine-related business. The marine-related types of businesses included a commercial fishing supplier, a marine consultant, an insurance agent, a landlord, two media/ publication businesses, three companies involved in storage or transportation, two vessel operators and one welder.

It is clear from the data that it is common for people who are working in the marine trades to have a number of different types of businesses associated with their enterprise. Of the 42 respondents, 32 can be classified as key marine industries that would be expected to need the particular skill sets that are the focus of this survey.

Table 1: The number of different types of businesses in which the respondents were involved (n=42).

MULTIPLE TYPES OF BUSINESS	Number	Types
6 business types	2	1 boatyard & marina with associated marine retail/dealerships 1 boatyard with associated marine retail/dealership
5	1	1 boatyard with marine retail/dealerships
4	2	1 boatyard & marina with associated marine retail/dealerships 1 boatyard with associated marine retail/dealership
3	3	1 boatyard & marina with associated marine retail/dealerships 1 boatyard with associated marine retail/dealership 1 marina with associated marine retail/dealership
2	7	1 boatyard & boat builder 4 boatyards with associated marine retail/dealerships 1 boatyard & marina 1 broker & dealership
1	27	7 boatyards 3 canvas workers 1 marina 2 transportation businesses 2 marine publication/media businesses 2 vessel operator 1 surveyor 3 brokers 3 dealerships 1 marine consultant 1 insurance business 1 welder

### 4.2 Number of Years in Business

The survey asked each respondent to state how long their business had been in operation. There were 41 responses to this question and the answers ranged from a minimum of 2 years in business to a maximum of 58 years. The average of all 41 responses was 18.8 years ( $\pm$ SE2.43). However, when only the 31 marine businesses were analyzed, the average increased to 21.7 years ( $\pm$ SE2.93). This suggests that the core, marine businesses tended to be those that had been in business for longer periods. A comparison of Figure 3 and Figure 4 supports this.

Figure 3 shows the responses from all 41 respondents, and Figure 4 shows the responses from the 31 marine businesses. It is clear that the most significant difference is that 8 of the marine-related businesses had only existed for less than 10 years, with only two having been in business for between 20 and 30 years.

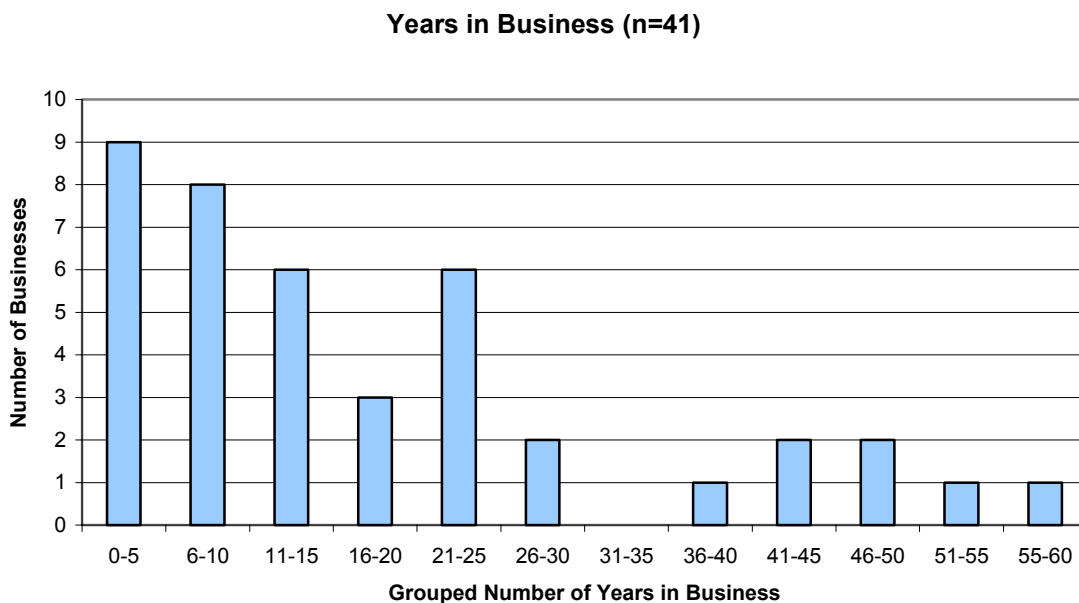


Figure 3: The number of years that all the respondents reported their business had existed.

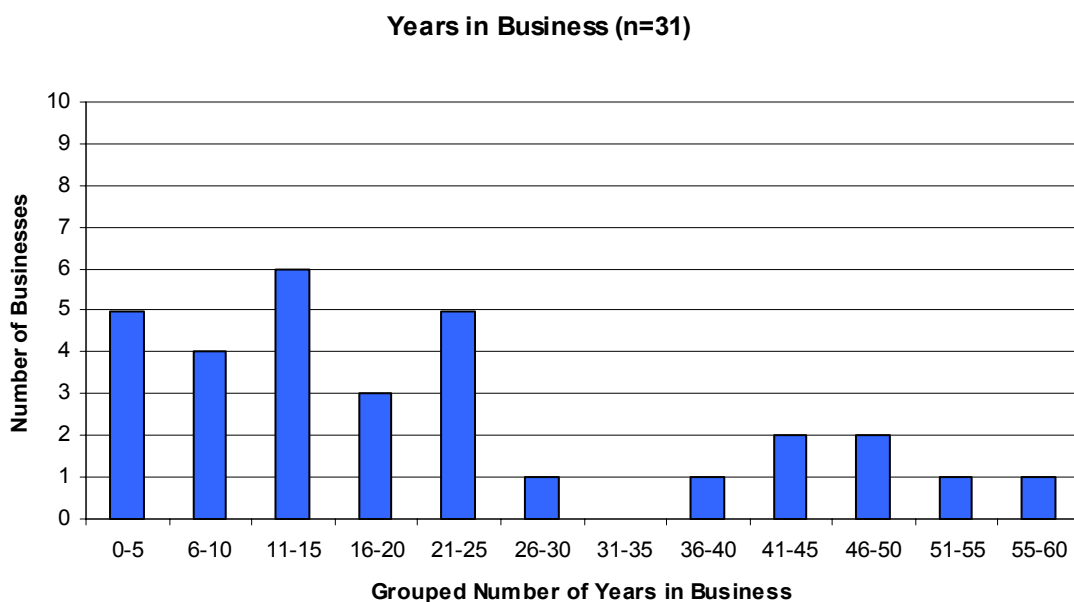


Figure 4: The number of years that the marine industry businesses reported being in business.

### 4.3 Type of Business Entity

The survey asked respondents to classify the type of business entity that they were (e.g. LLC, Inc, DBA, Sub S Corp, Public or Private). There were 37 useable responses, of which 29 were directly marine businesses. Both analyses gave similar results with over 50% of the businesses being “Inc”, around 20% being “LLC”, and 13% being DBAs (Figure 5).

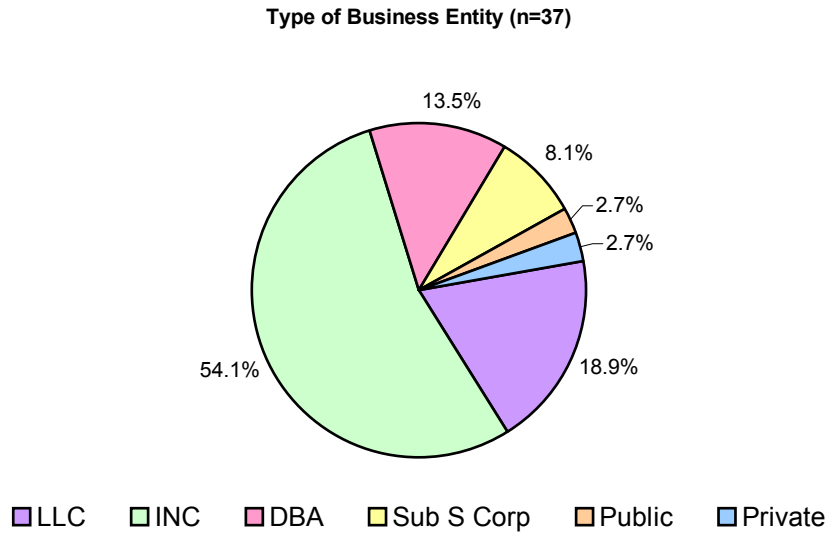


Figure 5: Type of business entity reported by all respondents.

#### 4.4 Business Location

The majority of businesses were located on the coastal waterfront (56% of all respondents and 55% of the marine business). Around 30% of businesses were located inland and the remainder on inland waterways. Figure 6 shows the data from the marine businesses.

The fact that a significant number of marine businesses are located away from the waterfront may seem surprising but is understandable. A number of types of business, while clearly being marine businesses are not necessarily water-dependent. These may include marine electronics, outboard engine repair, propeller repair etc. And, with the increasing use of hydraulic trailers, even boat sale, repair or storage can occur on upland areas.

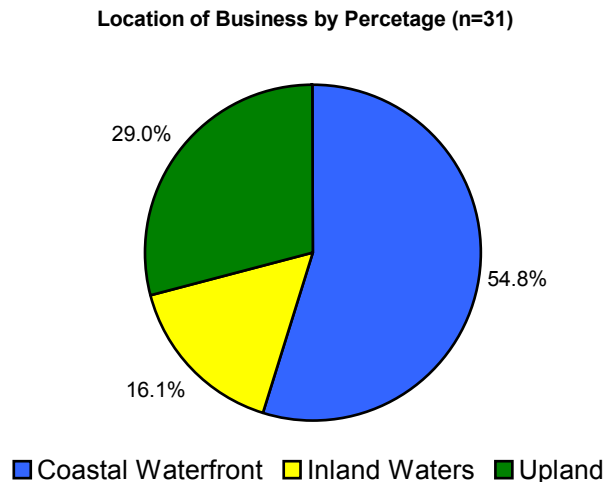


Figure 6: The location of the marine businesses.

#### 4.5 Number of Full-Time and Part-Time, Year-Round and Seasonal Employees

There were 41 responses to this question, of which 31 were from marine businesses. The 41 respondents reported a total of 266 year-round employees, of which 18 were part-time. The maximum number of year-round full-time employees was reported as 25. For year-round, part-time employees the maximum was

10. Additionally, there were 109 seasonal employees, of which 63 were part-time. For seasonal employees, the maximum numbers were: 15 full-time and 21 part-time.

In the marine businesses that responded, there were 211 year-round employees, of which only four were part-time. Of these there was a maximum of 25 full-time and 1 part-time year-round employees. There were an additional 92 seasonal employees, with 51 of them being part-time (Figure 7). For seasonal employees, the maximum numbers were: 15 for full-time and 21 for part-time. On average, each marine business had less than 7 full-time, year-round employees and less than 10 employees of any sort which suggests that many marine businesses are small. This is significant when it comes to the workload, ability to send employees for further training and the ability of businesses to grow.

Both the marine subset and all respondents showed similar patterns with the majority of employees being full-time and year-round (66% for all respondents and 68% for marine businesses). This is common throughout marine businesses, although many people from other businesses expect this not to be the case. There is a general perception that marine businesses are extremely seasonal but this is clearly not the case as marine businesses reported that almost 70% of their employees were hired year-round. The next largest group is part-time seasonal employees, followed by full-time seasonal. There appear to be few part-time, year-round positions and very few within the marine businesses.

**Full-time and Part-time Seasonal and Year-Round Employees (n=41)**

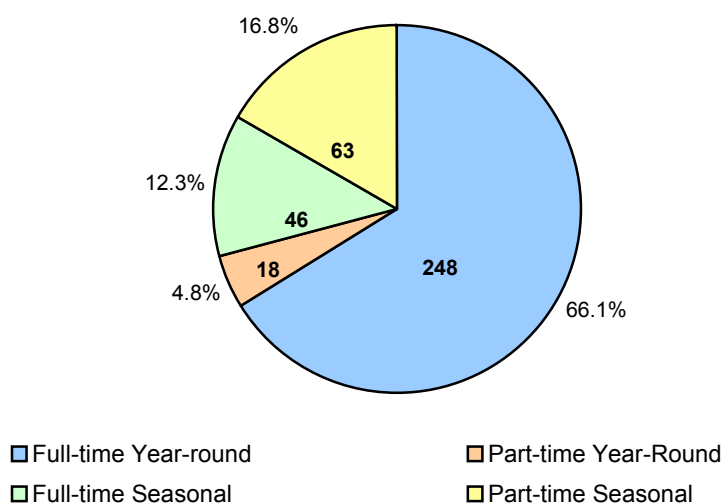


Figure 7: The breakdown of year-round/seasonal and full-time/part-time employees reported by all 41 respondents. The numbers inside the pie chart are the number of employees of each type.

#### **4.6 Seasonal or Year-Round Employees by Primary Job Title**

The survey then asked businesses to list the number of seasonal or year-round employees based on the primary job title or skill set. There were a total of 36 useable responses, of which 27 were from marine businesses. There was little variation between the analyses of all the responses and the marine subset. As the focus of this study was those skill sets needed in the marine workforce, only these data are presented below.

Figure 9 shows the number of seasonal versus year-round employees broken down by the primary job title, or skill, of each employee. What is clear is that there are some particular jobs that are clearly more seasonal than others. These include boatyard laborers, dock/gas dock attendants and boat washers/cleaners. This is not unexpected as many of these activities occur outdoors (and therefore less so in the winter) or are directly linked to the seasonal variation in recreational boating activity (e.g. dock/gas dock attendants). While many in the marine trades would have been able to identify which jobs are likely to be more seasonal than others, the data support this view.

What is of particular interest is that for the skilled marine positions (Master Technicians, Diesel Technicians, Inboard Gas Engine Technicians, Outboard Technicians and Sterndrive Technicians) there are very few seasonal employees. The majority (94%) of people working in such positions are employed year-round.

**Full-time and Part-time Seasonal and Year-Round Employees (n=31)**

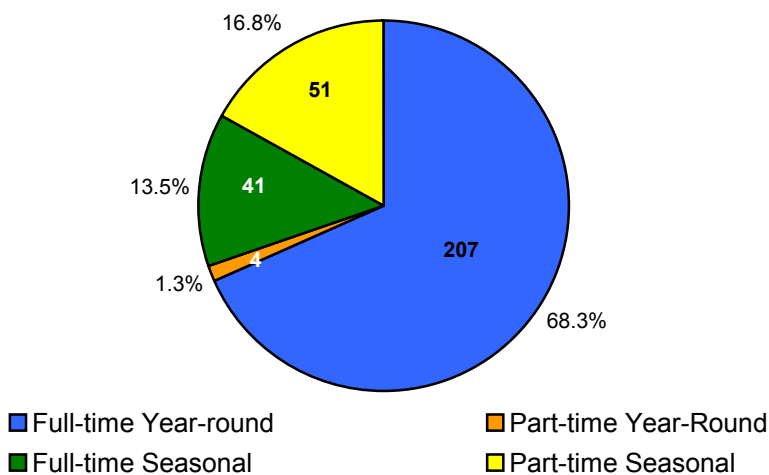


Figure 8: The breakdown of year-round/seasonal and full-time/part-time employees reported by the 31 marine businesses. The numbers inside the pie chart are the number of employees of each type.

Table 2 shows the same data as presented in Figure 9 as well as the number and percentage of businesses that reported that they employed people with a particular skill (shaded orange). A majority (63%) of the 27 businesses that responded employed Business/Clerical Staff and over 59% employed Master Technicians. The next two highest categories (almost 56% of businesses) employed Boatyard Laborers and Sales Staff.

The green column shows the average number of employees with a particular skill set for those businesses that require such skills. The highest numbers are for two of the very seasonal positions: Dock/Gas Dock Attendants and Boatyard Laborers.

The “Other” category included service and parts staff, general waterfront operations staff and CDL drivers.

#### **4.7 Current and Predicted Future Hiring Needs**

The survey asked employers to identify their current hiring needs by skill and what they thought their hiring needs would be in the next five years. The skills were those of specific interest to those in the marine industry. They were also asked to differentiate between year-round and seasonal needs. There were a total of 33 responses, of which 27 were marine businesses (26 responses when providing information on future needs). As before, only the data from the marine businesses is presented below. Figures 10 shows the current hiring needs reported by the marine businesses and shows a clear need for more Master Technicians. Interestingly, there seems to be little current demand for seasonal employees in any category. This could partly be due to the time when the survey was conducted. As responses were made when the season was underway, many seasonal positions may already have been filled. However, Figures 11 shows the responses to what employers feel will be their hiring needs within the next five years. Once again, the amount of seasonal employment is much less than the predicted need for year-round jobs.

There do seem to be differences between the current needs and the predicted needs in the future. Although Master Technicians continue to be the predicted greatest need in the future, there is also an increase in the need for Sterndrive and Outboard Technicians, Fiberglass Technicians and Riggers.

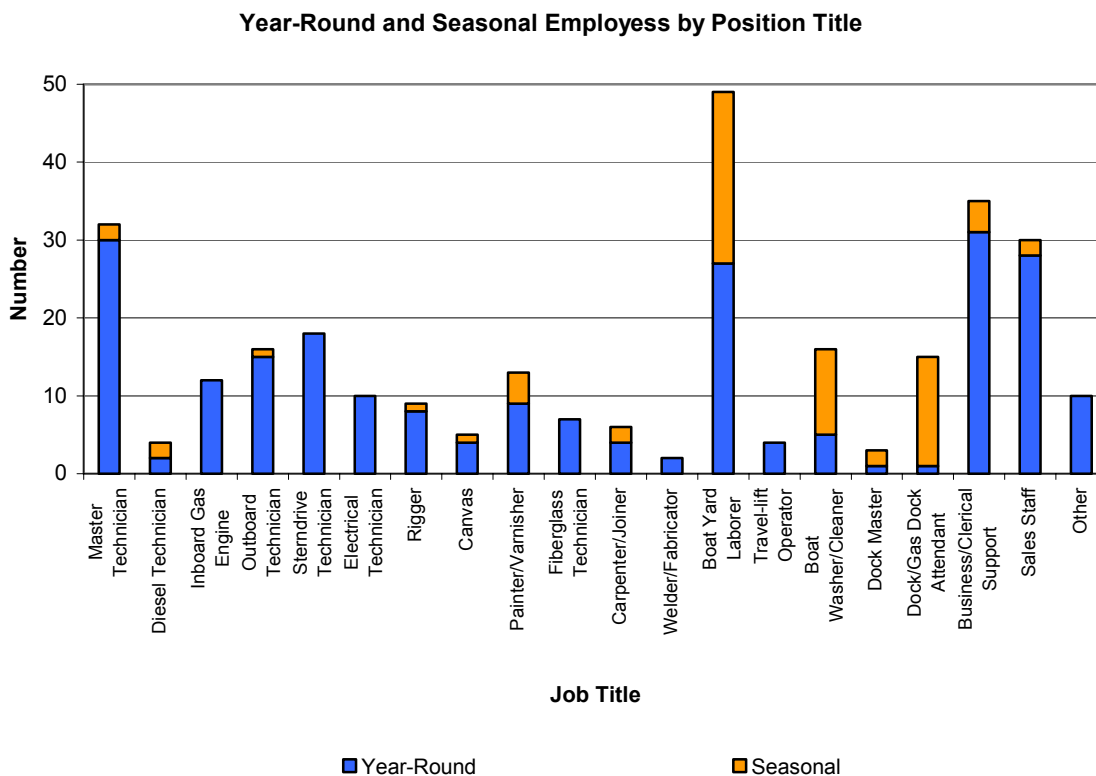


Figure 9: The breakdown of year-round versus seasonal employees by primary job title for the 27 marine businesses that responded.

What is of particular interest is the current and future need for people with marine skills such as technicians. Between the 27 marine businesses that responded, there was a current need for 41 technicians of various sorts. The 26 who predicted future needs suggested a need for 57 new technicians in 5-years time. This is of particular interest in that these are all well-paying jobs. The wages survey (Section 6) suggests that the minimum that respondents were paying people in such positions was between \$15 and \$20 per hour and the maximum was \$30 per hour (although those in the industry suggest that Master Technicians can be paid much more than the rates reported). It is also important to note that many of these positions require significant overtime, which is paid at time and a half.

The 27 respondents from the South Coastal area of Massachusetts needed, on average, 1.5 new technicians per business and the prediction is for a need for 2.2 new technicians per business in 5-years time. If their current and future needs are representative of the situation throughout the state then there is a high un-met demand for more skilled marine technicians and this is likely to increase in the future.

#### **4.8 Is Business Growth being Hampered by a Lack of Qualified People?**

There were 41 responses, of which 31 came from marine businesses. Both sets of responses show clearly that there is a strong feeling that there is a need for more qualified people and that the current lack of such people is limiting the ability for businesses to grow. Over 73% of respondents felt that this was the case. When only the marine businesses were analyzed, this figure rose to over 77%.

Clearly, the marine industry feels that the lack of qualified personnel is a significant hindrance to their ability to function. This, coupled with the need for technicians, suggests that the marine industry offers significant opportunities for those with the relevant qualifications.

#### 4.9 Is it Difficult to Find People with the Skills that are Lost when Employees Retire?

The previous question aimed to ascertain if employers felt that there was a lack of qualified people. This question aimed to refine this to discover if it was particularly difficult to find people possessing the skills of retiring employees. This is especially important as there are some traditional skills that are now less frequently found. The overwhelming response to this was that it is difficult to replace these lost skills (almost 82% of a total of 38 responses and almost 87% of the 30 responses from marine businesses). This suggests that some of the traditional skills are at risk of being lost within the industry.

Table 2: The number of year-round and seasonal employees reported by the 27 respondents, the number of businesses employing people with particular skills and the average number that such businesses employ, broken down by skill set/primary job title.

Job Title	YEAR-ROUND		SEASONAL		Total # Employing a Particular Skill Set	% of Respondents Employing a Particular Skill Set	Average Number of Employees by Skill Set
	# Employees	# Businesses	# Employees	# Businesses			
Master Technician	30	14	2	2	16	59.3	2.0
Diesel Technician	2	2	2	1	3	11.1	1.3
Inboard Gas Engine Technician	12	7	0	0	7	25.9	1.7
Outboard Technician	15	9	1	1	10	37.0	1.6
Sterndrive Technician	18	9	0	0	9	33.3	2.0
Electrical Technician	10	6	0	0	6	22.2	1.7
Rigger	8	5	1	1	6	22.2	1.5
Canvas	4	2	1	1	3	11.1	1.7
Painter/Varnisher	9	6	4	1	7	25.9	1.9
Fiberglass Technician	7	5	0	0	5	18.5	1.4
Carpenter/Joiner	4	4	2	1	5	18.5	1.2
Welder/Fabricator	2	2	0	0	2	7.4	1.0
Boat Yard Laborer	27	11	22	4	15	55.6	3.3
Travel-lift Operator	4	2	0	0	2	7.4	2.0
Boat Washer/Cleaner	5	3	11	3	6	22.2	2.7
Dock Master	1	1	2	1	2	7.4	1.5
Dock/Gas Dock Attendant	1	1	14	3	4	14.8	3.8
Business/Clerical Support	31	15	4	2	17	63.0	2.1
Sales Staff	28	13	2	2	15	55.6	2.0
Other	10	5	0	0	5	18.5	2.0

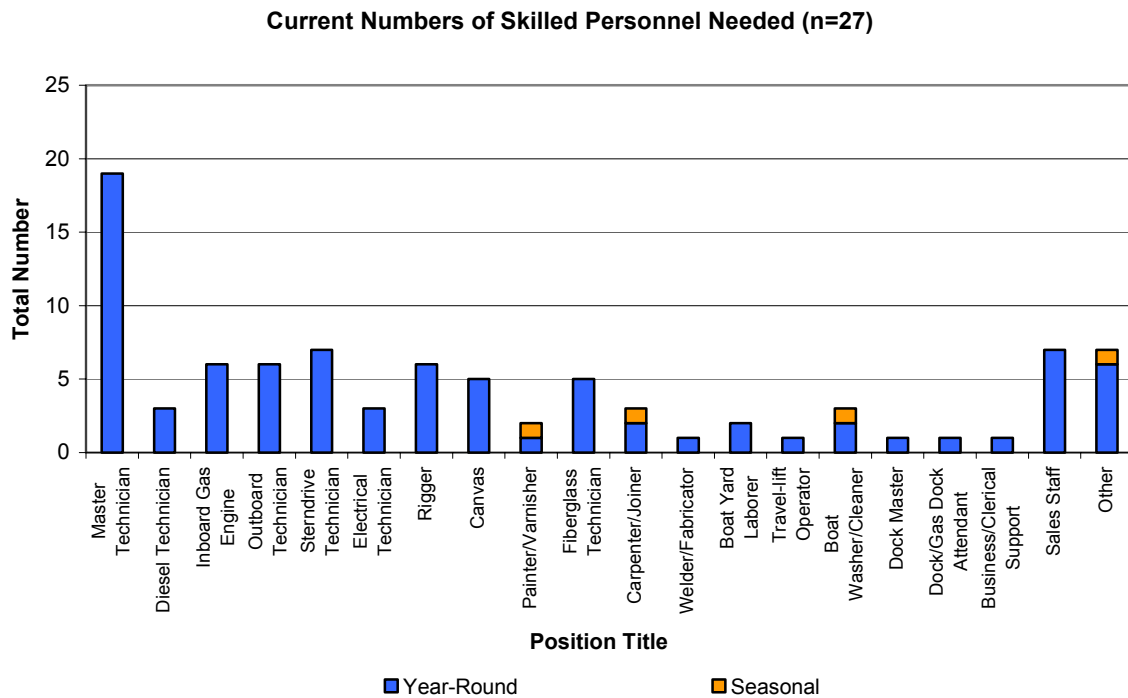


Figure 10: The current year-round and seasonal hiring needs reported by the marine businesses.

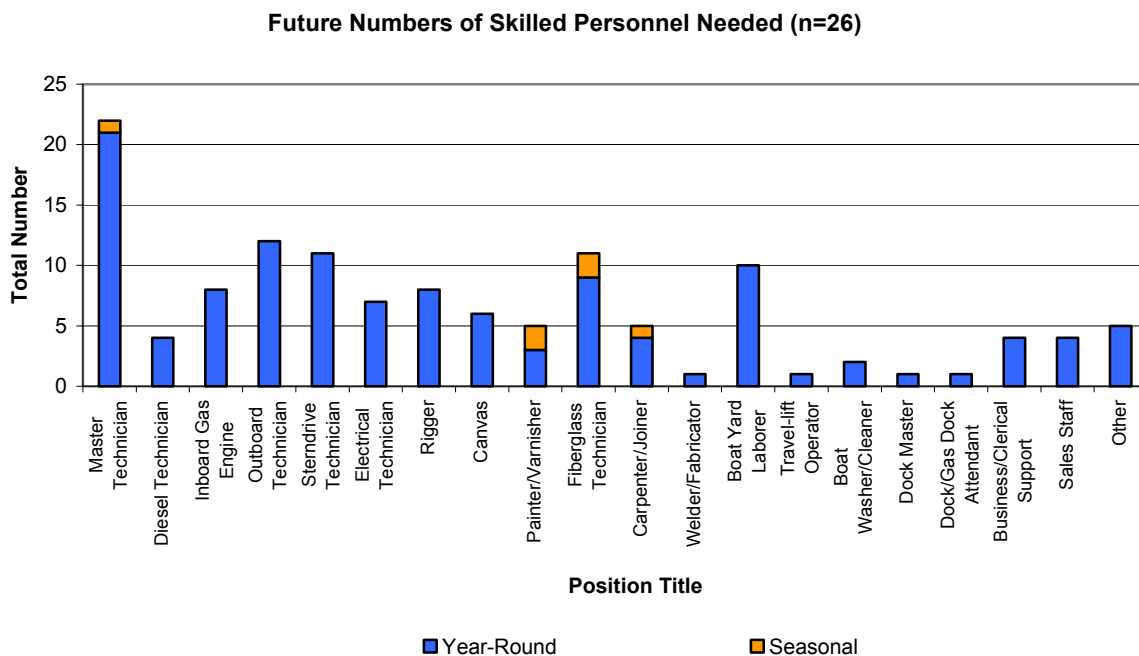


Figure 11: The predicted future hiring needs reported by the marine businesses.

#### 4.10 What are the Three Most Difficult Skills to Find?

Of the previously listed skills, those surveyed were asked to identify the top three most difficult skills to find. There were 37 responses. Thirty were from marine businesses. Of all the respondents, almost 46% listed Master Technician in the top three. This figure increased to almost 57% of responses from marine

businesses (Figure 12). From the total responses, almost 22% ranked Diesel Technician and Outboard Technician in the top three. Of the subset of marine businesses, almost 27% listed Outboard Technician as one of the top three most difficult skills, with 20% listing Diesel Technician, Inboard Gas Engine Technician and Sterndrive Technician as other rare skills. It is important to note that top five most difficult positions to fill are all the skilled technician positions. Therefore the businesses surveyed are currently looking to fill such positions, and will need more within 5-years but are finding it difficult to find qualified personnel. This, in turn, is hampering their ability to grow. This suggests that there is a real need to train new technicians to fill these positions.

#### 4.11 Where Current Employees had Received Training Prior to being Hired

There were 36 responses to this question (30 from marine businesses). Based on the all the responses, almost 39% of employees had received previous training through vocational schools. Additionally, over 30% had attended university and 25% had received training directly from a manufacturer or at high school (Figure 13).

The subset of marine businesses showed a different pattern (Figure 14) with almost 47% of employees receiving vocational school training and 30% having had training from a manufacturer. An equal number (23%) had received training at university, in high school or on the job.

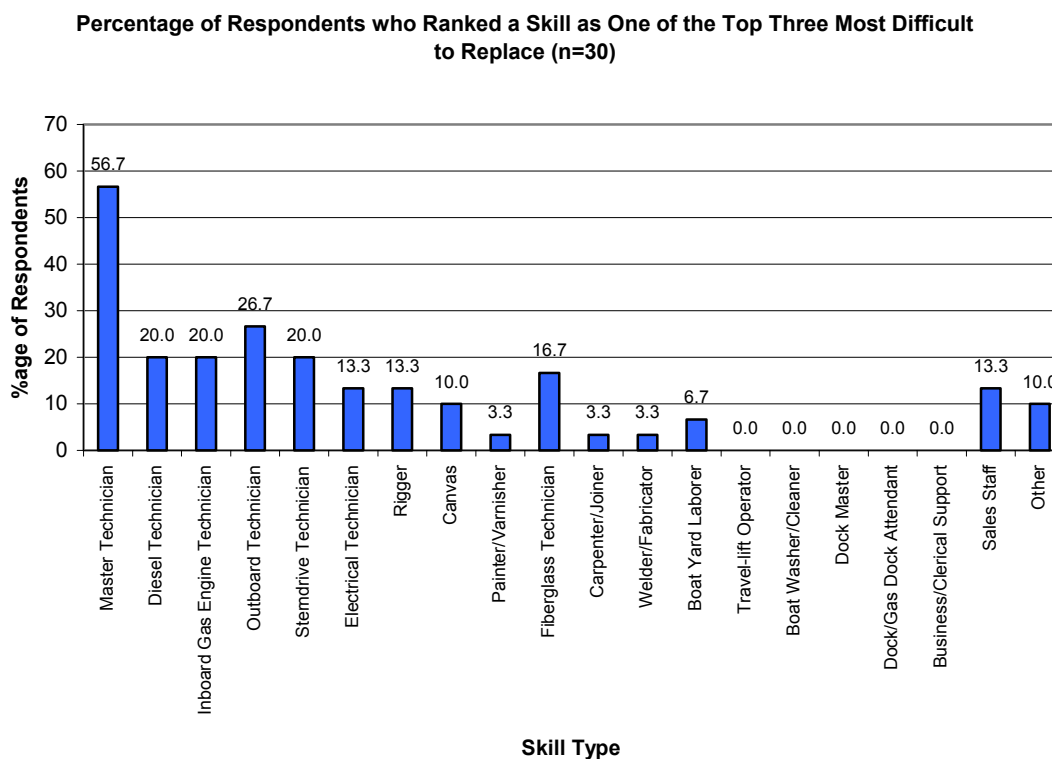


Figure 12: The number of marine businesses that ranked particular skill sets in the top three most difficult to find.



Figure 13: Where current employees had gained previous training as reported by all respondents.

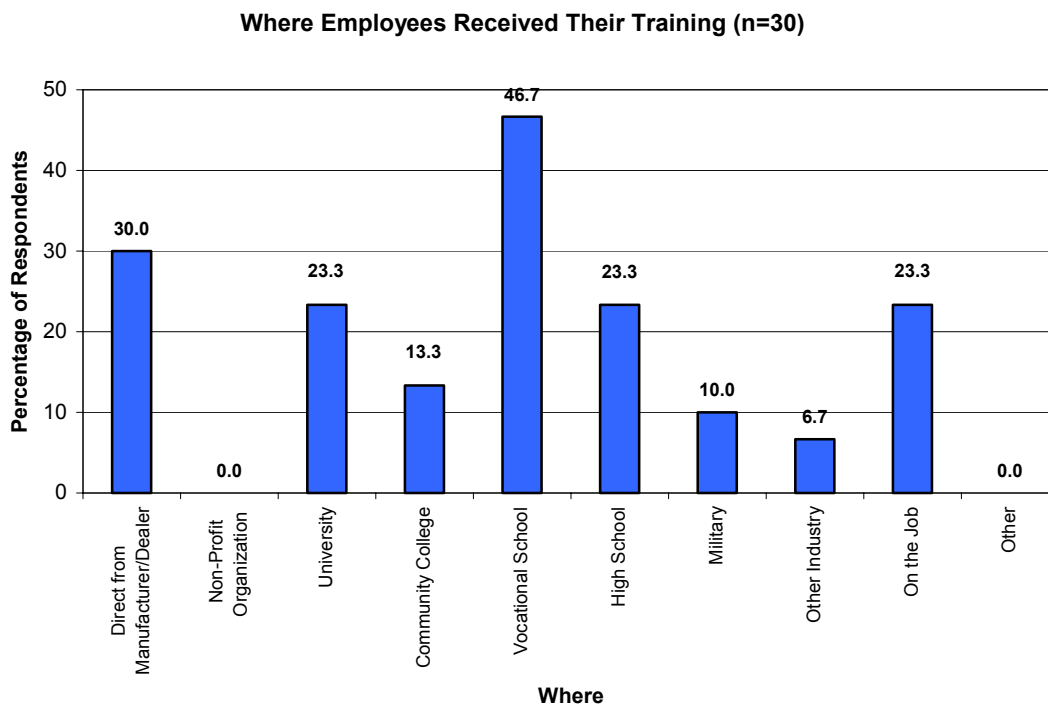


Figure 14: Where current employees had gained previous training as reported by the marine businesses.

#### 4.12 Training Offered to Encumbered Employees

A number of responses to the previous question suggested that employees had often received “on the job” training prior to being employed (19% of all respondents and 23% of the subset). However, “on the job” training can mean a number of things, from informal learning by experience and by watching others, to more formalized training. The majority (63% of all respondents and almost 67% of marine businesses) said that they offered formal on the job training to their current employees (from 30 marine responses and 8 marine-related ones).

The businesses were also asked if they send, and pay for, their encumbered employees for further training or certification. Of all the responses (n=38), almost 53% responded positively. However, when the marine subset was analyzed (n=28), over 64% said that they sent their employees for further training (Figure 15 and 16).

The high percentage businesses that support further training is significant as, when employees undertake further training or receive more certifications then their value is increased. This allows them to receive higher wages and also to be charged out at a higher rate.

Those that did not support further training were asked why they did not do so. As this question was aimed at only those who did not offer training, the number of responses was low (16 out of 18 possible, and only 9 were marine businesses). While this means that these responses are unlikely to be statistically robust, they are worth presenting as they show a couple of interesting points (Figures 16 and 17). Firstly, nobody felt that the cost of such training was prohibitive. Out of the all the responses, over 37% felt that their workload was too great to be able to give employees time off for training. Over 31% were self-employed and therefore had no employees to send for further training. Over 12% felt that if they sent an employee for further training then the employee would be likely to leave for a better job. The same number responded that there was no training available. It is interesting to note that both these respondents working as canvas makers/repairers. The final response was that no training was necessary (this was a used engine dealer).

Do Employers send Employees for Further Training? (n=38)

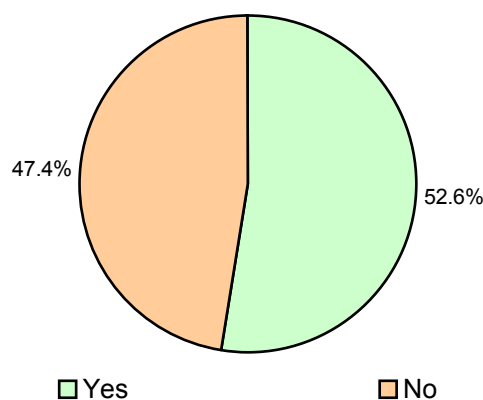


Figure 15: Whether all respondents send, and pay for further training for their employees.

### Do Marine Employers Send Employees for Further Training (n=28)

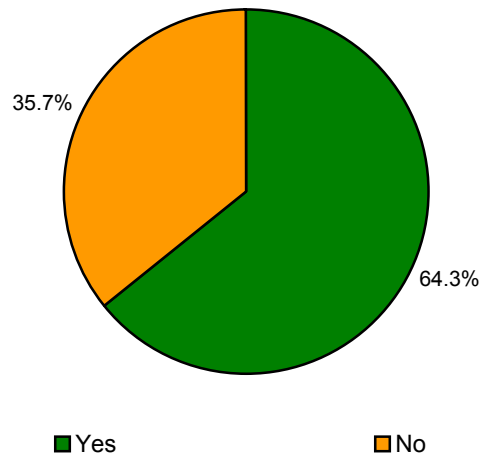


Figure 15: Whether marine businesses send, and pay for further training for their employees.

Of the marine businesses there was an even split between an excessive workload, the risk that the employee would leave for a better job, the business has no employees or that no training exists for canvas makers.

### Why Further Training is Not Offered (n=16)

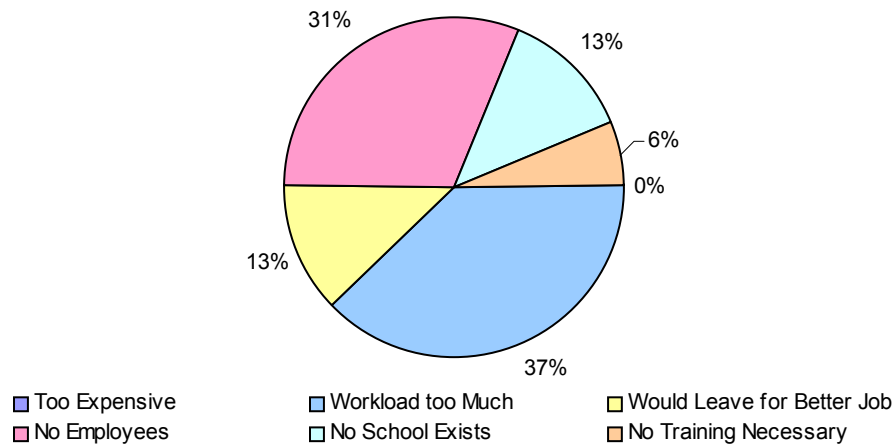


Figure 16: Reasons while further training is not supported based on all responses.

#### Why Further Training is Not Offered (n=6)

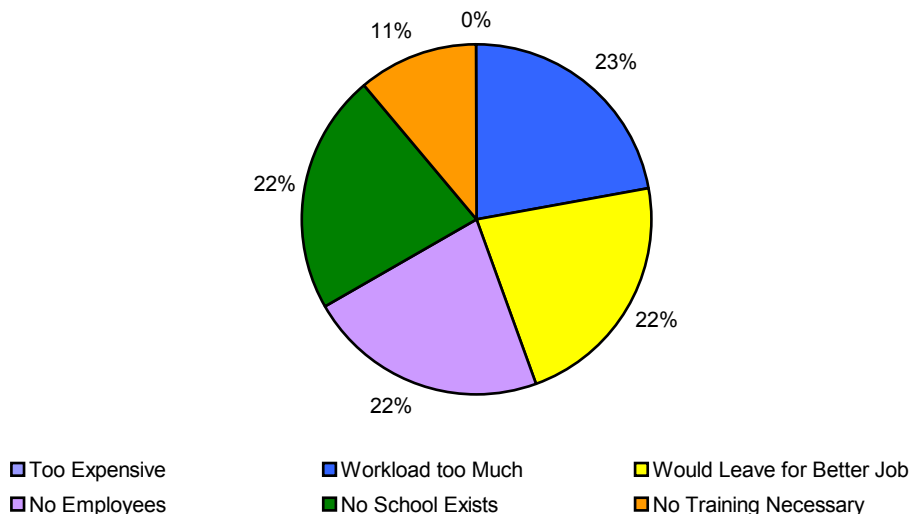


Figure 17: Reasons while further training is not supported based on marine business responses.

#### 4.13 Skills for which and Employer would prefer Qualifications or Certificates before Hiring

There were a total of 31 responses from marine industries and 8 from marine-related ones. In both cases the highest percentage (over 51% of all responses and over 61% of marine responses) felt that the position of Master Technician required formal qualifications of certificates. It was also felt that such qualifications were preferable for Inboard Gas Engine Technicians, Outboard Technicians and Sterndrive Technicians (28% of all responses and over 35% of marine ones). Over 19% of the respondents from marine businesses felt that the same was true for Diesel Technicians, Riggers, Fiberglass Technicians and Sales Staff (Figure 18).

Once again, it is the technician positions for which employers prefer prior certification or training.

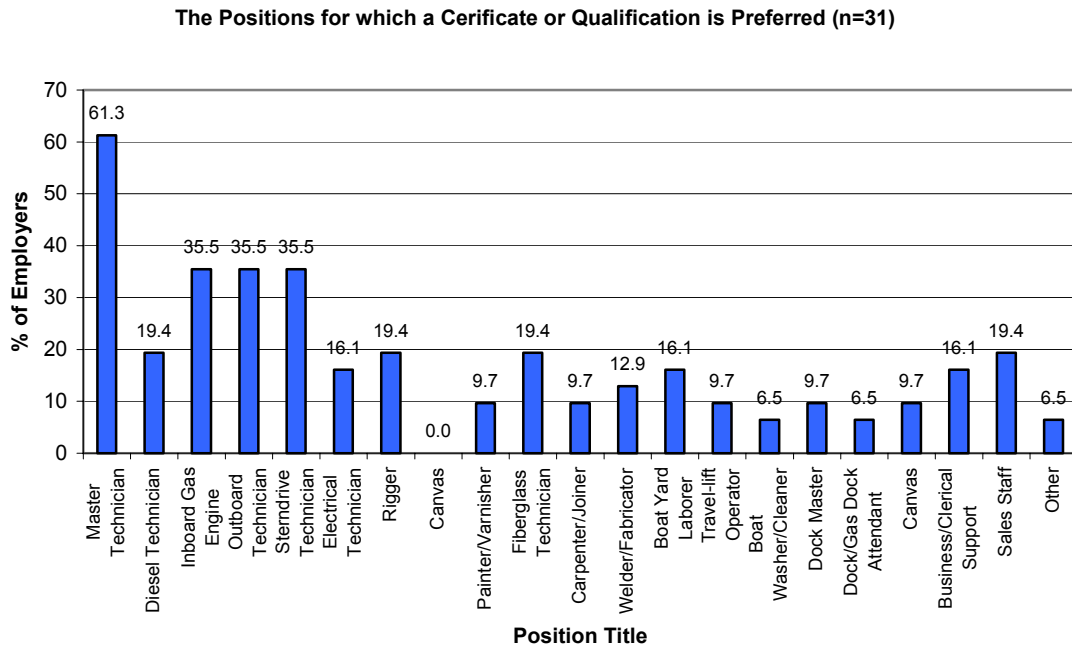


Figure 18: Percentage of marine business employers who preferred prospective employees to possess certificates or qualifications in specific skills prior to being hired.

#### **4.14 The Need for Local Education Centers and the Type of Training Preferred**

When asked if they felt if there was a need for local educational centers that offered training in a number of marine-related skills, the response was overwhelmingly positive. Of the total of 41 responses, 95% felt that there was such a need. The remaining 5% did not know. When only the marine responses were analyzed, 97% were in favor and 3% had no opinion. Nobody suggested that such centers were not needed. While costs were not identified as a reason for not supporting training (Section 4.12), excessive workload as an issue. Local training centers could reduce the time that training takes as many current training facilities are located elsewhere in the country, thus requiring extended periods away from work.

The survey then asked what types of training were preferable. Of a total of 39 responses, 77% preferred classroom or workshop based training. Almost 44% said that they preferred off-site training. However, almost 36% preferred onsite training. Other training, such as online courses, self-study or video/CD-ROM courses were not generally popular (all less than 8%).

When only the responses from 31 marine businesses were analyzed the pattern remained the same with 80% preferring workshop or classroom training, 45% preferring off-site and only 29% preferring onsite courses. Once again, the other options were not appealing (all less than 7%: Figure 19).

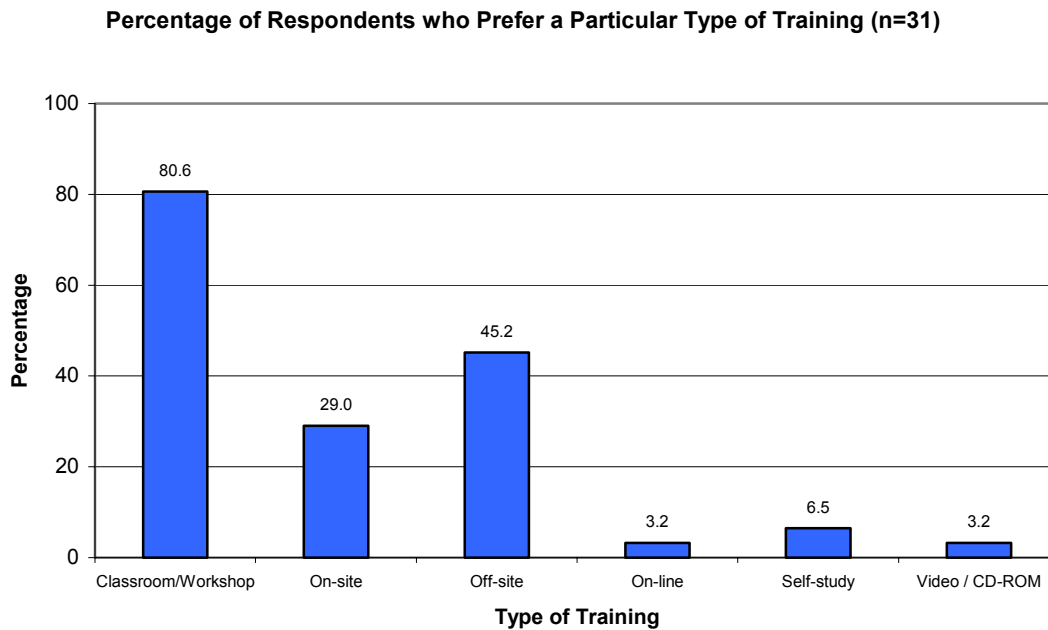


Figure 19: Percentage of marine business responses that specified a preferred type of training.

#### **4.15 Preferred Season for Training**

Many in the marine industry have suggested that training is only really feasible during the winter months when business is slightly slower. While this is generally believed to be the case, it was important to be able to show this statistically. The survey therefore asked each respondent in which season it would be most suitable to offer training. There were 32 responses from marine businesses and 8 from other marine-related businesses. All responses overwhelmingly support the generally accepted view that winter is the only feasible time with 95% of all respondents (91% of marine businesses) choosing “winter” (Figure 20). The other seasons were uniformly not preferred.

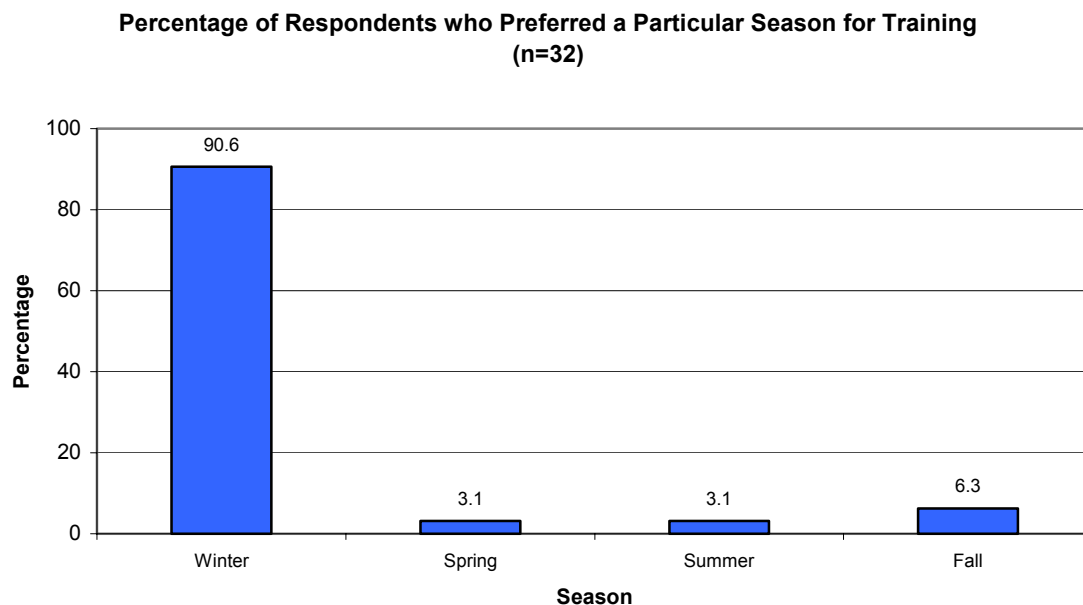


Figure 20: Percentage of marine business responses that specified a preferred season for training.

#### 4.16 Use of Sub-Contractors

The businesses were asked if they used sub-contractor and, if so, why. There were 39 responses, 30 of which were from marine businesses. From all the responses, almost 62% said that they sub-contracted work out. However, when only the marine businesses were analyzed, this figure rose to almost 74%.

When asked why they needed to sub-contract work, there were 22 responses from marine business and two from marine-related businesses. There were only three reasons given for using sub-contractors. The most common reasons were due to a lack of in-house expertise (45.5%), or due to an excessive work load (31.8%). Over 18% reported that it was a combination of the two. A further 4.5% reported that it was in order to keep overheads down (Figure 21).

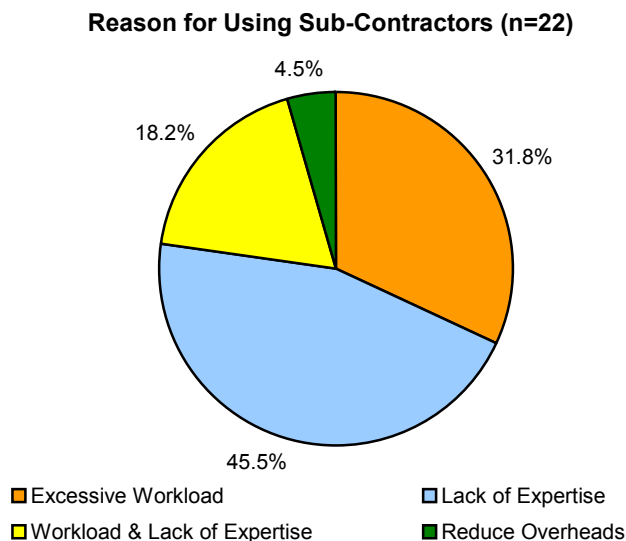


Figure 21: The reason that business sub-contract work, based on marine business responses.

#### 4.17 Type of Sub-Contract Work

Those businesses that reported that they did sub-contract work to other businesses were asked what types of work they generally hired these people for. There were 21 responses, of which all but one was from marine businesses. Analysis of the responses from marine businesses (Figure 22) shows that the common type of job for which a sub-contractor is hired is for electrical or electronics work (75%). This is followed by fiberglass projects (60%), canvas work (55%), and detailing (35%).

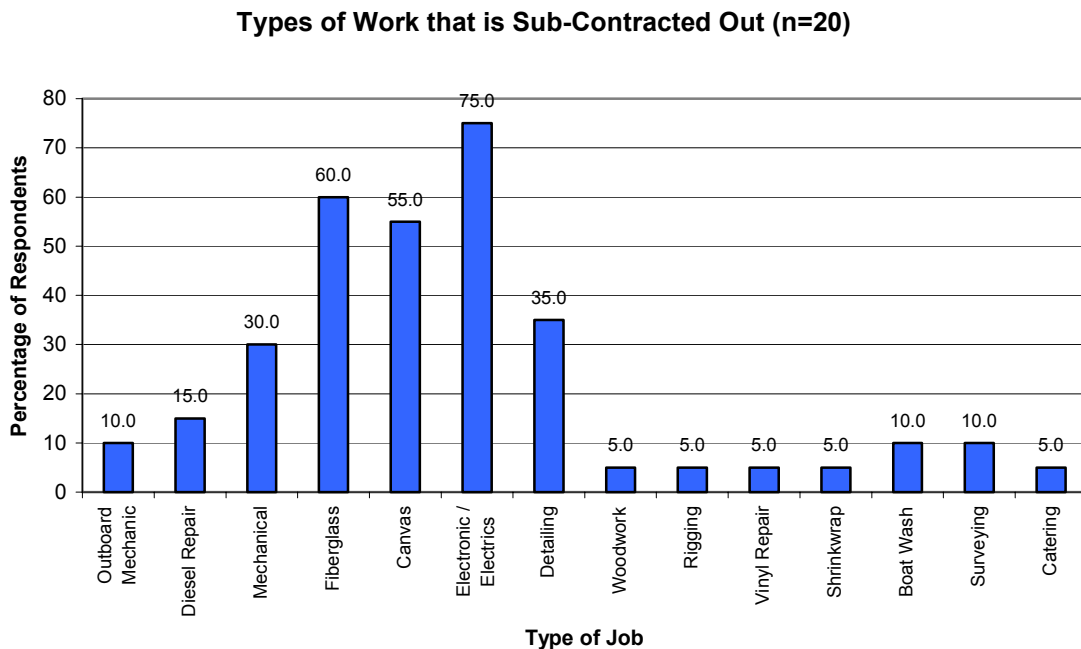


Figure 22: The types of work that is sub-contracted out by marine businesses (as a percentage of those businesses that responded).

#### **4.18 Private Use of Sub-Contractors**

The survey then asked if clients/customers directly privately sub-contracted work out. There were 26 responses from marine businesses and another 5 responses from marine-related businesses. Approximately 65% of businesses responded that this did occur.

#### **4.19 Future Challenges, Trends and Needs of the Industry**

The survey asked what the current challenges to the industry were and what they might be in 5-years time. There were 37 responses, of which 30 were from marine businesses. Analysis of all responses and of only those from marine businesses gave very similar results. It is clear that respondents felt that a lack of good/qualified personnel is the greatest challenge faced at this time and that this will still be the case in the future (Figure 23). Other current challenges include the high cost of operations and high demand for services. However, these were identified by far fewer businesses than the lack of good personnel.

**Number of Respondents who Identified Current and Future Challenges Faced by the Industry (n=30)**

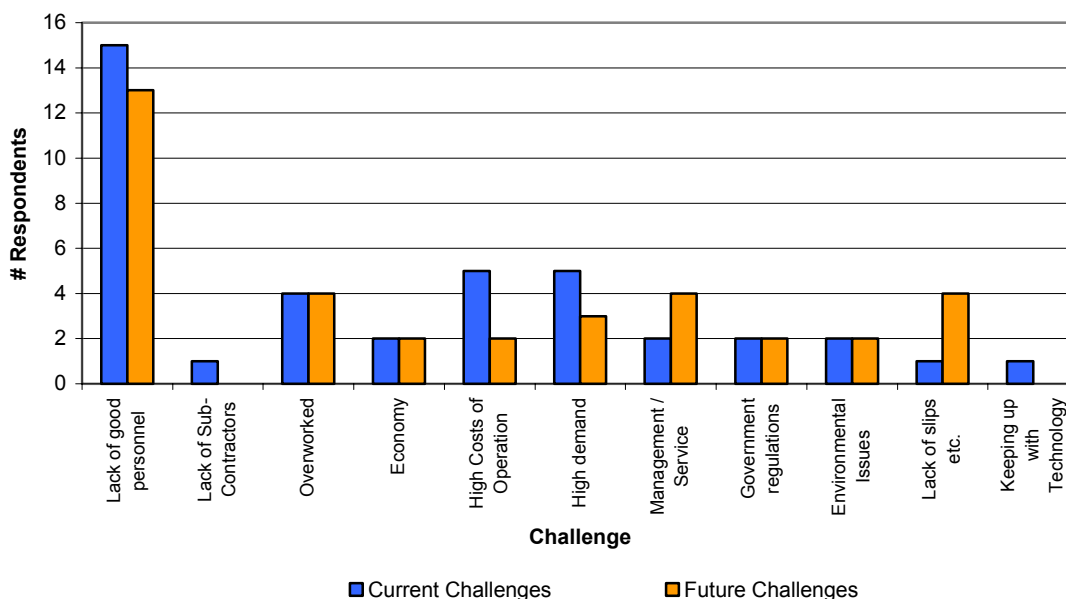


Figure 23: Number of marine businesses that identified specific current and future challenges facing the marine industry.

Businesses were then asked to identify what new challenges will influence the demand for specific skill sets in the future. To this there were 22 responses from marine businesses and 8 from marine-related businesses. The patterns for all responses and just for the subset of marine businesses were the same. Almost 55% of marine businesses suggesting that increasing technology, especially in the field of electronics, will be the most important influence. The second most common response was that increasing computerization will mean that computer skills will be needed (41%). The third, but much less pressing issue was a future need for more training to help employees remain up to speed with technological and computer advances (Figure 24).

The necessary skill sets that will be required to address these challenges and advancements in the industry were also addressed. The survey asked businesses to rank the three most important skill sets that they predicted would be needed in the future of the marine industry. There were a total of 27 responses, of which 23 were from marine businesses. It is clear that many respondents felt that computer skills will be a key skill that will be needed in the industry. The analysis of all responses suggested that cumulatively, diagnostic/troubleshooting skills and the ability to develop new courses to address technological advances will also be essential. These were followed closely by customer service skills, basic knowledge and skills, and a good work ethic (Figures 25).

**Percentages of Respondents who Predicted Changes that will Affect the Skills that the Industry will Require in the Future (n=22)**

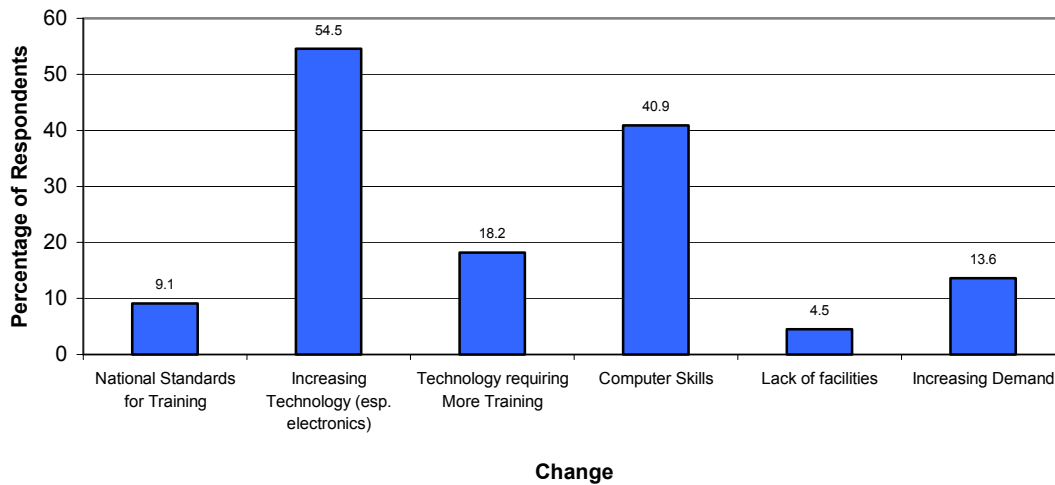


Figure 24: The percentage of marine businesses that predicted specific changes in the industry that will affect the skill sets that will be needed in the future.

**The Three Most Important Skill Sets that will be Needed in the Future (n=27)**

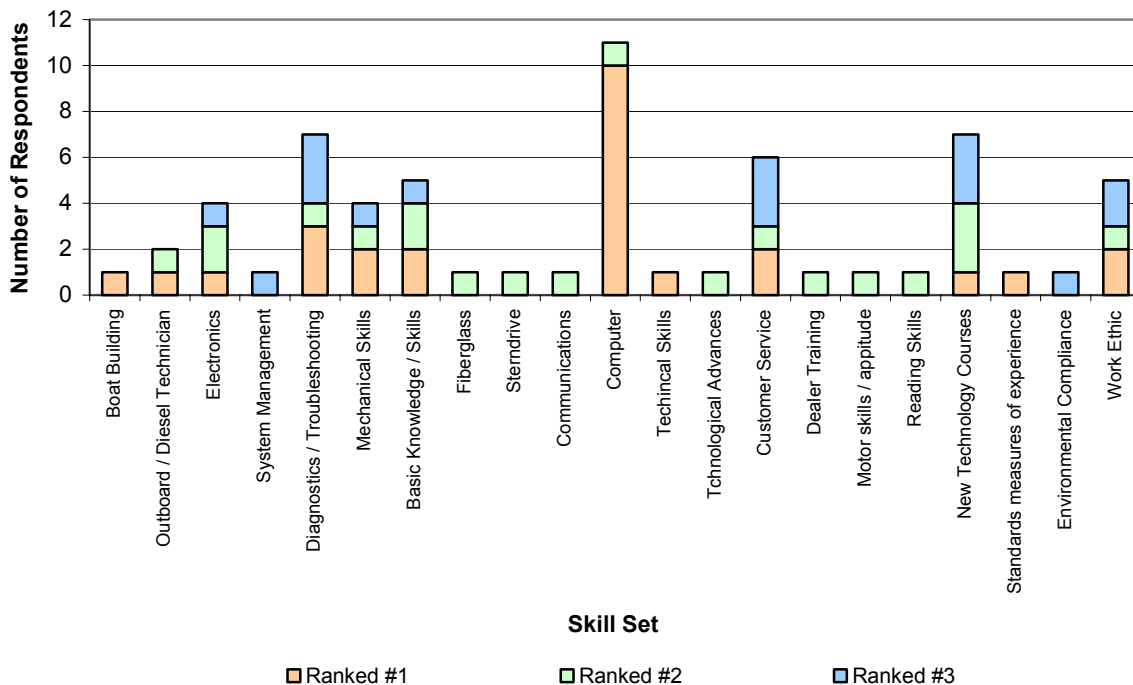


Figure 25: The number of respondents who ranked particular skill sets as being one of the top three most important skills in the future of the marine industry.

The pattern revealed when the same analysis was carried out only on the responses from the marine businesses differed slightly. Once again, computer skills were felt to be most essential. However, the

second most essential skill was customer service, followed closely by diagnostic/troubleshooting skills, the ability to develop new technology courses and a good work ethic (Figure 26).

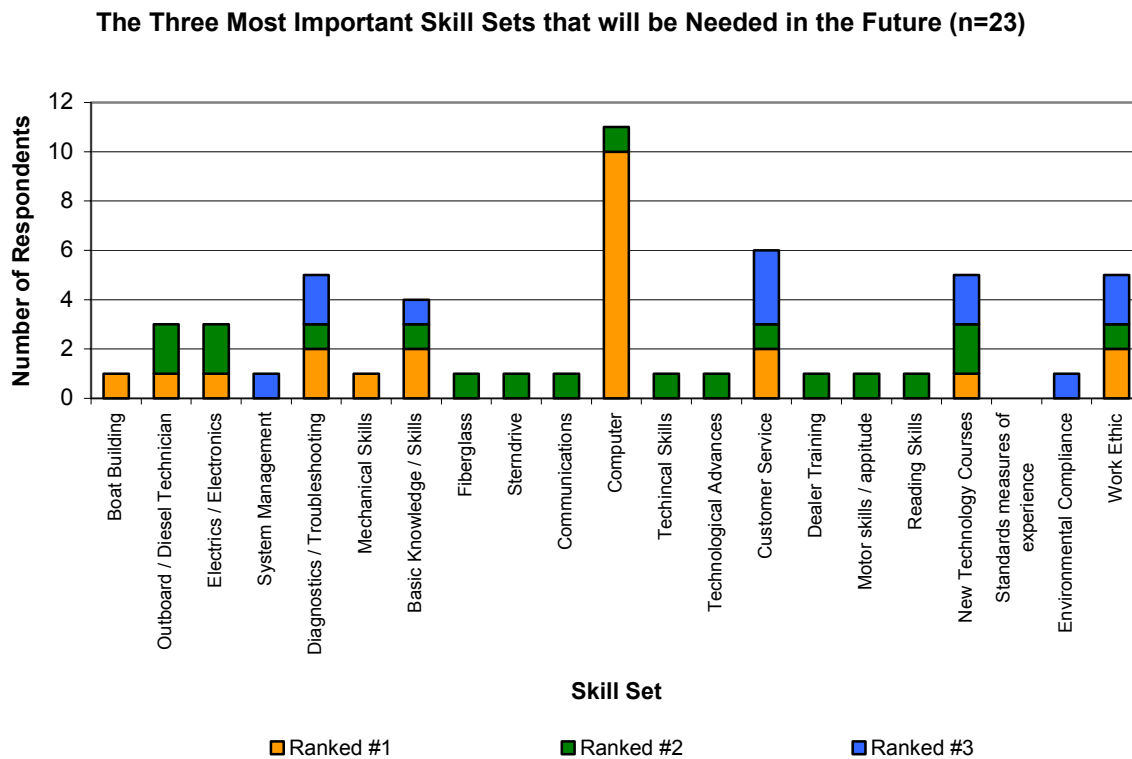


Figure 26: The number of marine business respondents who ranked particular skill sets as being one of the top three most important skills in the future of the marine industry.

#### 4.20 Conclusions from the Business Responses to the Workforce Development Survey

The 2005 Massachusetts Marine Trades Workforce Assessment clearly shows that the marine businesses in the South Coastal region of Massachusetts are currently unable to grow due to a severe lack of qualified technicians. On average, there appears to be current need for approximately 1.5 more technicians per business and this un-met demand is expected to grow in the future.

Qualified technician positions are well paid and this means that there are significant employment opportunities in the area for personnel with the relevant marine trade skills. Marine industry employers are keen to support their employees in efforts to gain further qualifications that may lead them to becoming a Master Technician but the fact that many of these companies are small means that it is not always possible to support further training as the remaining employees would not be able to deal with the excessive workload.

Currently, much of the training is offered out of state, which means that employees must be absent for significant periods of time. Such periods of time could be greatly reduced if educational centers were to be established within Massachusetts. Such center could offer courses in a number of marine trade skills and use on-site, classroom / workshop teaching methods. The establishment of such centers would encourage employers to assist their employees in gaining further qualifications and would also help to attract other people into the marine industry.

The popularity of such courses would be greatly enhanced by offering courses during the winter when the amount of work being done by marine businesses is somewhat reduced.

The overall benefits of developing local educational centers are three-fold:

- They could offer cost-effective, experiential learning to those who are interested in becoming employed in the marine industry in Massachusetts;
- They could assist in increasing the skills and qualification of those who are currently working in the marine industry; and,
- The resulting increase in the number of qualified marine technicians would allow many of the mainly small marine businesses to expand and therefore, hire more staff. Thus increasing the demand for more qualified technicians.

It is clear that if the marine industry in the South Coastal region of Massachusetts is to be able to expand, there is a significant demand for more qualified technicians. The potential for employment as a year-round, full-time marine technician is great and such positions offer significant financial opportunities for those with a good work ethic and a willingness to do overtime.

If the patterns and needs within the South Coastal region are mirrored in other areas of Massachusetts, then the marine industry offers immense employment potential that can only be realized through a concerted effort to encourage people to enter the industry and to expand educational opportunities such as those offered by Massasoit Community College. As the reputation of such courses increases, so will the employment potential of their graduates. While entry level positions in the marine industry are not particularly well paid, the industry is unique in that most businesses are very nurturing of keen, fast-learning employees with a good work ethic and such employees can expect rapid advancement, financial support for further training and qualification and the opportunity to earn significant income as their skills and experience increase.

## 5 Results from the Sub-Contractor Survey

As was to be expected, the number of responses from those that identified themselves as sub-contractors was quite low. There were only 11 responses from sub-contractors and many did not answer all of the survey questions. It is therefore difficult to draw significant conclusions from these data. However some basic points of interest can be identified.

### 5.1 Type of Sub-Contractor

Of the 11 responses that came from sub-contractors, three did not identify the type of contract work that they specialized in and provided no other information in the survey. The others 8 sub-contractors consisted of:

- a media and public relations contractor;
- a boat builder;
- a boat repairer;
- a charter boat captain;
- a marine surveyor; and,
- three mechanics.

### 5.2 Formal Training and Certification

The sub-contractors were asked to identify in what skills they either had formal training or certificates. One of the mechanics (Mechanic 1) did not complete this section of the survey. Table 3 shows what skills each sub-contractor identified as having training or certification.

Table 3: The training and certification that each of the sub-contractors had received.

Skill	Sub-Contractor							
	Media & PR	Boat Building	Boat Repair	Charter Boat	Mechanic 1	Surveyor	Mechanic 2	Mechanic 3
Master Technician								T
Diesel Rechnician								
Inboard Gas Engine Technician			C				C	
Outboard Technician			C				C	
Sterndrive Technician							C	
Rigger		T						
Painter/Varnisher		T						
Fiberglass Technician		T						
Welder/Fabricator			C					
Travel-lift Operator			C					
Business/Clerical Support	T&C		C					
Sales Staff	T&C		C					
<b>Other</b>								
Journalism	T&C							
Captain's License				C				
Medical				C				
Fire Fighting				C				
Surveyor						C		

KEY: T Training  
C Certificate  
T&C Training & Certificate

The contractors were then asked to identify where they had received their training or certification. Mechanic 3, with training as a Master Technician, did not identify what the training had occurred. The boat repair contractor had received certification through direct from a manufacturer or dealer and had attended university. Mechanic 1 had received certification or training from a vocational school and Mechanic 2 received certification directly from a manufacturer/dealer. The boat builder had received training during an apprenticeship (Table 4).

Table 4: Where the sub-contractors had received training or certification.

Where Training Was Undertaken	Sub-Contractor							
	Media & PR	Boat Building	Boat Repair	Charter Boat	Mechanic 1	Surveyor	Mechanic 2	Mechanic 3
Direct from Manufacturer/Dealer			X				X	
Non-Profit Organization						X		
University	X		X					
Community College								
Vocational School					X			
High School								
NorthEast Maritime Institute				X				
US Coast Guard				X				
Apprenticeship		X						

### 5.3 Primary Work Location

The contractors were asked if they primarily worked on their own premises or if they worked at other sites. The surveyor did not respond to this question. The three mechanics primarily work at other sites while the other contractors generally work from their own premises.

### 5.4 Contracted by Individuals or Other Businesses

The survey asked the contractors whether they were generally hired by other businesses or by individuals. All but Mechanic 1 responded that they generally work for individuals. Mechanic 1 worked for both individuals and other businesses.

### 5.5 Conclusions from the Contractor Responses to the Workforce Development Survey

As the number of responses from sub-contractors was low, the findings themselves are not statistically robust. However, it does appear that those involved in marine trades tend to have qualifications or training. This was generally from vocational schools or training offered directly from a manufacturer.

Almost all the sub-contractors worked primarily for individuals with only one suggesting that he also worked for marine companies.

The mechanics generally worked at other locations while the others worked out of their own premises.

## 6 Results from the Wages Survey

In 2002, the Massachusetts Marine Trades Association conducted a wages salary throughout the state to ascertain how salaries in the marine industry in Massachusetts compared with a study undertaken by the American Boat Builders and Repairers Association in 2001.

As the 2005 Workforce Development Survey involved distributing a survey, it was decided that this represented an opportunity to try to gather some supplemental data on current wages, labor billing rates and annual sales volumes. A brief survey was attached to the back of the main survey and it was reiterated that individual business information would remain strictly confidential. Even with the promise of confidentiality, data on wages is notoriously difficult to gather through a survey. The MMTA survey wages survey in 2002 only received approximately 50 responses from all the marine industries in Massachusetts. The supplemental wages survey that was attached to the Workforce Development Survey in 2005 netted: 12 responses regarding wages, 11 regarding labor billing rates and 7 providing information on annual sales volumes. While these numbers are low, this was to be expected. As a result of this, the findings from the wages survey are included as a matter of interest and should not be regarded as statistically robust.

It is also important to note that the “Position Titles” used in the Wages Survey are not the same as were used in the Workforce Development Survey. This was to ensure that the data from 2005 could be compared to those collected in 2001 and 2002.

### 6.1 Wages Survey Results from 2005

Table 5 represents the results received through the 2005 survey that aimed to gather information on wages, labor rates and annual sales volumes. The survey asked for maximum and minimum wages (either hourly or annually) for a number of administrative and services position. In Table 5, the administrative positions are shown in white and the service positions are in blue. Labor billing rate information is in yellow and annual sales volume data is in orange. Some respondents provided annual salary information and others provided hourly rates. Whichever the response, all information was recalculated based on a 40 hour working week and each position being full-time and year-round. Generally it must be assumed that the minimum rates represent an entry-level wage and the maximum rates are given to those with the most experience. It is not possible to ascertain if the maximum rates being paid are because the person in a position has reached the limit of what the employer is willing to pay, or simply if those in a position are less experienced.

It is important to note that the hourly wages do not represent overtime rates. Overtime is generally common within the marine industry and is normally paid at time and a half. The amount of overtime that is required in the marine industry is frequently significant and is increased by the high workload and the lack of available skilled personnel as discussed above.

The average hourly rates from 2005 can be seen in Figure 27. The data in orange represents average hourly wages for administrative positions, while those in blue are for service positions. The error bars provide an indication of the variability in hourly wages for each position. For example, there is clearly a great deal of variation in the average salaries paid to Customer Service personnel, Store/Stockroom staff, Carpenters and Machinists/Welders, as shown by the large error bars.

It is clear that the marine industry offers significantly higher wages for those with more qualifications and experience (e.g. Lead Technicians and Service Managers). The higher end of the pay rates reported represent significant potential incomes for those employed in the marine industry in the South Coastal region of Massachusetts.

Table 5: Wages, labor billing rates and annual sales volume data gathered in 2005 showing the number of responses for each position, and the minimum, maximum, average and SE of the data received. Note that wages are base rates and do not reflect overtime rates.

Position	Number of responses	Hourly Rate				Annual Salary Equivalent		
		Minimum	Maximum	Average	SE	Minimum	Maximum	Average
Office Manager	5	\$10.00	\$28.00	<b>\$20.31</b>	\$2.98	\$20,800	\$58,240	<b>\$42,245</b>
Secretary	7	\$10.00	\$16.00	<b>\$12.75</b>	\$0.81	\$20,800	\$33,280	<b>\$26,520</b>
Bookkeeper	7	\$12.00	\$28.00	<b>\$20.41</b>	\$1.99	\$24,960	\$58,240	<b>\$42,447</b>
Customer Service	4	\$10.00	\$40.00	<b>\$19.46</b>	\$5.16	\$20,800	\$83,200	<b>\$40,480</b>
Store/Stockroom	5	\$10.00	\$60.00	<b>\$23.99</b>	\$7.28	\$20,800	\$124,800	<b>\$49,889</b>
F & I Person	3	\$10.00	\$30.29	<b>\$20.06</b>	\$4.62	\$20,800	\$63,000	<b>\$41,720</b>
Service Manager	9	\$18.00	\$60.10	<b>\$28.26</b>	\$3.40	\$37,440	\$125,000	<b>\$58,790</b>
Lead Technician	5	\$19.23	\$30.00	<b>\$24.83</b>	\$1.88	\$40,000	\$62,400	<b>\$51,644</b>
Technician/Mechanic	8	\$13.46	\$25.00	<b>\$19.58</b>	\$1.35	\$28,000	\$52,000	<b>\$40,726</b>
Outboard Technician	5	\$15.00	\$25.00	<b>\$20.27</b>	\$1.67	\$31,200	\$52,000	<b>\$42,152</b>
Sterndrive Technician	4	\$15.00	\$28.85	<b>\$21.06</b>	\$2.49	\$31,200	\$60,000	<b>\$43,800</b>
Parts Manager	6	\$14.42	\$40.87	<b>\$21.68</b>	\$2.99	\$30,000	\$85,000	<b>\$45,091</b>
Electronics	4	\$15.00	\$28.85	<b>\$22.98</b>	\$2.86	\$31,200	\$60,000	<b>\$47,806</b>
Yard Foreman	4	\$15.00	\$28.85	<b>\$23.97</b>	\$2.54	\$31,200	\$60,000	<b>\$49,860</b>
Rigger	4	\$15.00	\$25.00	<b>\$19.90</b>	\$2.35	\$31,200	\$52,000	<b>\$41,383</b>
Painter/Varnisher	3	\$15.00	\$30.00	<b>\$23.33</b>	\$3.94	\$31,200	\$62,400	<b>\$48,533</b>
Fiberglasser	4	\$15.00	\$25.00	<b>\$20.66</b>	\$2.18	\$31,200	\$52,000	<b>\$42,970</b>
Carpenter	2	\$15.00	\$35.00	<b>\$22.75</b>	\$6.59	\$31,200	\$72,800	<b>\$47,320</b>
Equipment Operator	4	\$15.00	\$25.00	<b>\$19.78</b>	\$2.10	\$31,200	\$52,000	<b>\$41,150</b>
Machinist/Welder	1	\$15.00	\$25.00	<b>\$20.00</b>	\$7.07	\$31,200	\$52,000	<b>\$41,600</b>
General Laborer	9	\$10.00	\$20.00	<b>\$14.52</b>	\$1.17	\$20,800	\$41,600	<b>\$30,209</b>
Dock Master	2	\$14.00	\$22.00	<b>\$16.50</b>	\$2.61	\$29,120	\$45,760	<b>\$34,320</b>
Dock Hand	2	\$7.00	\$15.00	<b>\$11.00</b>	\$2.38	\$14,560	\$31,200	<b>\$22,880</b>
<b>Labor Billing Rates</b>								
Skilled Labor	11	\$60.00	\$125.00	\$78.35				
Unskilled Labor	9	\$30.00	\$84.00	\$59.36				
<b>Annual Sales Volme</b>	7	\$100,000	\$6,000,000	\$2,114,286				

## 6.2 Comparison of Data from the Surveys Conducted in 2001, 2002 & 2005

It is important to remember that the data collected in 2001 were from a national study and those from 2002 were from a statewide survey. Additionally, the number of responses from 2005 was low due to a smaller survey size and the difficulty in gathering wages data. This data is presented for comparison only and should not be assumed to be of statistical significance.

Table 6 shows a side-by-side comparison of the minimum and maximum hourly rates gathered in 2005 and those gathered in 2002 as well as a comparison of the average rates from 2001, 2002 and 2005. The table also provides a "Salary Expert Job Description". This is taken directly from the MMTA survey conducted in 2002 and represents more generic equivalent job descriptions. The table also includes a comparison of the labor billing rates gathered in 2001, 2002 and 2005. Data from 2001 are shaded green, data from 2002 are in yellow and the data from the 2005 South Coastal survey are in blue.

Figure 28 shows a comparison between the average hourly wage based on data from the three surveys from 2001, 2002 and 2005. Figure 29 shows a comparison of the labor billing rates from the same three surveys.

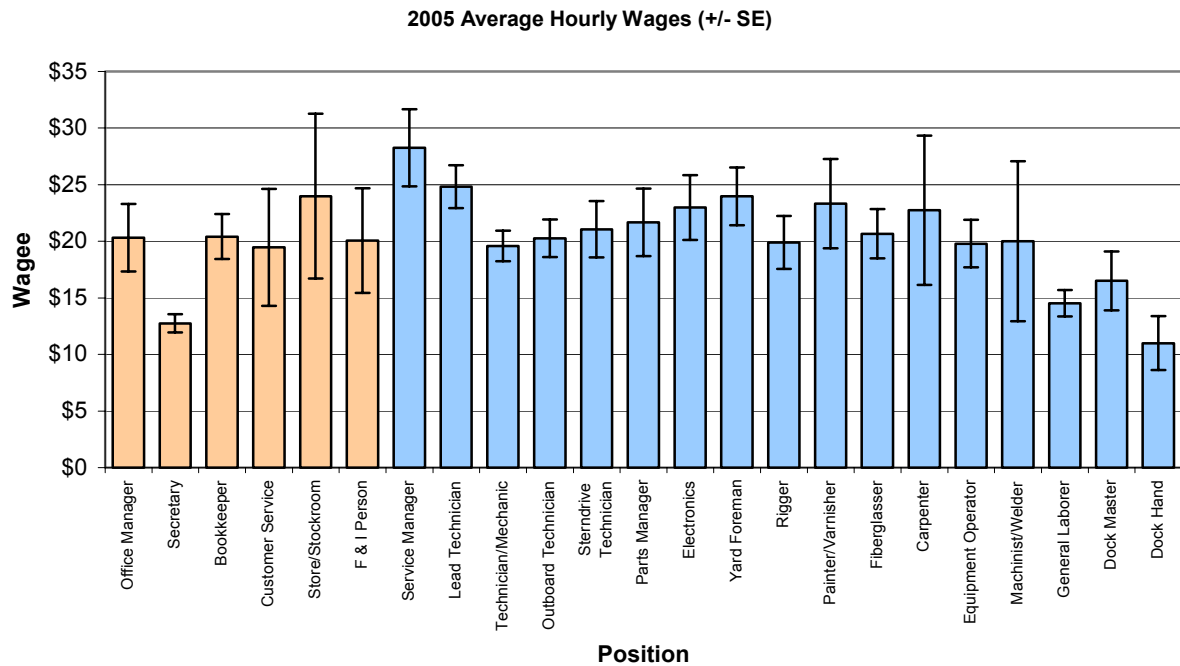


Figure 27: Average hourly wages for positions within the marine industry in Massachusetts based on data from 2005.

Table 6: Comparison of wages data and labor billing rates from the 2001, 2002 and 2005 surveys.

Position Type	Position Title	2002	2005	2002	2005	2001	2002	2005
		MMTA Minimum Hourly Rate	Minimum Hourly Rate	MMTA Maximum Hourly Rate	Maximum Hourly Rate	ABBRA Average Hourly Rate	MMTA Average Hourly Rate	Average Hourly Rate
ADMINISTRATIVE POSITIONS	Office Manager	\$12.00	\$10.00	\$35.00	\$28.00	\$20.25	\$19.34	\$20.31
	Secretary	\$9.00	\$10.00	\$21.00	\$16.00	\$13.59	\$13.77	\$12.75
	Bookkeeper	\$13.50	\$12.00	\$30.00	\$28.00	\$16.56	\$17.46	\$20.41
	Customer Service	\$9.50	\$10.00	\$26.00	\$40.00		\$17.18	\$19.46
	Store/Stockroom	\$8.00	\$10.00	\$18.50	\$60.00	\$9.50	\$14.03	\$23.99
	F & I Person	\$15.00	\$10.00	\$22.50	\$30.29		\$18.50	\$20.06
SERVICE POSITIONS	Service Manager	\$15.00	\$18.00	\$50.00	\$60.10	\$22.69	\$25.82	\$28.26
	Lead Technician	\$8.50	\$19.23	\$40.00	\$30.00		\$23.12	\$24.83
	Technician/Mechanic	\$8.00	\$13.46	\$35.00	\$25.00	\$18.18	\$18.45	\$19.58
	Outboard Technician	\$10.00	\$15.00	\$23.50	\$25.00	\$18.18	\$17.53	\$20.27
	Sterndrive Technician	\$10.00	\$15.00	\$22.10	\$28.85	\$18.18	\$17.65	\$21.06
	Parts Manager	\$14.00	\$14.42	\$26.00	\$40.87	\$15.67	\$18.66	\$21.68
	Electronics	\$18.50	\$15.00	\$26.00	\$28.85	\$17.85	\$21.50	\$22.98
	Yard Foreman	\$11.00	\$15.00	\$26.50	\$28.85	\$19.43	\$18.61	\$23.97
	Rigger	\$11.00	\$15.00	\$27.50	\$25.00	\$14.59	\$17.36	\$19.90
	Painter/Varnisher	\$11.00	\$15.00	\$22.50	\$30.00	\$17.36	\$16.21	\$23.33
	Fiberglass	\$14.20	\$15.00	\$23.50	\$25.00	\$14.90	\$18.23	\$20.66
	Carpenter	\$10.00	\$15.00	\$21.00	\$35.00	\$17.21	\$17.11	\$22.75
	Equipment Operator	\$12.00	\$15.00	\$28.00	\$25.00	\$17.89	\$16.36	\$19.78
	Machinist/Welder	\$13.00	\$15.00	\$18.75	\$25.00	\$17.50	\$15.58	\$20.00
	General Labor	\$8.50	\$10.00	\$21.00	\$20.00	\$12.79	\$12.38	\$14.52
	Dockmaster	\$15.00	\$14.00	\$29.00	\$22.00	\$13.37	\$20.24	\$16.50
	Dock Hands	\$7.00	\$7.00	\$11.50	\$15.00	\$7.50	\$9.32	\$11.00
BILLING RATE	Skilled Labor	\$50.00	\$60.00	\$89.00	\$125.00	\$58.81	\$73.83	\$78.35
	Unskilled Labor	\$30.00	\$30.00	\$89.00	\$84.00	\$49.90	\$61.87	\$59.36

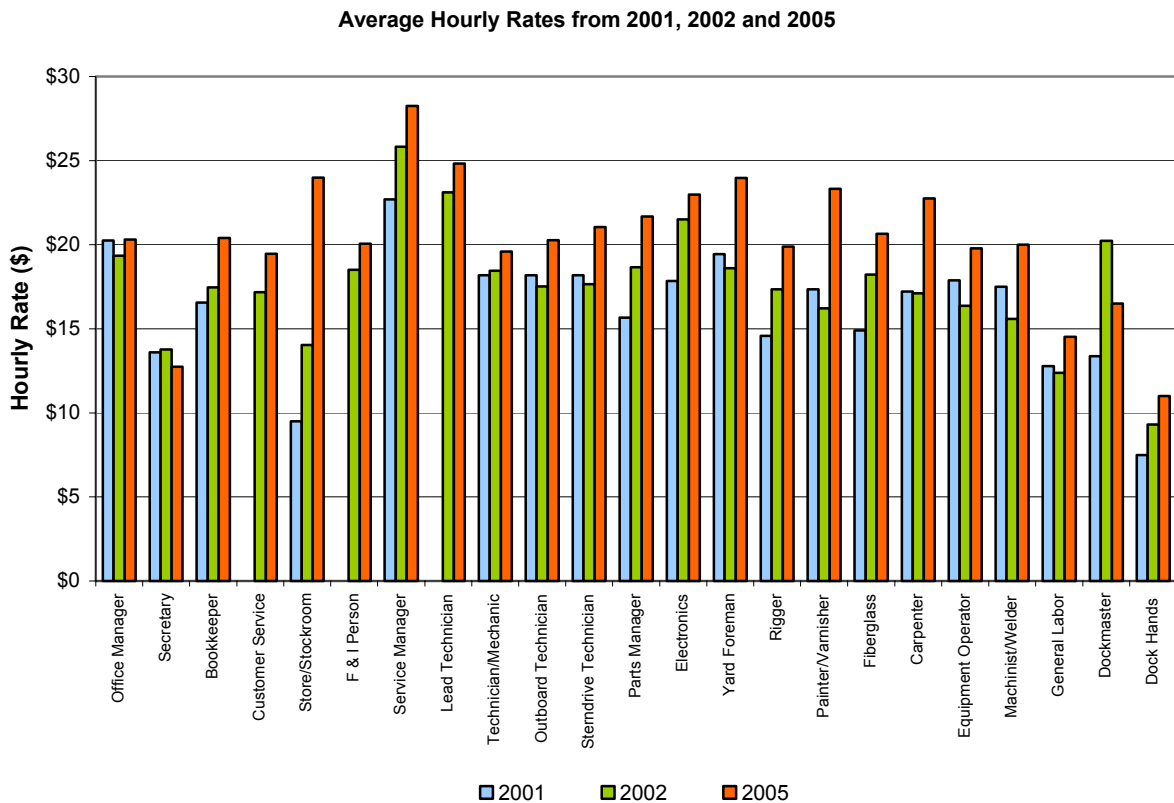


Figure 28: Comparison of the hourly wages from the surveys from 2001, 2002 and 2005.

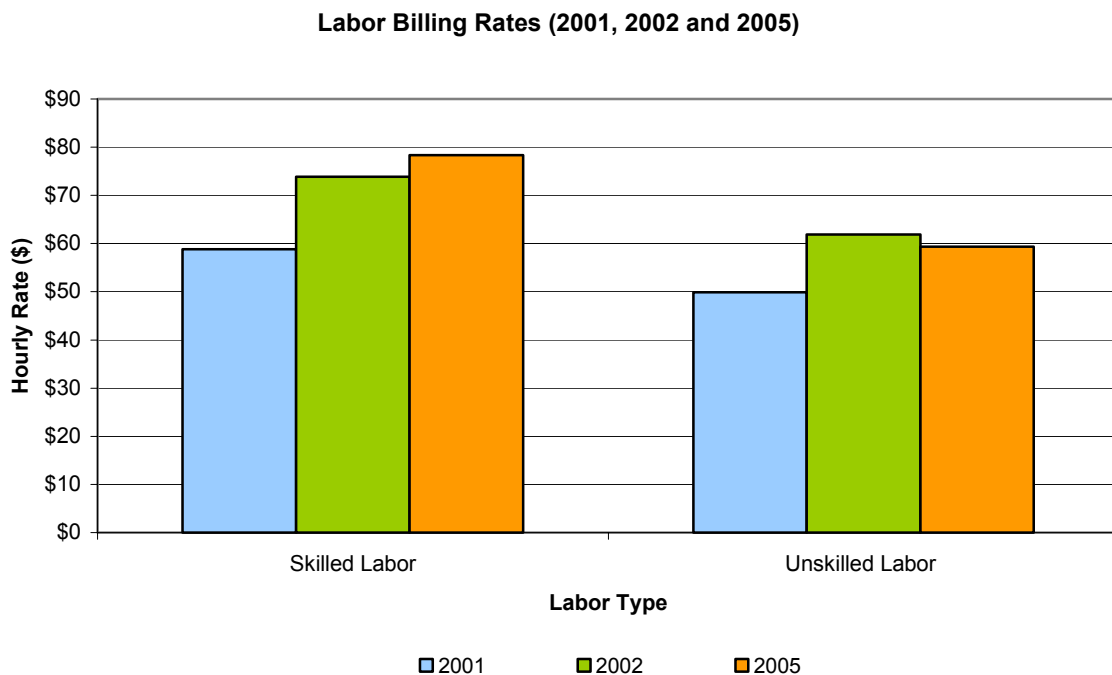


Figure 29: Comparison of the labor billing rates from the surveys from 2001, 2002 and 2005.

### 6.3 Comparison of the Wages Reported in 2005 with SalaryExpert.com Data

In order to ascertain if the marine businesses in the South Coastal region of Massachusetts are paying wages that are competitive, the data from the survey was scaled up to an annual salary equivalent. It is important to remember that the number of responses was low and that the wages do not reflect the possible additional income that can be gained through working overtime.

The website SalaryExpert.com, allows users to look up the minimum, maximum and average salaries paid for various positions. It is also possible to filter the results by geographic location so that the salaries given reflect the local cost of living. For each marine position description, the salary data derived from the survey were compared to the salaries suggested by SalaryExpert.com for an equivalent position. The results were filtered by Brockton, MA as this was the closest option that corresponded to the study area.

Table 7 shows the salary minimum, maximum and average salaries reported in the survey compared with those from SalaryExpert.com. To aid in interpretation, if the salary data from the survey are lower than those from the website, they are shaded orange. Where they are higher, they are shaded green.

Table 7: Comparison of salary data from the survey with data provided by SalaryExpert.com for equivalent positions in the Brockton area.

Position	Reported Salary			SalaryExpert.com 2005			
	Minimum	Maximum	Average	Minimum	Maximum	Average	Job Description
Service Manager	\$37,440	\$125,000	\$58,790	\$37,362	\$68,768	\$52,058	Production Supervisor
Lead Technician	\$40,000	\$62,400	\$51,644	\$32,065	\$61,910	\$41,199	Auto Mechanic
Technician/Mechanic	\$28,000	\$52,000	\$40,726	\$29,328	\$63,065	\$40,297	Diesel Mechanic
Outboard Technician	\$31,200	\$52,000	\$42,152	\$29,328	\$63,065	\$40,297	Diesel Mechanic
Sterndrive Technician	\$31,200	\$60,000	\$43,800	\$29,328	\$63,065	\$40,297	Diesel Mechanic
Parts Manager	\$30,000	\$85,000	\$45,091	\$20,161	\$37,300	\$29,540	Procurement Clerk
Electronics	\$31,200	\$60,000	\$47,806	\$32,160	\$55,442	\$45,759	Electronic Equipment Repair
Yard Foreman	\$31,200	\$60,000	\$49,860	\$37,362	\$68,768	\$52,058	Production Supervisor
Rigger	\$31,200	\$52,000	\$41,383	\$26,476	\$44,913	\$37,920	Rigger
Painter/Varnisher	\$31,200	\$62,400	\$48,533	\$23,679	\$39,331	\$30,088	Painter
Fiberglasser	\$31,200	\$52,000	\$42,970	\$26,219	\$43,888	\$36,410	Precision Grinder
Carpenter	\$31,200	\$72,800	\$47,320	\$25,007	\$46,910	\$36,185	Carpenter
Equipment Operator	\$31,200	\$52,000	\$41,150	\$31,310	\$49,864	\$40,987	Construction Equipment Operator
Machinist/Welder	\$31,200	\$52,000	\$41,600	\$26,431	\$54,209	\$35,819	Machinist
General Laborer	\$20,800	\$41,600	\$30,209	\$17,159	\$34,977	\$27,932	Maintenance Worker General
Dock Master	\$29,120	\$45,760	\$34,320	\$26,433	\$47,195	\$41,334	Foreman
Dock Hand	\$14,560	\$31,200	\$22,880	\$18,416	\$30,342	\$21,282	Attendant Arcade

It is clear that the data from the survey suggest that the minimum, maximum and average salaries for most positions within the marine industry in the South Coastal region of Massachusetts, are above those from SalaryExpert.com. While this appears to be the case, the small sample size means that such a conclusion is not statistically robust.

### 6.4 Conclusions from the Business Responses to the Wages Survey

As the number of responses to the wages survey were low, it is difficult to draw any firm conclusions. However, in general Figure 27 shows that there has been an increase in average hourly pay rates from 2001 through to 2005. As with the previous surveys, on average the two highest paid positions are those of Service Manager (\$28.26 per hour) and Lead Technician (\$24.83 per hour). The lowest average wages are for Dock Hands (\$11.00 per hour), General Laborers (\$14.52 per hour) and Dock Masters (\$16.50 per hour). These reflect the average wages reported but the maximum hourly wages reported vary significantly with the highest being over \$60 per hour for a Service Manager, followed by almost \$41 per hour for a Parts Manager and \$35 per hour for a carpenter. None of these rates reflect potential overtime rates that are paid at time and a half. Working overtime is common within the marine industry and can contribute significantly to an employee's annual income.

The entry level starting wages for a general boatyard laborer appears to be around \$10 per hour. While this is not particularly high, it is higher than the minimum salary suggested by SalaryExpert.com. Additionally, it is important to remember that an entry-level employee who is quick to learn and has some experience or qualifications is likely to be promoted rapidly. As discussed previously, many marine businesses actively support employees receiving further training. This can often involved attending manufacturer's courses that are located in other states. As an employee become more experienced and qualified they become able to leverage higher wages. Many businesses are not so concerned about helping their employees better themselves.

The comparison of the 2005 survey data with the salaries from SalaryExpert.com suggests that the marine industry is generally offering competitive wages for the South Coastal region of Massachusetts. However, as the number of responses was low this cannot be stated categorically. It is also important to remember that the survey salaries do not include the potential for overtime and that working overtime is a common occurrence in the marine industry. A comparison of the ABBRA data from 2001 and the MMTA data from 2002 suggests that at that time, the Massachusetts wages were generally comparable to those being paid elsewhere.

One difficulty that the marine industry in Massachusetts faces is the high cost of living. Many boatyards conduct a large amount of warranty work and the amount that they are paid for such work is often determined by the manufacturer. Many manufacturers, and much of the country's boating business are located further south in warmer, less seasonally restricted states. These areas also have lower costs of living than Massachusetts and, as such, when manufacturers set the rate that they will pay for warranty work, it reflects the local labor rates. Therefore, these rates do not reflect the higher cost of living, and hence wages, that are common in other areas of the country. This has been a problem within the industry for a prolonged period. However, there is a move for manufacturers to start to pay "shop rates" for warranty work. As these rates would be based on the cost of work in a particular area, it will reflect the differences in the cost of living within the US. If this practice becomes more common, wages in more expensive areas of the country may rise to reflect the higher cost of living.

## 7 Massasoit Community College Survey Results

In spring, 2005, Massasoit Community College, in partnership with the Massachusetts Marine Trades Association, conducted a survey (Appendix 3) of students who had taken one or more of the College's Marine Trade courses. The survey was administered through the College's Division of Workforce Development & Community Education and funded through a state grant for research on the marine industry.

Survey respondents were asked about their experiences before, during, and after taking Massasoit's marine courses, including their reasons for enrolling, whether they were employed in the industry, and suggestions and comments regarding the program. The 45-hour Boating Trades Overview has been offered at the college for the past several years. The 475-hour Marine Technician Program is in its first year. The survey targeted a total of 138 individuals who had taken one or more of these courses.

In March, 2005, a blank survey with accompanying cover letter from the Dean of Workforce Development & Community Education was mailed to all 138 students who had completed one or more marine courses. Respondents were asked to return completed surveys to the Office of Institutional Research at Massasoit. No names were associated with the responses. Ten surveys were returned by the post office as undeliverable. A second mailing was sent out in May, 2005 to all 128 with valid addresses. In all, a total of 33 completed surveys were returned (a response rate of 25.8% of the 128 successfully sent) by the final deadline.

### 7.1 Summary of Survey Results

Most of the respondents indicated that they worked full time (64%). Nearly one-fifth (18%) work part time. Another respondent was working temporarily in a summer job. Three (9%) indicated that they were not currently in the labor force. Two were unemployed.

Nearly three-quarters of the respondents (72.7%) indicated that they had taken the Boating Trades Overview course. About one-third had taken the Marine Tech Fundamentals (33%) and/or the Marine Tech Outboard Engines (30%) courses. Only three respondents (9%) had taken the Boating Trades course in conjunction with one or more Marine Tech courses.

When asked to describe the main reason(s) for taking one of the marine courses, most (85%) selected one or more career goals, including possible career change, gaining skills for entering the marine industry, and gaining better skills for possible promotion in existing job. About one-third (33%) wanted to learn how to better repair their own boats. Four students (12%) checked only the personal goal. All four choosing "Other" mentioned exploring employment in marine trades after retirement. One of these also cited enrichment as a goal.

What was the Main Reason* you decided to take one of the Marine Courses?		
To explore a possible career change.	21	64%
To gain the skills needed to go to work in the marine industry.	9	27%
To gain better skills and possible promotion in my existing marine job.	2	6%
To learn how to better repair my own boat.	11	33%
Other.	4	12%
<i>*Multiple responses from a total of 33 individuals.</i>		

More than two-thirds (72.7%) of the respondents indicated that the courses did help them gain their main goal; six students (18%) said that they had not; three had no response. Nineteen students added the following comments about whether the courses had helped them with their goals.

Did the course/s help you gain your main goal as stated above?	Explain:
Blank	Yes and No.
N	Not employed yet but hope to be employed.
N	I have been unable to attain full-time employment in Marine Industry.
N	Not yet.
N	It refreshed my knowledge. But I didn't learn a lot of skill.
N	Cursory introduction.
N	The outboard course needed to be longer.
N	Have not completed all courses yet.
Y	Desired to pursue marine management.
Y	Well-conducted course.
Y	Basic understanding before I change careers.
Y	Become a better consumer of boat services.
Y	I learned about several alternatives to jobs I originally considered.
Y	Showed trade as low pay/undesirable hours.
Y	I also was exploring career change.
Y	I met and became employed with business owners in the field.
Y	It was a terrific overview of the boating profession.
Y	Enough understanding to ready my cousin's boat for sail.
Y	Excellent course.

Only six respondents (18.2%) were already working in the marine industry when they first starting taking marine courses at Massasoit. They listed the following positions:

- Boatyard worker/Assistant Manager
- Insurance Agent—Boats/Yachts Specialty
- Mechanic
- Sailing teacher/Rescue boat driver
- Deckhand/sternman (fishing boat, commercial)
- Outboard diesel and stern drive

When asked to indicate how their Massasoit training may help in their current employment, more than two-thirds felt that it had improved skills used in their existing position (71%) and that it had increased opportunities for future advancement (71%). Less than half felt that the training had increased their level of responsibility (43%) or increased their wages (43%).

Two respondents (6%) began working in the marine industry during or after taking one of the marine courses. The positions they obtained were General Boatyard Technician and Operations Manager/Associate Producer. One position is full time and one is part time.

A total of eight (24%) respondents indicated that they are presently working in a marine-related position. The positions are as listed above in the previous sections. On average, those with marine-related jobs earn \$14-\$16 per hour, with two outliers earning \$9 and \$35 per hour. Most work 40 hours per week. Of those relating how they found their position, most listed 'other' sources, while three (9%) said their friends assisted them and one said he had been helped by the Mass. Marine trades website and/or staff.

Of those who did not have a job in the marine industry, 13 (52%) said they intended to work in the marine industry in the future. Four (16%) said “maybe” while one other called it a “good possibility.” Six (24%) said “no” and one left the question blank.

Most of the respondents (80%) indicated that marine industry wages did not meet the expectations they had upon entering the marine courses. Twenty gave the following comments regarding marine wages.

<b>Comments Regarding Marine Wages</b>	
Blank	More research into the subject should have been undertaken by the College prior to beginning the course.
Blank	Not sure.
Blank	I didn't have an expectation, but I think they are fair—for top technician @ \$50K.
Blank	I have not yet pursued opportunities in the marine industry.
Blank	I'm entering a non-tech position; salaries vary.
Blank	I have not looked.
N	No, some of the students who have jobs are being paid \$10.00 per hour.
N	I cannot afford to work full time in marine industry. I need to keep other employment for income.
N	Wages are unusually low for cost of living in region.
N	\$10-\$15 per hour--you can earn that at Shaw's.
N	Low.
N	Entry wages are lower than anticipated.
N	Entry-level pay too low.
N	Little low, benefits.
N	I think the lack of interest is due to the low wages in a high cost of living area.
N	Low wages for this area, working weekends, all summer.
N	We got a sheet of different positions and it wasn't much. It ranged from \$15,000 to high twenties.
N	Part time/laborer wages at entry.
N	Wages are not even close to what I thought they would be.
Y	Not sure. Seems to be excellent for the skilled.

About one-quarter (24%) of the respondents indicated that they had looked for a marine job and been unsuccessful. Seven gave the following explanations as to why they thought they were unsuccessful.

<b>Comments Regarding Unsuccessful Job Search</b>
No experience and no full time jobs.
No offers, little opportunity in area.
In my case, I was only interested in part-time work. There also were no openings for entry level.
Low wages.
Age. One interviewer asked what year I graduated from school.
No answer back.
They never called me.

Twenty-four respondents described the type of positions they would be looking for in the marine industry. Among the most often listed positions were marine technician, marine management, and mechanic.

<b>Type of Marine Positions Wanted</b>
Marine Technician ( <b>five responses</b> )
Marine Management ( <b>two responses</b> )
Mechanic ( <b>two responses</b> )
General manager/owner of boat/marina facility
General yard work
Marine management, part-time work
Marine Surveying—Recreational Boats/Yachts
Marine transport and repair
Outboard mechanic, boat moving, hauling
Outboard Mechanic/General boating work
Repair and troubleshooting
Repair, technician, sales, manager of shop
Retail or any entry level
Sales or management position
Sales, marketing, management
Service of boats and engines
Yard work, dock hand

Respondents were asked to rate Massasoit marine courses in terms of preparation for work in the marine field. Most of those answering felt that the courses had prepared them Well (49%) or Extremely Well (41%) in providing General Knowledge of the marine field. Three (10%) indicated that the courses had not prepared them well. Four students did not respond.

In terms of Specific Technical Skills, most respondents felt the courses prepared them Well (57%) or Extremely Well (10%). One-third (33%) said the courses had not prepared them well in technical skills. Twelve did not respond or chose Not Completed.

The final two questions on the survey asked for suggestions for improving the Massasoit marine program and for providing comments. A total of 28 provided free responses in one or both of these categories. Whereas many of the suggestions and comments are related, these responses are reported next to each other in the results table that follows. A blank field indicates that an individual responded to only one category.

<b>Suggestions</b>	<b>Additional Comments</b>
Add on internship or work-study as part of program similar to Northeastern. Student gains experience and gets some money.	Program needs to improve hands-on facilities and equipment at Massasoit.
After basic, maybe an electric or engine or boat survey.	A good beginning for a new career.
Bring in manufacturers to set up courses in the school as does Plymouth High School with Mercury Marine. Make these courses available at night.	
I plan to work part time in the Marine Industry upon retirement from my current full time employment. I would be very interested in evening classes to work toward a marine certificate/degree.	You run an excellent program. If evening classes are not an option at this time, I hope the course survives the two to four years until I retire and am able to attend full time days.

Suggestions	Additional Comments
I was satisfied with the course I took.	I would like to be able to take courses on a part-time basis. I have in the past worked as an ASE Master Automotive Technician and all the courses would duplicate what I already know. And still have credit for life experience that would transfer over to the marine industry.
Keep having them for people to take, to enter the marine field easier.	
Make the class not so late (until 10). Make credit course so you can take a course and if you want some time off, you can go back the next year and take the rest of the courses. For example, the marine tech program is one year. It would be nice to be able to break it down into two.	
More hands on and actual experience.	
Maybe job placement involvement. More technical courses.	[Certain individual] was an outstanding teacher. His offering of his business and staff for the purpose of the class was tremendous. Thank you for trying to help the marine industry and people.
More hands on at the technical end so the book ends complete the skill. Especially on electrical aspect.	I am looking at this field as a second career. Any thoughts or direction you could offer, I would appreciate.
More hands on training.	
More hands on, more depth.	
More on outboards, more hands on.	The Marine Industry needs more techs. They have to start paying more for people to get interested in the field. The money is a <u>huge</u> turn-off for me.
More time should be spent on campus rather than shop area.	A heavy expenditure of time and money is needed by persons planning on entering the marine trades field.
Need more hands on work and diagnostic work in the marine technician fundamentals.	
None.	I plan to pursue further coursework in marine surveying this Fall at UMass Boston.
Shorter fundamentals courses.	
The class was informative on the marine industry as a whole on the South Shore. It would be helpful to promote and describe this course as a very broad/general look at the industry and small businesses within the field so that students looking to gain more "hands on" experience could join the more technical courses. It would also be helpful to focus more on career placement as most every student was looking for new work. I enjoyed the class and its instructors immensely. Thank you.	
The College should place students in paid internships during the Summer 2005 after completion of the first three required classes.	I hope to get a job this summer.
The more hands on, the better.	Job fair concentrating on marine field.

Suggestions	Additional Comments
The shop situation was very poorly planned and tools and equipment not available for use. This was in excess of the normal teething troubles to be expected at the start of a college-level program. Priorities need to be re-examined here.	It should not be up to the instructor to provide tools and equipment personally for class use.
Fundamentals in boatyard skills should be shorter. Outboard class should be longer.	Needs more hands on. Equipment was not utilized to full capacity. Outboard class was excellent.
Would like to see a continuation course to the marine trades overview which is technical in nature but not as comprehensive as the 475-hour course.	
There is no equipment to work on. The shop is a fire trap. If this course is going to work you need more up-to-date equipment, motors, stern drives. It's not the instructor; he is a great wealth of knowledge. You need course equipment. If things don't improve you will lose a lot of students. Were not happy, not at \$2000.	
The Boating Trades Overview was a good course. If other courses (475-hour course) are same, it would be good.	I might be interested in new 475-hour tech course.
	Appreciated the opportunity to learn more about my boat and its maintenance.
	I really enjoyed the class but felt that at this period of my life, I could not switch careers. I would highly recommend these courses to anyone.
	Verify that the instructors have an updated marine certification from the marine trade. So as to have the Marine Technical Program in line with the state of the art for the marine industry.

**NOTE:**

*The Massasoit Community College Survey was designed to provide feedback on two courses – particularly a new 475-hour Marine Technician Program – so that the courses could be improved over time. As with all courses, it is essential that they are adaptive and can evolve based on changes in the industry and the needs of those who enroll. The survey was successful in identifying the areas that were highly successful and also identified some areas where improvements could be made. One issue that was raised by a number of graduates of the course was that the entry-level wages in the industry were lower than they had expected. As discussed in the previous section, the initial wages for the industry are not particularly high. However the opportunity for rapid advancement is great, and is enhanced when an employee has some previous experience and a good work ethic. As the 475-hour course is new, it has not yet gained a reputation with potential employers. As this happens it is likely that those who complete the course will find it easier to gain entry into the marine industry and will have an enhanced chance of rapid advancement. While the course is an extremely valuable starting point, it is important to remember that those who have completed it are not yet technicians but rather are “technicians in training”. To become a Technician, and ultimately a Master Technician, requires further formal – and on-the-job – training, more certification (possibly paid for by an employer) and more proven, hands-on experience.*



## 2005 MARINE TRADES WORKFORCE ASSESSMENT SURVEY

*Please return survey by mail, fax or as an e-mail attachments to:*

**Squantum Marine Consulting**  
**308 Victory Road**  
**North Quincy, MA 02171**  
**Tel: (617) 820-8231**  
**Fax: (617) 472-49**

*The purpose for the formulation of the Massachusetts Marine Trades Association is to establish an organization of dedicated men and women who are employed in the marine industry with the concept that this organization will provide the framework for furthering the interests of the marine trades and the boating public through the promotion of boating, participation in legislation, and professional improvement programs. It is further hoped that the association will be the focal point for exchange of ideas concerning marine matters, and that a high standard of professional and ethical conduct will be adhered to by the membership.*

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The following pages contain two workforce surveys developed by the Massachusetts Marine Trades Association (MMTA) in collaboration with the Urban Harbors Institute (UHI) at the University of Massachusetts Boston.

The aim of these surveys is to better understand the current status of our industry and to try to determine the future needs of those involved in marine trades within Massachusetts.

Individual responses will be held in the strictest confidence. The aggregate results will be used by the Association and will be available to those who participated in the surveys (if contact details are provided).

The Workforce Survey aims to determine the current and future needs of the Marine Industry in Massachusetts.

The Wages Survey is a follow-up to a similar survey that was conducted in 2002 by MMTA and allows us to determine how the current wages within the industry compare to those in other industries. If you are unwilling to provide wages information, PLEASE STILL COMPLETE THE WORKFORCE SURVEY. If you prefer to respond to the Wages Survey anonymously, please return it separately via mail.

**YOUR PARTICIPATION IN THESE SURVEYS IS GREATLY APPRECIATED AND WILL HELP STRENGTHEN THE MARINE TRADES IN MASSACHUSETTS.**

### CONTACT INFORMATION

This information is **OPTIONAL**. However, without this, we will be unable to send the aggregated results to you at the completion of the surveys.

Name	_____	Telephone	_____
Job Title	_____	Fax	_____
Company	_____	Email	_____
Address	_____	Website	_____
	_____		

---

**1 What type of business are you? - check all that apply**

<input type="checkbox"/> Boatyard/Boat Repair <input type="checkbox"/> Boat Builder <input type="checkbox"/> Canvas Maker/Repair (interior or exterior) <input type="checkbox"/> Boating Equipment Manufacturer <input type="checkbox"/> Marina <input type="checkbox"/> Surveyors	<input type="checkbox"/> Boating Equipment Retail <input type="checkbox"/> Brokerage/Yacht Sales <input type="checkbox"/> Dealer <input type="checkbox"/> Engine Sales <input type="checkbox"/> Other (please specify) _____
---	--

**2 How many years have you been in business?**

 years

**3 What kind of business entity are you?**

<input type="checkbox"/> LLC <input type="checkbox"/> INC <input type="checkbox"/> DBA <input type="checkbox"/> Sub S Corp	<input type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Other (please specify) _____
---	--

**4 Where is your business located?**

<input type="checkbox"/> Coastal waterfront <input type="checkbox"/> Inland waters waterfront	<input type="checkbox"/> Upland
--	---------------------------------

**5 How many employees (not including subcontractors) does your company normally employ?**

<input type="checkbox"/> Full-time year-round <input type="checkbox"/> Part-time year-round	<input type="checkbox"/> Full-time seasonal <input type="checkbox"/> Part-time seasonal
--	--

**6 Please indicate the number of Year-Round or Seasonal employees (either full or part-time) whose PRIMARY job can be described by the title below - please allocate only one job title per employee**

Yearly	Season		Yearly	Season	
<input type="checkbox"/>	<input type="checkbox"/>	Master Technician	<input type="checkbox"/>	<input type="checkbox"/>	Welder/Fabricator
<input type="checkbox"/>	<input type="checkbox"/>	Diesel Technician	<input type="checkbox"/>	<input type="checkbox"/>	Boat Yard Laborer
<input type="checkbox"/>	<input type="checkbox"/>	Inboard Gas Engine Technician	<input type="checkbox"/>	<input type="checkbox"/>	Travel-lift Operator
<input type="checkbox"/>	<input type="checkbox"/>	Outboard Technician	<input type="checkbox"/>	<input type="checkbox"/>	Boat Washer/Cleaner
<input type="checkbox"/>	<input type="checkbox"/>	Sterndrive Technician	<input type="checkbox"/>	<input type="checkbox"/>	Dock Master
<input type="checkbox"/>	<input type="checkbox"/>	Electrical Technician	<input type="checkbox"/>	<input type="checkbox"/>	Dock/Gas Dock Attendant
<input type="checkbox"/>	<input type="checkbox"/>	Rigger	<input type="checkbox"/>	<input type="checkbox"/>	Business/Clerical Support
<input type="checkbox"/>	<input type="checkbox"/>	Painter/Varnisher	<input type="checkbox"/>	<input type="checkbox"/>	Sales Staff
<input type="checkbox"/>	<input type="checkbox"/>	Fiberglass Technician	<input type="checkbox"/>	<input type="checkbox"/>	Other (please specify) _____
<input type="checkbox"/>	<input type="checkbox"/>	Carpenter/Joiner			

**7 How many people with the following PRIMARY skills are you CURRENTLY looking to hire? - please provide the number of positions for each job type that you are trying to fill**

Yearly	Season		Yearly	Season	
<input type="checkbox"/>	<input type="checkbox"/>	Master Technician	<input type="checkbox"/>	<input type="checkbox"/>	Welder/Fabricator
<input type="checkbox"/>	<input type="checkbox"/>	Diesel Technician	<input type="checkbox"/>	<input type="checkbox"/>	Boat Yard Laborer
<input type="checkbox"/>	<input type="checkbox"/>	Inboard Gas Engine Technician	<input type="checkbox"/>	<input type="checkbox"/>	Travel-lift Operator
<input type="checkbox"/>	<input type="checkbox"/>	Outboard Technician	<input type="checkbox"/>	<input type="checkbox"/>	Boat Washer/Cleaner
<input type="checkbox"/>	<input type="checkbox"/>	Sterndrive Technician	<input type="checkbox"/>	<input type="checkbox"/>	Dock Master
<input type="checkbox"/>	<input type="checkbox"/>	Electrical Technician	<input type="checkbox"/>	<input type="checkbox"/>	Dock/Gas Dock Attendant
<input type="checkbox"/>	<input type="checkbox"/>	Rigger	<input type="checkbox"/>	<input type="checkbox"/>	Business/Clerical Support
<input type="checkbox"/>	<input type="checkbox"/>	Painter/Varnisher	<input type="checkbox"/>	<input type="checkbox"/>	Sales Staff
<input type="checkbox"/>	<input type="checkbox"/>	Fiberglass Technician	<input type="checkbox"/>	<input type="checkbox"/>	Other (please specify) _____
<input type="checkbox"/>	<input type="checkbox"/>	Carpenter/Joiner			

- 8 How many people with the following PRIMARY skills will you be looking to hire in the next FIVE years? - please provide the number of positions for each job type that you plan to fill**

Yearly	Season	
		Master Technician
		Diesel Technician
		Inboard Gas Engine Technician
		Outboard Technician
		Sterndrive Technician
		Electrical Technician
		Rigger
		Painter/Varnisher
		Fiberglass Technician
		Carpenter/Joiner

Yearly	Season	
		Welder/Fabricator
		Boat Yard Laborer
		Travel-lift Operator
		Boat Washer/Cleaner
		Dock Master
		Dock/Gas Dock Attendant
		Business/Clerical Support
		Sales Staff
		Other (please specify)

---

- 9 Is your ability to expand and grow your business inhibited by not being able to hire qualified employees?**

☐

Yes

☐

No

- 10 Do you find that, as skilled employees retire, it is difficult to find new employees with the same skills to replace them?**

☐

Yes

☐

No

- 11 Of the employees that you require, which are the THREE most difficult positions to fill? - please rank these with #1 being the most difficult**

	Master Technician
	Diesel Technician
	Inboard Gas Engine Technician
	Outboard Technician
	Sterndrive Technician
	Electrical Technician
	Rigger
	Painter/Varnisher
	Fiberglass Technician
	Carpenter/Joiner

	Welder/Fabricator
	Boat Yard Laborer
	Travel-lift Operator
	Boat Washer/Cleaner
	Dock Master
	Dock/Gas Dock Attendant
	Business/Clerical Support
	Sales Staff
	Other (please specify)

---

- 12 Where did your current employees obtain their education/training/certification before you hired them?**


Directly from Manufacturer/Dealer  
Non-profit Organization (e.g. ABYC)  
University  
Community College


Vocational School  
High School  
Other (please specify)

---

- 13 Do you provide formal, on-the-job training?**

☐

Yes

☐

No

**If YES,** please describe what types of on-the-job training you offer

**14 Do you send your employees for further training or certification at your own expense?**

☐

Yes

☐

No

**If NO**, please explain why not.

☐

Too expensive

☐

Employees would leave for better job

☐

Workload too much to allow absence

☐

Other (please specify)

---

**15 Of the skill sets below, for which would you prefer a new hire to have relevant qualifications or certificates before commencing employment? - check all that apply**

☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐

Master Technician

Diesel Technician

Inboard Gas Engine Technician

Outboard Technician

Stern-drive Technician

Electrical Technician

Rigger

Painter/Varnisher

Fiberglass Technician

Carpenter/Joiner

☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐

Welder/Fabricator

Boat Yard Laborer

Travel-lift Operator

Boat Washer/Cleaner

Dock Master

Dock/Gas Dock Attendant

Business/Clerical Support

Sales Staff

Other (please specify)

---

**16 Do you see the need for local educational centers offering training/certification in multiple marine trade skills?**

☐

Yes

☐

No

☐

Don't know

**If YES**, in what **TWO** ways would you prefer to see these services delivered? - please rank these with #1 being your preferred option

☐  
☐  
☐  
☐

Classroom/Workshop courses

Customized on-site training

Customized off-site training

On-line courses

☐  
☐  
☐

Self-study printed materials

Videos or CD-ROMs

Other (please describe)

---

**17 What would be the best time of year for employees to attend training?**

☐

Winter

☐

Spring

☐

Summer

☐

Fall

**18 If you subcontract work out from your business, why is this?**

☐

Excessive workload

☐

Do not subcontract

☐

Lack of employee expertise

☐

Other (please specify)

---

**19 Do your customers/boaters use subcontractors?**

☐

Yes

☐

No

**20 If you answered YES to #14 or #15, estimate how many DIFFERENT contractors enter your facility per year**

**What types of jobs are the contractors hired to do?**

- 21 What is the greatest challenge your business is faced with today?

- 22 What do you think will be the greatest challenge in 5 years?

- 23 Do you perceive changes in the industry that will ultimately change the skill sets, or training required by your employees?

☐

Yes

☐

No

If YES, in what ways do you see the industry changing?

- 24 If these changes occur, what new skill sets or training do you foresee requiring in the future? - please rank the **THREE** most important future skill sets

#1

#2

#3

**Only complete questions 25 to 30 if you are a SELF-EMPLOYED CONTRACTOR working in the marine trade.**  
**ALL OTHERS, please skip to the WAGES SURVEY on page 7.**

- 25 Please describe the types of contract work that you specialize in.

--

- 26 Do you have formal training or certificates in any of the following skills? - check all the apply

Training	Certificate		Training	Certificate	
<input type="checkbox"/>	<input type="checkbox"/>	Master Technician	<input type="checkbox"/>	<input type="checkbox"/>	Welder/Fabricator
<input type="checkbox"/>	<input type="checkbox"/>	Diesel Technician	<input type="checkbox"/>	<input type="checkbox"/>	Boat Yard Laborer
<input type="checkbox"/>	<input type="checkbox"/>	Inboard Gas Engine Technician	<input type="checkbox"/>	<input type="checkbox"/>	Travel-lift Operator
<input type="checkbox"/>	<input type="checkbox"/>	Outboard Technician	<input type="checkbox"/>	<input type="checkbox"/>	Boat Washer/Cleaner
<input type="checkbox"/>	<input type="checkbox"/>	Sterndrive Technician	<input type="checkbox"/>	<input type="checkbox"/>	Dock Master
<input type="checkbox"/>	<input type="checkbox"/>	Electrical Technician	<input type="checkbox"/>	<input type="checkbox"/>	Dock/Gas Dock Attendant
<input type="checkbox"/>	<input type="checkbox"/>	Rigger	<input type="checkbox"/>	<input type="checkbox"/>	Business/Clerical Support
<input type="checkbox"/>	<input type="checkbox"/>	Painter/Varnisher	<input type="checkbox"/>	<input type="checkbox"/>	Sales Staff
<input type="checkbox"/>	<input type="checkbox"/>	Fiberglass Technician	<input type="checkbox"/>	<input type="checkbox"/>	Other (please specify)
<input type="checkbox"/>	<input type="checkbox"/>	Carpenter/Joiner			

- 27 If you have formal training or certificates relating to the services you offer, from where did you obtain them?

<input type="checkbox"/>	Directly from Manufacturer/Dealer	<input type="checkbox"/>	Vocational School
<input type="checkbox"/>	Non-profit Organization (e.g. ABYC)	<input type="checkbox"/>	High School
<input type="checkbox"/>	University	<input type="checkbox"/>	Other (please specify)
<input type="checkbox"/>	Community College		

- 28 Do you **PRIMARILY** work on your own premises or at other sites?

<input type="checkbox"/> Own premises	<input type="checkbox"/> At other sites
---------------------------------------	---

- 29 Are you **PRIMARILY** subcontracted by other marine industry businesses or do you work for private individuals?

<input type="checkbox"/> Subcontracted by other businesses	<input type="checkbox"/> Work for individuals
--	---

**If you are subcontracted by other marine industry businesses,** please estimate how many businesses you work for in a typical year.

<input style="width: 50px;" type="text"/>	Number of businesses that subcontract you in a typical year.
---	--

- 30 What geographical area do you work in? - please be as specific as possible

--

**MASSACHUSETTS MARINE TRADES ASSOCIATION  
Wage Survey 2005**

In 2002 the Massachusetts Marine Trades Association conducted a Wage Survey that provided useful information about the state of our industry. As we are distributing the new Workforce Survey, it seems that this would be an ideal opportunity to update the Wage Survey as well. The updated information from the new Wage Survey will help us compare the marine trades with other industries.

**IF YOU WISH YOUR WAGE INFORMATION TO BE ANONYMOUS, PLEASE RETURN THIS FORM SEPARATELY.**

**Please provide the maximum and minimum wages that you currently pay for the following positions:**

ADMINISTRATIVE POSITION TITLE	HOURLY RATE	
	Minimum	Maximum
Office Manager		
Secretary		
Bookkeeper		
Customer Service		
Store/Stockroom		
F & I Person		

or

ANNUAL SALARY	
Minimum	Maximum

SERVICE POSITION TITLE	HOURLY RATE	
	Minimum	Maximum
Service Manager		
Lead Technician		
Technician/Mechanic		
Outboard Technician		
Sterndrive Technician		
Parts Manager		
Electronics		
Yard Foreman		
Rigger		
Painter/Varnisher		
Fiberglass		
Carpenter		
Equipment Operator		
Machinist/Welder		
General Labor		
Dockmaster		
Dock Hands		

or

ANNUAL SALARY	
Minimum	Maximum

RETAIL LABOR BILLING RATES	HOURLY RATE	
	Minimum	Maximum
Skilled Labor		
Unskilled Labor		

**What is your Annual Sales Volume in Dollars?** \_\_\_\_\_

**THANK YOU...** Return to page 1 for information on how to submit your survey.

### MARINE COURSES STUDENT SURVEY

Massasoit Community College is working on a grant project together with Massachusetts Marine Trades Association, UMass, Southcoastal WIB, and Commonwealth Corporation. In order to determine if our college is helping to fill the workforce shortage in the marine industry, it is very important for you to give us feed-back on your experiences. Thank you in advance for your participation. Please return this survey in the enclosed postage-paid envelope by **June 15, 2005**.

1. What is your current general employment status? (Check One.)  
☐ Full-time (35 hrs/week +)                      ☐ Part-time (Less than 35 hrs/week)  
☐ Not in labor force (By choice)                      ☐ Unemployed (Seeking employment)  
☐ Full-time Military Service
2. Which of the following courses did you complete or are you presently taking at Massasoit? (Check all that apply.)  
☐ Boating Trades Overview  
☐ Marine Technician Fundamentals  
☐ Marine Technician Outboard Engines
3. What was the main reason you decided to take one of the marine courses?  
☐ To explore a possible career change  
☐ To gain the skills needed to go to work in the marine industry  
☐ To gain better skills and possible promotion in my existing marine job  
☐ To learn how to better repair my own boat  
☐ Other (Explain): \_\_\_\_\_
4. Did the course/s help you gain your main goal as stated above?                      ☐ Yes    ☐ No  
Explain: \_\_\_\_\_
5. Were you **already** working in the marine industry when you entered your first marine course at Massasoit?                      ☐ Yes    ☐ No  
If Yes:
  - What type of position did/do you have? \_\_\_\_\_
  - Has your Massasoit training to date resulted in any of the following?  
Improvement in the skills used in your existing position?                      ☐ Yes    ☐ No  
Change to higher level position or responsibilities?                      ☐ Yes    ☐ No  
Increased wages?                      ☐ Yes    ☐ No  
Increased opportunities for future advancement?                      ☐ Yes    ☐ No
6. Did you first begin to work in the marine industry **during or after** taking one of the courses?  
☐ Yes    ☐ No  
If Yes:
  - What type of position did you obtain? \_\_\_\_\_
  - Is the position    ☐ full-time or ☐ part-time?

7. Are you presently working in a marine-related position? \_\_\_ Yes\_\_\_ No

a. **If Yes:**

- What type of position? \_\_\_\_\_
- What is your current salary before deductions (not counting over-time)?  
\$\_\_\_\_\_per \_\_\_\_\_ (Hour, week, month, year) based on \_\_\_ hours/wk
- How did you find your position? (Check One)  
\_\_\_ Newspaper; \_\_\_ Friends, Family; \_\_\_ MA Marine Trades Web-site/Staff  
\_\_\_ Massasoit Placement Office; \_\_\_ Employment Agency; \_\_\_ Other \_\_\_\_\_

b. **If No:**

- Do you intend to work in the marine industry in the future? \_\_\_Yes \_\_\_ No

8. Do marine industry wages meet the expectations you had upon entering the marine courses?  
\_\_\_ Yes \_\_\_ No

Explain \_\_\_\_\_

9. Have you looked for a marine job and been unsuccessful? \_\_\_ Yes \_\_\_ No

If Yes, why were you unsuccessful? \_\_\_\_\_

10. If you are or soon will be seeking work in the marine industry, what type of position are you looking for? \_\_\_\_\_

11. How well have the Massasoit marine courses taken to date prepared you for work in the marine field? (Circle one response for each item.)

	Extremely Well	Well	Not Well	Not Completed
General Knowledge of Field	4	3	2	1
Specific Technical Skills	4	3	2	1

12. Suggestions for improving the Massasoit Marine Program

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

13. Other Comments

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

MASSACHUSETTS  
MARINE TRADES  
ASSOCIATION



## MASSACHUSETTS MARINE TRADES EDUCATIONAL TRUST



*Endorsed by the MMTA, the Boston International In Water Boat Show attracts thousands of boaters and visitors to Greater Boston each Fall.*

“...The industry must do everything in its power to recruit and educate as many qualified technicians as possible. Never has this become more critical than today. The industry is already facing a severe shortage of technicians, and as the current manufacturing trend of producing more complex engines continues, this situation will only get worse.”

*Boating Industry, AMTECH Column, Monday  
February 10, 2003*

The battle cry from the year 2003. Since then the number of recreational boaters has increased and the number of qualified marine technicians has decreased and remains in decline. In 2003 the situation was critical: as 2006 nears, the situation is a full blown crisis for the recreational boating industry.

Over the past decade, the recreational marine industry's contribution to the Massachusetts economy has increased significantly; and today accounts for an estimated 1,260 businesses, 27,000 full and part-time employees, and an estimated \$508,654,167 in annual payroll and \$25,432,708 in annual income tax revenues. In addition, the industry generates approximately 14.8 million dollars in annual sales tax on peripheral boating expenses with 1.7 billion total estimated combined spending attributable to the recreational boating experience in Massachusetts.



Over 1,200 marine trades businesses serve nearly 200,000 resident and transient boaters who navigate and enjoy over 1,500 miles of saltwater coastline and inland waters of the Commonwealth. These mostly small business owners provide services to both recreational boaters and commercial vessel operators such as: outboard, sterndrive, inboard and diesel engine installation, repair and maintenance; fiberglass repair and refinishing; navigation and vessel system electronics installation and repair; vessel dockage, storage, mooring and haul out

facilities; marine carpentry, painting, detailing; chandlery services including supplies, fuel, marine parts, components and accessories; boat sales, boat brokerage, vessel transportation services, vessel title and insurance services.

The most acute shortage is for marine service personnel including: outboard, stern drive, inboard and diesel service technicians, riggers, electronic installers and repairers, fiberglass fabricators and refinishers. Careers in these areas have a relatively short education cycle but require very specific skills and mechanical aptitude. While the national marine industry does a reasonable job educating employees already in the industry in product specific applications—advanced level courses are offered by manufacturers and are paid for by the dealers—there is little basic training available to prepare potential employees for a career as a marine technician.



Nationwide the marine trades' skilled labor shortage has become so severe that it threatens to undermine the recreational marine industry itself. In Massachusetts, the lack of training programs, standardized marine curriculum, and effective short and long-range recruitment efforts translates into lost revenue for businesses, lost tax revenue for the Commonwealth, and a lost opportunity for meaningful employment for thousands of Massachusetts residents.

Vacancies and the general shortage of skilled employees negatively impact the end users as it causes unreasonably long service wait times. The waits and downtime that users experience too often result in the customers abandoning the activity in favor of more “hassle-free” recreational avocations. As more and more boaters opt out of boating due to the unavailability of marine service, retailers, dealer and service providers cannot sustain their businesses, go out of business and layoff more workers.





## MASSACHUSETTS MARINE TRADES EDUCATIONAL TRUST

**The Massachusetts Marine Trades Association (MMTA)** is an organization of men and women employed in the marine industry that provides a framework for furthering the interest of the marine trades and boating public through the promotion of boating, participation in legislation, development of professional improvement programs.

The Association serves as a focal point for the exchange of ideas concerning marine matters in Massachusetts and seeks to uphold the highest standards of professional and ethical conduct among its membership.

**The Massachusetts Marine Trades Education Trust (MMTET)** is established for the purpose of applying its resources to fund scholarships for students enrolled in vocational high schools, junior colleges and other education institutions dedicated to teaching recreational marine industry skills.

In the process MMTA and Massachusetts Marine Trades Education Trust (MMTET) have:

- ◆ Been active participants at various career centers promoting the marine industry and the job opportunities available now and in the future.
- ◆ Completed an economic impact survey of the recreational marine trades in Massachusetts
- ◆ Completed wage and labor assessment surveys of the statewide industry
- ◆ Assisted in the implementation of the first post-secondary level marine trades program at Massasoit Community College;
- ◆ Been an active participant in the Ocean Economy Taskforce;
- ◆ Served as a Director of the South Coastal Workforce Investment Board;
- ◆ Created a foundation (MMTET) for the administration of scholarship funds for marine trades students and for the furtherance of education, training and job placement initiatives for the MA marine trades;
- ◆ Assisted in the establishment and maintenance of vocational programs for the recreational marine trades at K-12 and post secondary levels.