

2008

City of Annapolis Maritime Industry Economic Survey



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EXECUTIVE SUMMARY

SUMMARY

The 2008 analysis of the maritime businesses in the City of Annapolis confirms it as a major center for the selling and buying of recreational boats on the east coast. The maritime businesses are under constraints for affordable space due to growth of the business paired with rising rents and land costs. There has been a slowing in the number of new businesses relocating in Annapolis. The economic impact of maritime businesses to the city's economy remains one of the largest private sector contributors.

BACKGROUND

The City of Annapolis has conducted analysis of the maritime businesses in light of its 1987 Maritime Zoning Regulations efforts to retain and grow maritime businesses with the city limits. There have been three previous maritime business studies done of the City of Annapolis. The initial study done by Litpon and Greer (1992) University of Maryland Sea Grant College Program identified Annapolis as a “maritime shopping center” with a critical mass for one-stop shopping for goods and services. In 1993, City Planning and Zoning Department under the direction of the Maritime Advisory Board, a City appointed board composed of maritime business leaders, conducted a “Maritime Industry Survey”. The survey identified 200 known maritime businesses in the City of Annapolis, with a response rate of 50.5 percent or 101 businesses. The third study by ZHA in 2002 used the same questionnaire developed by the City of Annapolis Planning and Zoning Department in the 1993 study revealed a shift in the client base toward the regional Washington-Baltimore market since 1993.



INTRODUCTION

U. S. MARITIME INDUSTRY

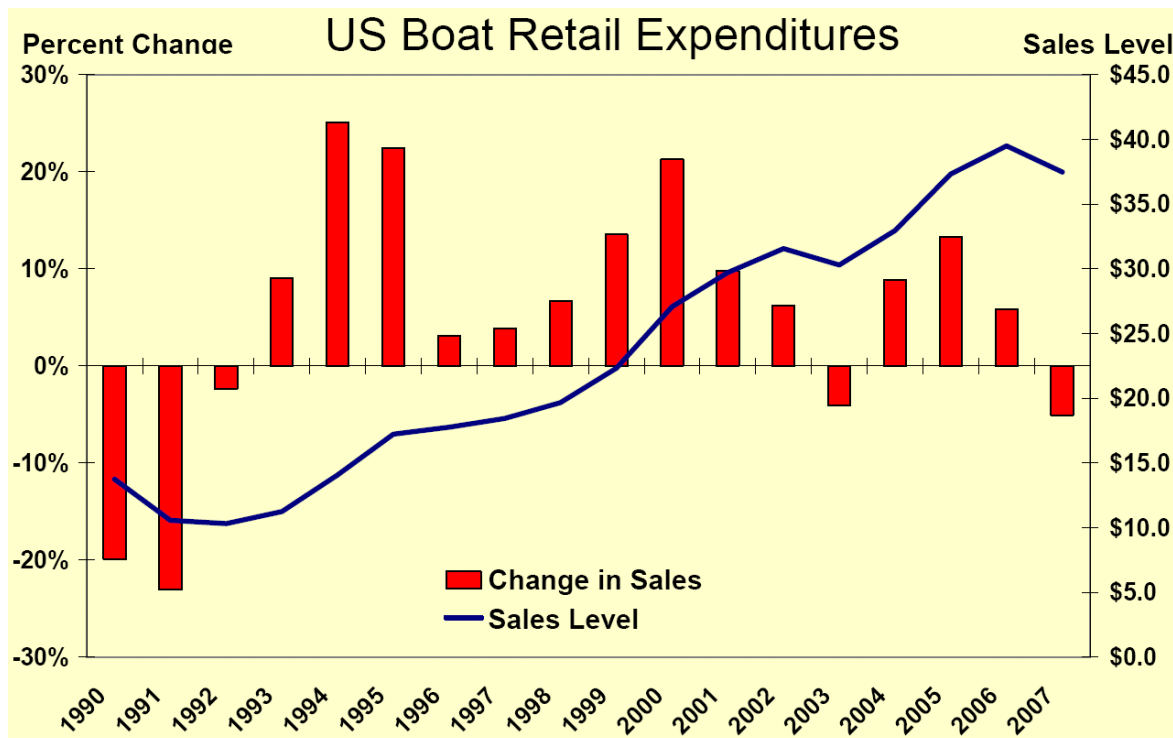
INDUSTRY SEGMENT

Recreational boat makes up a major portion of the maritime industry as defined in this study, but also includes water sightseeing and water taxi service. As an industry, it reflects consumer disposable income estimated in 2007 to account for \$37.5 billion in retail expenditures and new sales. As an industry, it is very sensitive to consumer confidence and consumer spending. During the previous recession of 2001 over all recreational marine spending did not decline, but increased by 9.8 percent.

RECENT SALES TRENDS

The growth in retail expenditures in the boating sector peaked in 2001 with a growth of 21.2 percent, up from \$22.3 billion in 2000 to \$27.1 billion in 2001. This is followed by a sharp decline in 2003, down by 4.1 percent only to rebound in 2004, up by 7.2 percent. Boat retail expenditures continued to grow into 2005, up by 13.4 percent. Since, 2005 there has been a fall off in the growth of spending to end 2007, down by 5.1 percent.

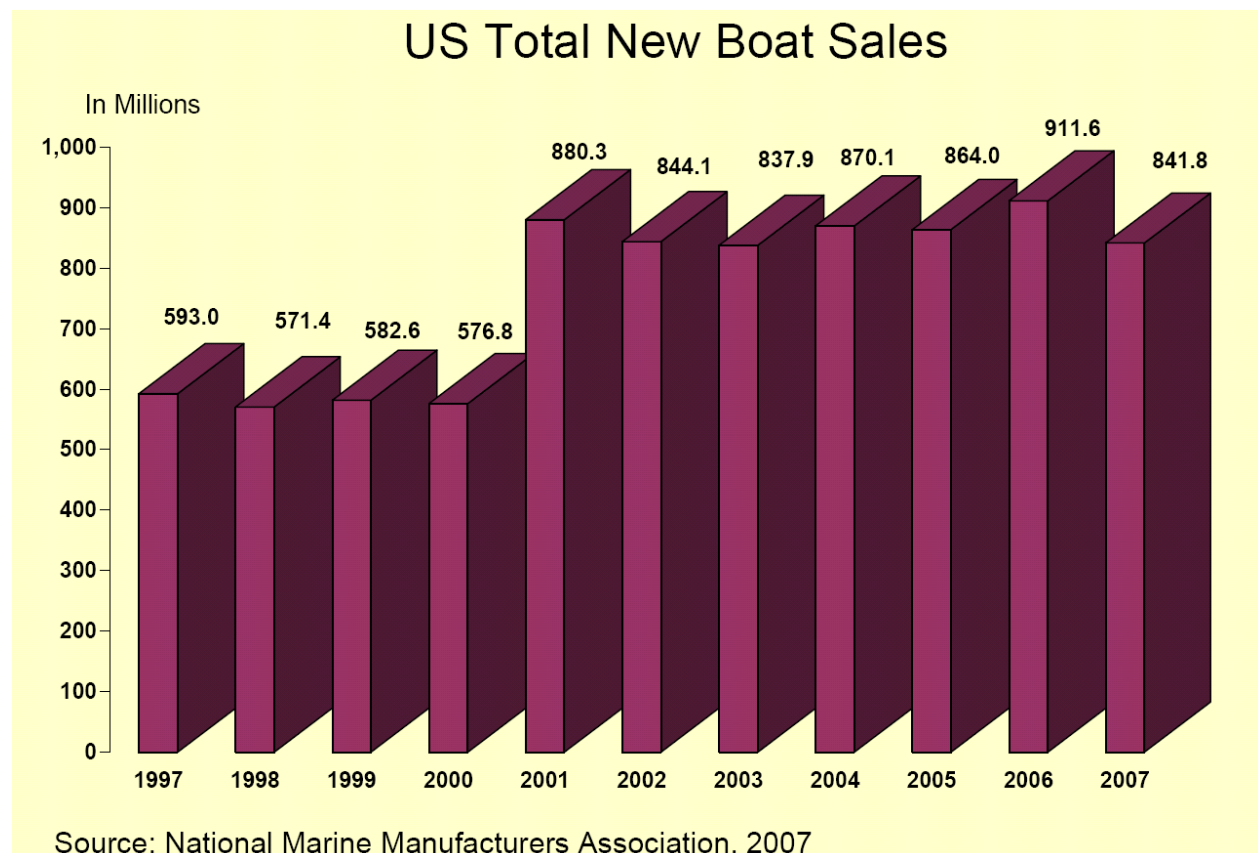
FIGURE 1



Source: National Association of Marine Manufacturers, 2007

Overall, US new boat sales have remained volatile since picking in 2001 where new boat sales doubled from 2000 by 52.6 percent. Since, 2001, the growth in new boat sales have volatile, down in 2002 and 2003, and up 2004. New boat sales turned down in 2005 only to rebound 2006, but turning down in 2007. The growth in US new boat sales tends to lag behind total retail sales, while boat sales peaked in 2001 national retail sales peaked two years prior in 1999.

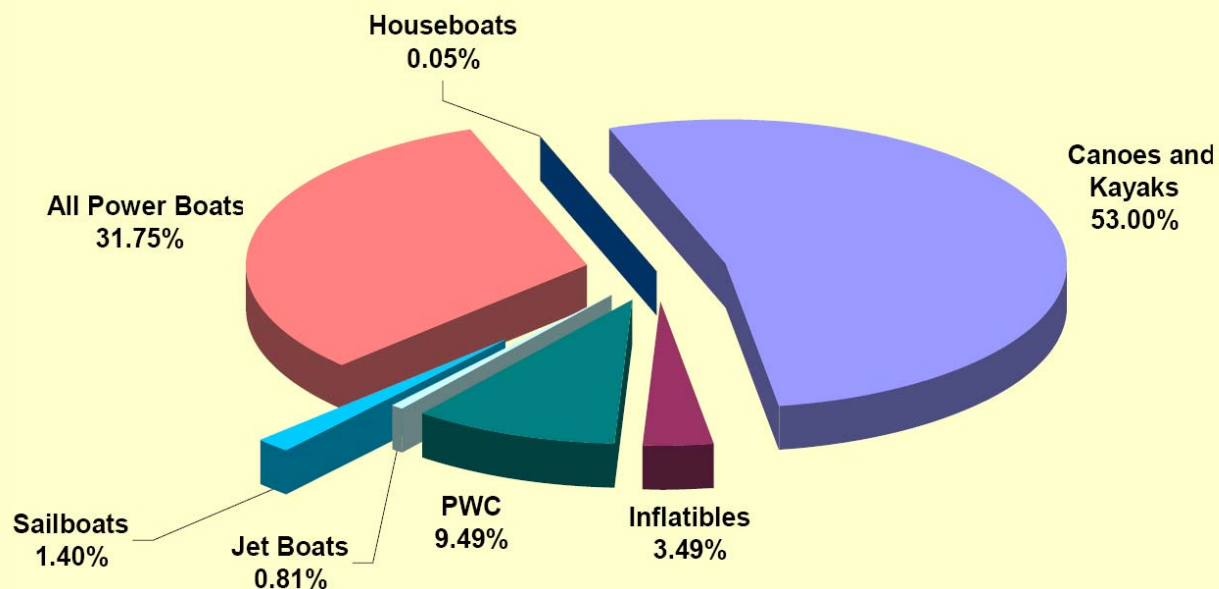
FIGURE 2



Most of the growth in new boat sales has been the growth in canoes and kayaks reflecting shifts in consumer allocation of recreational time as well as sensitivity to price. In 2007, canoes and kayaks reflected 53 percent of the numbers of new boat sales or 4.4 million boats produced. All forms of power boats including outboard boats, inboards, and stern drive boats comprise 32 percent of new boat sales in 2007. Sailboats represent only 1.4 percent of new boat sales, but experienced a 20.1 percent increase in sales from 2006 and 2007.

Figure 3

US Recreational New Boat Manufacturing Market Share 2007



Source: National Marine Manufacturers Association, 2007

One of the main trends dominating the U.S. recreational marine products market, and to a lesser extent the overseas market, is the sale of small water-pump-propelled craft, such as personal watercraft (PWC) and jet boats. Once considered complementary, or at the very worst, a minor competitive annoyance, PWC now are seen as a bigger threat to conventional powerboat sales. Until recently this segment had experienced rapid growth (double-digit growth through most of the 1990s), but a fall in sales took place over the past three years. This was caused largely by consumer concerns about safety and environmental problems, with some consumers hesitating out of a fear that PWC would be banned in many places. The three-person PWC is now the top seller, reflecting an interest in broadening the activity to include water skiing and tubing and involving others. Furthermore, jet boats and personal watercraft have attracted many *new* boaters. The industry remains positive that increased sales of jet boats and personal watercraft will eventually lead to future sales of all boat products, despite the fact that the relatively low retail prices of these craft have lowered the annual dollar volume of sales.

IMPORTS IN U.S. MARKETS

An increasing number of boats are being imported and in some cases as in the foreign automobile manufacturers, they have established their own manufacturing plants in the

United States. Boating in foreign markets is growing rapidly as foreign manufacturers service their own markets, catching up to U.S. manufacturers in economies of scale, and provides new price-competitive products. On the other hand, many consumers in overseas markets look for the “Made in the USA” label because they believe that U.S. manufacturers provide the highest-quality products available.

Imports increased dramatically in recent years, from about \$257 million in 1992 to \$997.4 Million in 1996.¹ Much (approximately 64%) of this \$740 million increase in imports can be attributed to activity in Canada, for three reasons. First, Canada already was the source of the majority of U.S. boat imports, with a 55% import market share; its share of the 1992-1996 increase was only slightly higher. Second, Canada is home to the largest maker of PWC, sales of which greatly increased in the United States over this period. Third, many U.S. manufacturers have purchased Canadian boat makers and shifted production to the newly purchased plants. It was projected that, over the 1996-98 period, imports would decline while exports would increase, cutting the \$378 million 1996 boat trade deficit to about \$150 million over those two years.² Further discussion of imports in the context of challenges and opportunities for the U.S. BBR industry appears in a later section of this report.

EXPORTS OF U.S. FIRMS TO FOREIGN MARKETS

From 1992 through 1996, the value of U.S. BBR industry exports declined; from about \$714 million to \$621 million (the latter figure actually represents a rebound from a low of \$504 million in 1994.) Most of this decline can be attributed to a reduction in sales to Western Europe, which in 1996 still accounted for nearly 40% of U.S. exports; sales to Latin American countries also slid. Exports to Canada and Mexico were essentially flat, making up approximately one-quarter of U.S. BBR industry exports. Increases in exports to Asia (not including Japan) and “Rest of World” (mainly Australia and Africa) were significant in percentage terms but not in dollar value.



¹ Despite their recent rapid growth, imports still represent only about 5% of total U.S. boat sales.

² Since detailed import-export data become available with a lag, we will not be able to confirm the accuracy of this projection for one or two more years.

BUSINESS TRENDS

In 2002, the U.S. Census Bureau reported at 92,235 establishments with paid employees and non-paid employees primarily engaged recreational marine activities including water transportation and excursion and sighting boats, charter fishing, and marinas.³ Of the 20,704 establishments with paid employees, the largest number was



boat dealers comprising nearly 27 percent of the industry or 5,523 businesses. Boat dealers alone employ 39,924 persons and combined industry sectors employ 193,638 people. The majority of recreational boating products are sold through retail establishments. Boat dealers in the United States are, for the most part, independent retailers. Although a retailer may choose to feature a particular manufacturer's boat, dealerships are not controlled or owned by that manufacturer.

Marine wholesalers play a significant part in the distribution of manufactured products to retail dealers. Most in the industry note that a wholesaler is necessary in a business where so many entrepreneurial fabrications and boat builders buy small amounts of

materials. In some areas such as marine fabrics, however, it is becoming more commonplace for mills to sell directly to the boat companies, which may make things more costly for small market entrants who buy in small quantities. Marine wholesalers represent 26 percent of all establishments in the marine industry and have the highest employment of 51,794.

The third largest number of establishments is marinas, comprising 21 percent of the total number of recreational marine establishments, and 14 percent of employment. Marinas play a central part for the storage and repair of recreational boats. Nationally, new marinas are becoming extensions of hotels and waterfront communities providing

³ The 2002 Economic Census measures activity during calendar year 2002. Census forms will be mailed to more than 5 million companies in December 2002, with a due date of February 12, 2003.

docking only facilities and eliminating the function of repair and service. This reflects the increased federal and state environmental regulations placed on marinas providing repair and service functions. Pressure for waterfront development has forced marinas to close entirely with conversion into residential development.

Boat repair establishments account for 11 percent of the establishments and 5 percent of establishment with paid employees. Somewhat overlooked in the marine industry is the number of establishments with no paid employees. These establishments comprise just the owners. From the 2002 Economic Census, for every one establishment with paid employees there 166 contractors (nonpaid employers) in boat repair. A major part of the reason is the low barrier to entry makes this an opportunity for workers with basic skills to enter the business. These establishments provide contract labor in the boat repair sector, while those with more technical skills have paid employees.

RECREATIONAL BOATING CONSUMERS

Individual consumers, who buy a boat primarily for use in recreational activities, make up the largest demand segment for the U.S. Boat BR industry, accounting for 79.4% of the value of sales in 1996.⁴ The commercial (6.9%) and “other” (13.7%) segments account for the remainder of the market. There were an estimated 16.93 million registered, a non-registered boats in the United States as of 2007. This is down from the peak of 17.67 million in 2005. Compared to 2006, the number of boats in use during 2007 increased in all segments except sailboats and other boats. Nearly half of the boats in use were outboard boats.

Because of general demographic trends over the past twenty years, the age range of customers buying the largest number of boats has changed from the 18-to-34 age group to the over-44 age group. The median age of boat owners is at 45-49 years of age. This shift to the older population segment has caused marine manufacturers to rethink marketing strategies. The group over 44 years of age tends to prefer cruising with the family. They have more disposable income and the family activities tend to be high



⁴ The same source reports that *unit* sales fell in the first nine months of 1997. This combination of increased dollar sales with decreased unit sales might be explained by the simultaneous drop in “jet ski”

valued.

US demand for recreational boating products, including boats and separately sold propulsion systems and accessories, is projected to rise 5.3 percent per annum through 2011 to over \$20 billion. Strong growth in recreation and leisure expenditures will support demand, as will gains in disposable personal income. The recreational boating market will benefit from strong population growth in the 55-64 age bracket, which are key end users of large, high-priced recreational boating products. Gains will be supported by the efforts of manufacturers and industry organizations to increase interest in boating among women, minorities, and other nontraditional boat buyers.

Powerboats are expected to see the fastest gains in the boat category through 2011, as these boats are more ideal for the aging population due to their ease of operation. Outboard powerboats are expected to post rapid growth, driven by the increasing popularity of boat packages that often include the motor, a trailer, and other various accessories that make the buying process simpler for the consumer. Such packages add dollar value to the outboard boat market, as well as a significant level of convenience for first-time buyers. Sterndrive powerboats are also expected to see healthy gains, benefiting from their high performance capabilities, fuel efficiency, and durability.

Separately sold propulsion systems are expected to be the fastest growing segment among recreational boating products through 2011. Gains will be supported by evolving environmental regulations, which will lead to more stringent emission standards on marine engines. These standards will require continual technological innovation, thereby increasing the overall cost of the engines. Demand for separately sold accessories is also expected to grow at a healthy pace, benefiting from a growing consumer interest in global positioning systems, as well as satellite-based communication systems.

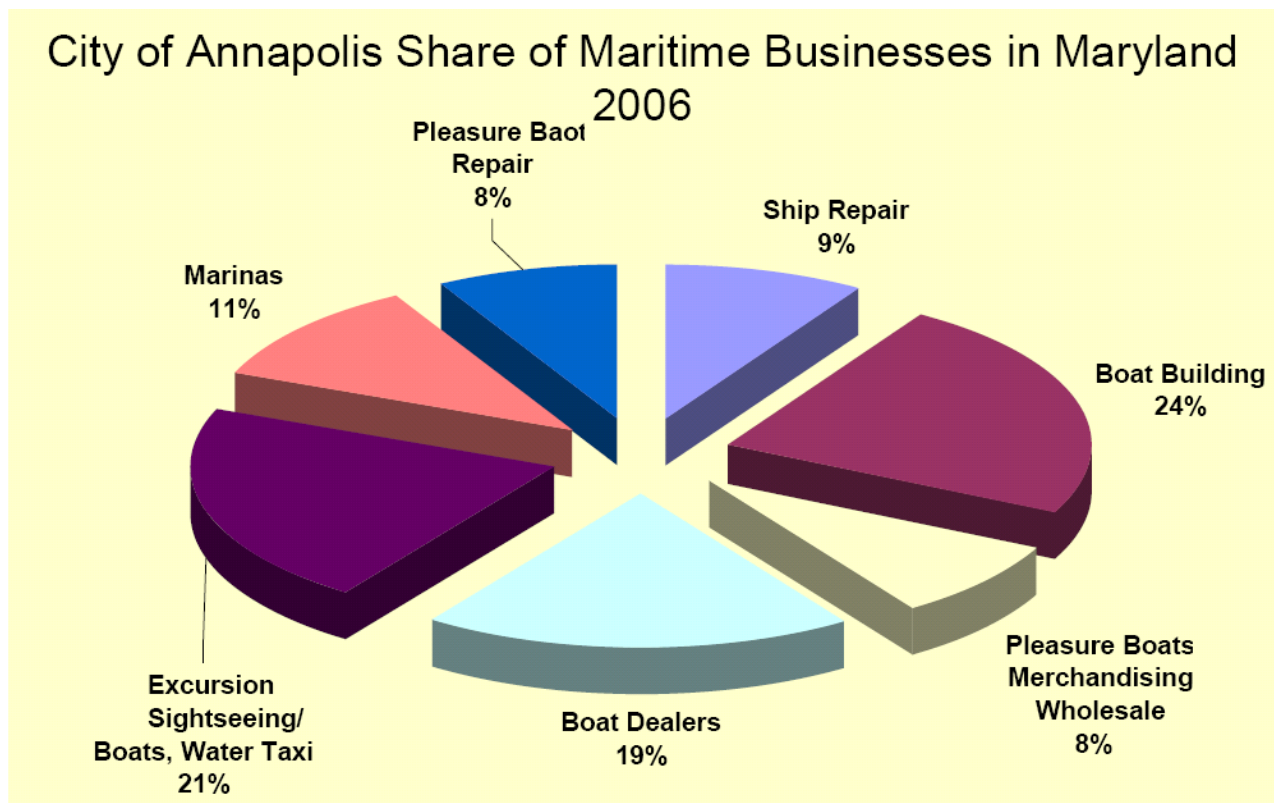
ANNAPOLIS, MARYLAND MARITIME INDUSTRY

The City of Annapolis has been a small center of boat manufacturers including the home of Annapolis Yacht Yard building patrol boats for World War I and World War II, Owens Boats, and later John Trumpy & Sons building motor and sailing yachts. Since, that period several boat builders established production shops including Condor LTD, J. Gordon, Craine Brothers, Belkov Yacht Company, and Performance Cruising. There have been from time to time custom boat builders who had individual boat construction, but chose other locations for production. Since the 1960's, the City of Annapolis is known as the home for buying and selling of boats and the marine retail center.

CLUSTERING OF MARITIME BUSINESS

Maritime businesses tend to cluster around major repair marinas that offer haul out of boats for repair and boat surveys. This clustering reflects the size of boats requiring lifting equipment as oppose to easily transportable boats via trailers. The City of Annapolis has nearly 15 percent of all the maritime businesses in Maryland. The City has a 24 percent of the boat building businesses in the state. Excursion, sighting boats, and water taxis comprise 21 percent of the state's share. Boat dealers account for 19 percent of the maritime businesses in Maryland.

FIGURE 4



CITY OF ANNAPOLIS SHARE OF MARYLAND MARITIME BUSINESSES

TABLE 1

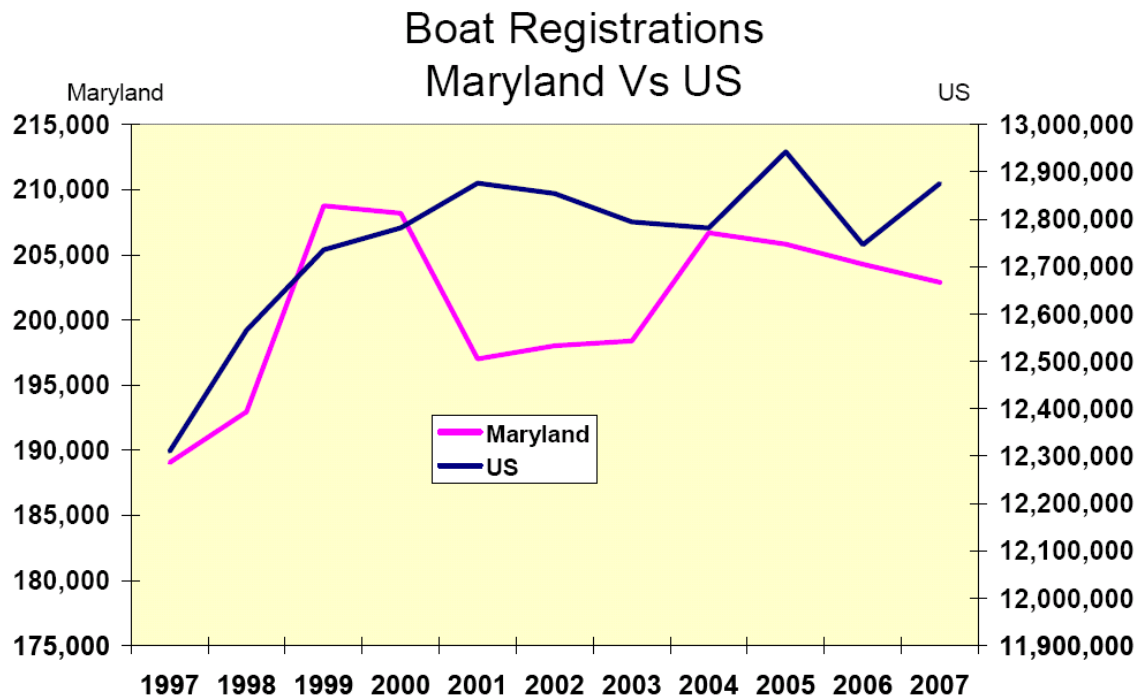
Maritime Industry Share	
Ship Repair	9.1%
Boat Building	24.4%
Pleasure Boats Merchandising Wholesale	8.8%
Boat Dealers	19.8%
Excursion Sightseeing Boats, Water Taxi	21.4%
Marinas	11.2%
Boat Pleasure Repair	8.4%

Source: U.S. Census County Business Patterns, 2008

ANNAPOLIS MARITIME DEMAND

Annapolis has an estimated 2,387 boat slips at marinas and there are an estimated 1,000 private boat slips at individual homes and development complexes. In addition, the City of Annapolis has two public boat launching ramps as well as public water access to the streets ending at the City's waterways. The growth of boat slips has been limited by environment regulations involving multiple levels of government permit approvals. Annapolis is a major center for recreational boating for the Washington/Baltimore metropolitan area as well as drawing boat owners as far as the Philadelphia metropolitan area. Maryland Department of Natural Resources requires that any motorized boat 16 feet or longer that uses Maryland waters for a period of 30 days or more register the boat. Maryland boat registrations peaked in 2004 leading a similar peak of all state boat registrations in 2005. The chart shows that during the previous economic slowdown of 2001, Maryland boat registrations declined earlier and recovered sooner than did the nation.

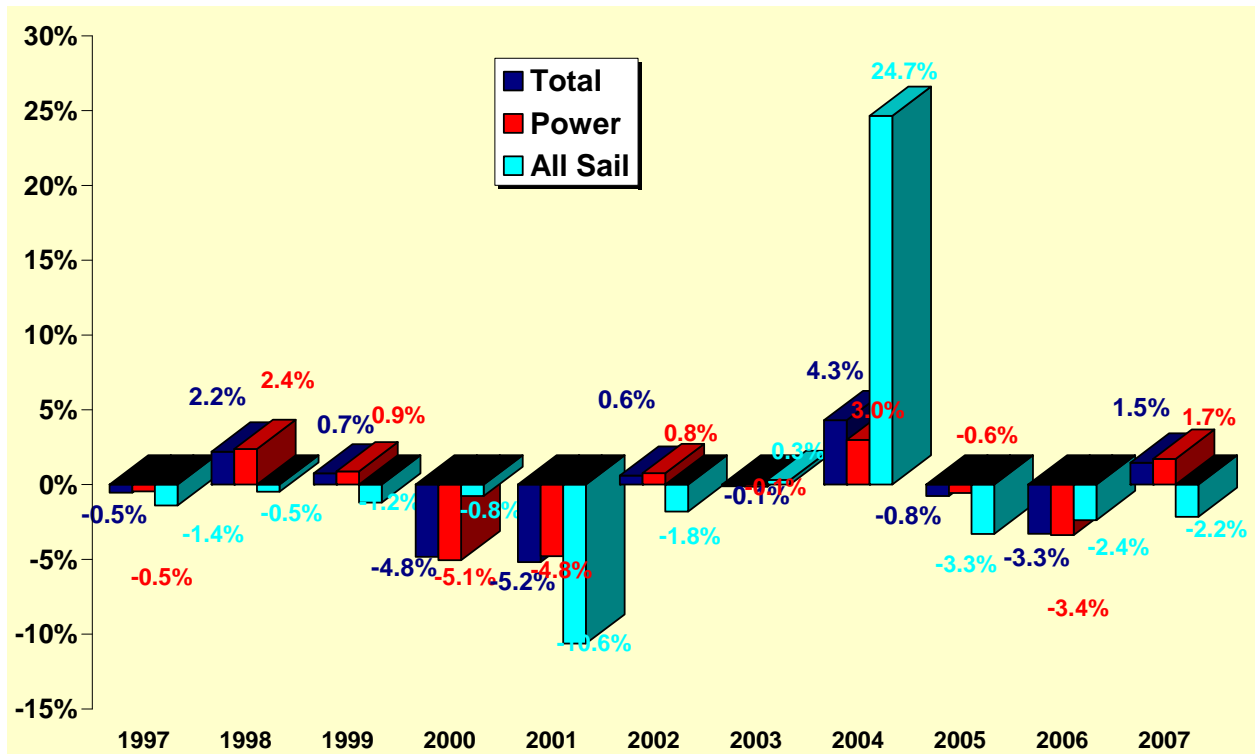
FIGURE 5



Source: U.S. Department of Transportation, U.S. Coast Guard, Boating Statistics, Washington, DC

FIGURE 6

Growth in Maryland Boat Registrations

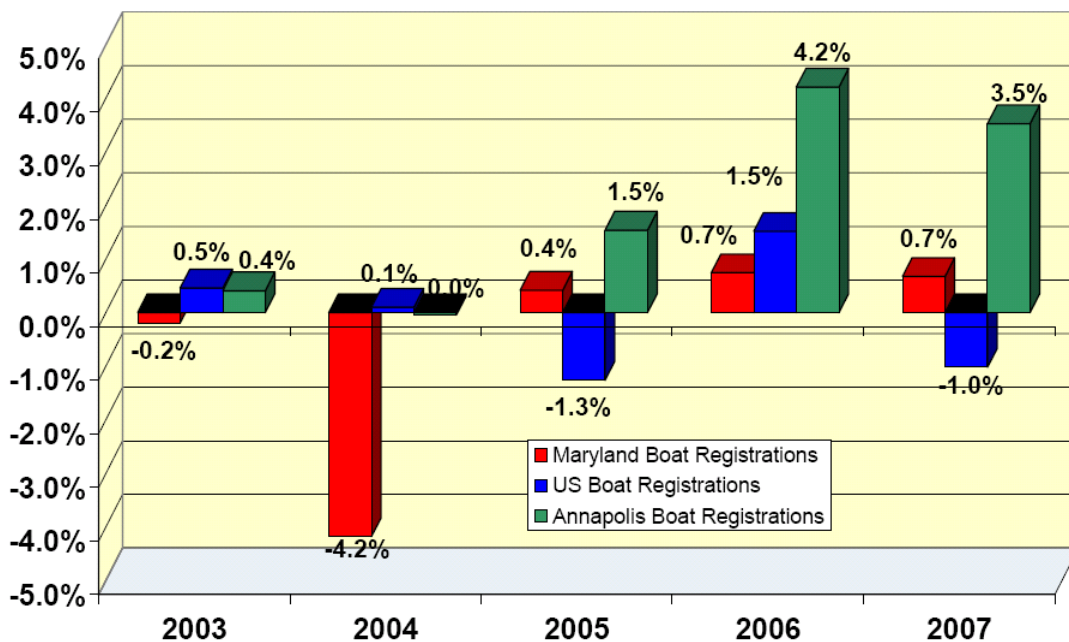


Source: Maryland Department of Natural Resources, 2008

In 2007, there were 8,453 boats whose owners resided in Annapolis or one-sixth of all boats whose owners resided in Anne Arundel County. Annapolis boat registrations resisted national and state-wide trends to end 2007, up by 3.5 percent compared to 0.7 percent growth in Maryland and a decline by 1.0 percent for the nation. However, like the state, the largest number of Annapolis boat registrations was in 2002, and 9,324 boats. Between 2002 and 2007, there was a decline of 871 registered boats or a drop of 9.3 percent.

FIGURE 7

Annapolis Boat Registration Resist National Trend



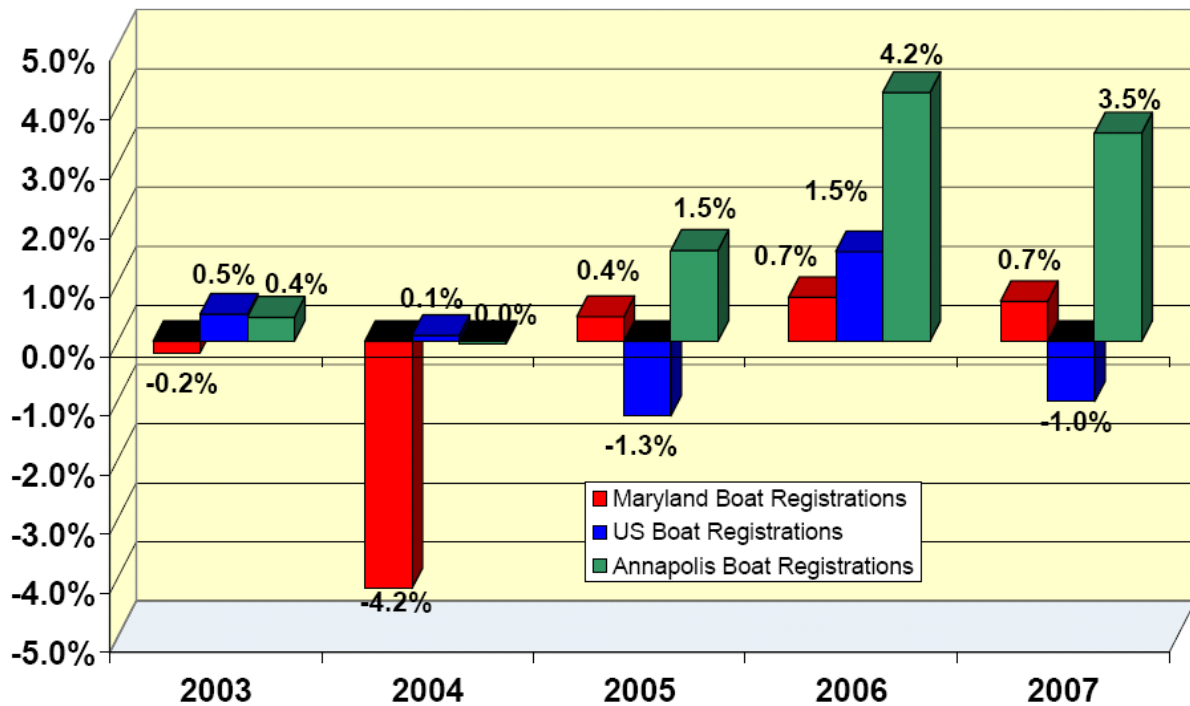
Source: Maryland Department of Natural Resources, 2008

DEMOGRAPHICS OF BOAT OWNERS

From national demographic characteristics, we can apply that three out of four boat owners have an average household income under \$100,000. Nearly 68 percent of boat owners were married and the median age was 45–49 years. Annapolis draws boat owners from one the richest metropolitan areas in the nation comprising Washington-Baltimore and Philadelphia metropolitan areas. From national demographic characteristics, three out of four boat owners have an average household income under \$100,000. Our estimates suggest that the average household income for 75 percent of boat owners in the Washington-Baltimore, and Philadelphia area is under \$124,999 to reflect the higher median income of the area. Consistent with national figures that 68 percent of boat owners are married with the median age of 45 – 49 years. This reflects dual income households who are near their peak in earnings.

FIGURE 8

Annapolis Boat Registration Resist National Trend



Source: Maryland Department of Natural Resources, 2008

ANNAPOLIS MARITIME BUSINESS SURVEY

The City of Annapolis Department of Economic Affairs commissioned Market-Economics to analyze a survey of the city's maritime industry. In August 2008, the City's Department of Economic Affairs conducted a survey of maritime businesses in the City of Annapolis. This is the fifth survey of the maritime industry during the period 1986-2008. With proper precautions, the 2008 survey is comparable to the 2002 survey. Essentially, the same 20-question survey instrument was used by both surveys. Although "business samples" are referenced, both surveys attempted to reach all businesses within the scope of the study. Thus, both surveys were "universe" measures of maritime businesses existing at the time of each survey. As described below there may be some distinction in the actual boundaries of the survey areas. The 2008 survey had a smaller number of businesses in which the survey was mailed to than in 2002. The latter survey resulted in 101 usable responses from a total of 275 businesses. The current survey looks at 84 responses from 212 businesses. The response rate was 36.7 percent in 2002 and 39.6 percent in 2008. However, political boundaries may not fully explain the differences in survey size between 2002 and 2008. Further research to validate the employer directories of both surveys may be advisable. In addition, zip code boundaries could be analyzed to verify the scope of the surveys.

The geography of the 2002 survey is described as limited to businesses inside the Annapolis City limits. In 2008, 25% of the businesses surveyed were located near but outside the city limits. It is arguable that maritime businesses adjacent to Annapolis City are a part of the City's maritime industry market. However, for comparison purposes this 2008 survey analysis also speaks to the numbers and characteristics of businesses located within Annapolis City limits when appropriate and possible. Market-Economics consulted Dun and Bradstreet, a third party proprietary employer database to help understand the completeness of the business list that was used for the 2008 survey. Those findings are helpful and are discussed in the Employment section below.

Since the number of businesses contacted in each survey was different, comparisons between surveys are presented in percentage, average or number formats as appropriate. In addition, the consultant analyzed the survey questions for the entire study area and exclusively for Annapolis City, as indicated in table 2.

AREA ANALYSIS BY QUESTION

TABLE 2

#	Question	Entire Survey Area	City only*
1	N/A		
2	N/A		
3	Type of business (for detail, see "Business Types" section below or questionnaire in appendix)	X	X
4	Number of employees	X	X
5	How many are full-time? Part-time? Contractual?	X	X
6	What is your gross annual payroll?		X
7	Do you own or rent the building in which your business is located.		X
8	How many total square feet do you use for your business? Interior? Exterior?		X
9	Is access to the water critical for your business?		X
10	About how many customers do you have on an annual basis? Those out of state?		X
11	What percentage of this client base is: local? Regional? National? International?		X
12	How long have you been in business?		X
13	If you moved your business from outside Annapolis, when and where?		X
14	Do you have plans to expand your business in the near future?		X
15	If you plan to expand, in what way? (for detail, see questionnaire in appendix)		X
16	What was your unadjusted gross business income reported for 2007?		X
17	Business compared to this time last year, as per your 2007 tax report, (for detail, see questionnaire in appendix)		X
18	Business compared to this time three years ago, as per your 2007 tax report, (for detail, see questionnaire in appendix)		X
19	Do you market your business at boat or trade shows? If yes, which ones do you anticipate participating in during the next 12 months?		X
20	Do you advertise any publications? If yes, list below		X

*Zip codes 21401, 21402 and 21403

BUSINESS TYPES

In 2008, 38.8 percent of respondents indicated they operated more than one business type. The 2002 survey was about the same at 40.6 percent. In 2008, 44 different business types were reported. This compared to 30 business types reported in the 2002 survey. This indicates that during the period between surveys businesses became more varied in the products and services offered.

SIGNIFICANT BUSINESS TYPES

Regarding the most often reported business types, the 2008 survey recorded eight (8) significant types. In 2002, only four (4) were noted:

SIGNIFICANT BUSINESS TYPES IN TOTAL SURVEY AREA: 2002 AND 2008

TABLE 3

2002 Business Type	Respondents	% Response	Share of Rank
Yacht broker/dealer	21	20.8%	1
Marine Hardware	14	13.9%	2
Marinas, slips only	14	13.9%	3
Rigging/fabricators	12	11.9%	4

TABLE 4

2008 Business Type	Respondents	% Response	Share of Rank
Yacht broker/dealer (rs)	17	21.3%	1
Marina/boatyard (gs)	16	20.0%	2
Marine electrical (gs)	15	18.8%	3
Marine engine sales/service (gs)	15	18.8%	4
Marine Hardware (rs)	13	16.3%	5
Woodworking/carpentry (gs)	12	15.0%	6
Rigging/fabricators (rs)	11	13.8%	7
Marinas, slips only (rs)	8	10.0%	8

Significant*

*significant share defined as 10% or more

(rs) means business type remained significant from 2002 to 2008

(gs) means business type gained significance from 2002 to 2008

Comparing the two surveys shows that in 2008 the category Yacht broker/dealer remained the highest number of responses. Three (3) other business types remained significant, but their ranks changed as four (4) additional significant business types were recorded. The expanded list of significant business types between 2002 and 2008 suggests a broadening of Annapolis' core maritime industries. This suggests that the

existing maritime businesses have increased their diversification to capture a variety of marine services. For example, a sailmaker may advertise canvas covers including bimini tops and tent booms

The expanded geography of the 2008 survey made possible the inclusion of business types outside the City of Annapolis. To control for this difference, a separate analysis of Annapolis City respondents from zip codes 21401, 21402 and 21403 were separately examined. The results continue to show a broadening of significant business types. Table 5 shows business types located in the city of Annapolis in 2002 and 2008. The net effect of analyzing only City zip codes leaves intact the earlier observation that a noticeable increase occurred in significant business types between 2002 and 2008. Although “slip only” marinas lose significant status in 2008, Marina/boatyard, woodworking/carpentry and marine electrical gain significant status.

SIGNIFICANT BUSINESS TYPES IN ANNAPOLIS CITY: 2002 AND 2008

TABLE 5

2002 Business Type	Respondents	% Response	Share of Rank
Yacht broker/dealer	21	20.8%	1
Marine Hardware	14	13.9%	2
Marinas, slips only	14	13.9%	3
Rigging/fabricators	12	11.9%	4

TABLE 6

2008 Business Type	Respondents	% Response	Share of Rank
Yacht broker/dealer (rs)	11	17.7%	1
Marine electrical (gs)	10	16.1%	2
Woodworking/carpentry (gs)	9	14.5%	3
Rigging/Fabricators (rs)	9	14.5%	4
Marine Hardware (rs)	8	12.9%	5
Marina/boatyard (gs)	7	11.3%	6

Significant*

*significant share defined as 10% or more

(rs) means business type remained significant from 2002 to 2008

(gs) means business type gained significance from 2002 to 2008

Note: Responses that provided insufficient information to identify a zip code were assumed to be in the City.

ALL BUSINESS TYPES (ENTIRE SURVEY AREA)

In all, 43 business types were reported; 25 of the 27 stipulated in the questionnaire and 19 “other” responses. There were no responses for business types “transportation/shipping” and “inflatable sales and repairs.” The two following charts show all reported business types throughout the study area 1) In questionnaire order and 2) By frequency of response.

FIGURE 9

Business Types In Questionnaire Order

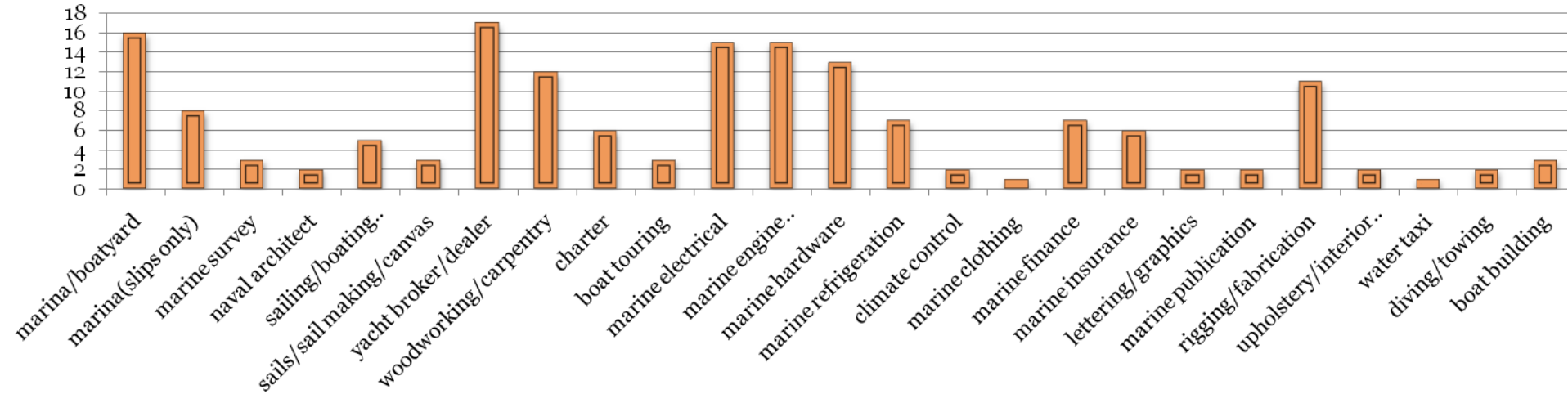
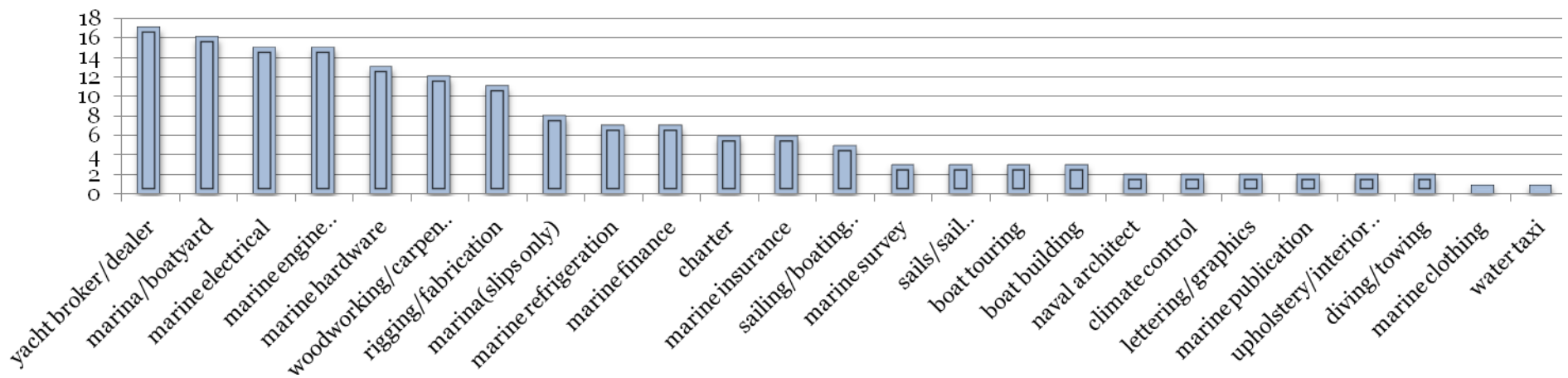


FIGURE 10

Business Types By Frequency



EMPLOYMENT

The report of the 2002 survey concluded that there were between 1,650 and 1,787 persons employed by the marina industry in 2002. There were 275 businesses surveyed. Businesses responding (101) indicated they



employed 1,386 persons at the time. The range for total employment was determined by multiplying the median of six (6) or the average of 6.5 employees for the 101 responding businesses by all of the employers that were surveyed (275).

In 2008, City Of Annapolis Department Of Economic Affairs identified and surveyed 212 businesses in which 84 businesses responded. The survey tabulation and analysis showed that responding businesses employed 922. Average employment was 10.8 and median employment was six (6).

A total of 63 of the 84 businesses responding were located in Annapolis City, and 680 of the 922 persons reported as employed were located in zip codes 21401, 21402, and 21403. Average employment was 10.8 and median employment was six (6) employees. Market economics noted the presence of an “outlier” significantly raising the average employment of all respondents. The outlier was removed and the average employment for responding businesses declined to 8.8 employees.

The particular concern is arriving at the universe of total maritime employment because of the response rate. Using the same methods for gathering names of maritime businesses in 2002 and 2008, there were 275 in 2002 and 212 in 2008. Market-Economics considered two methods for estimating total marina industry employment in Annapolis City.

1. Use a representative alternate measure of Annapolis marina businesses. Market-Economics queried Dun & Bradstreet for the number of city businesses in the industries thought to be representative of business types used in the 2008 survey questionnaire. Dun and Bradstreet indicate 134 such city businesses. Start with the 63 city businesses that reported employment of 680 persons. Estimate the number of non-responding businesses as 71 (134 – 63). Use average employment of 8.8 employee business average to estimate employment of non-responding

businesses. This yields 625 persons. Adding the 680 and 625 brings the total employment estimate to 1,305 persons.

2. Use the results of the 2008 survey and add an estimate for those employers who did not respond. This scenario most resembles the approach followed by ZHA, Inc. in the 2002 survey. By this method city, maritime employment is estimated at 1,480 persons. Start with the 637 persons reported as employed. City respondents (59) represent 74% of all respondents. Assume that 74% of all 212 surveyed businesses are located in Annapolis City. There are 157 city businesses that received questionnaires. If 59 responded, there were 98 that did not. Using the 8.6 employee business average, an estimated city employment of non-respondents was 843 persons. Adding the 843 to the 637 persons reported as employed by 59 businesses yields a total employment estimate of 1,480.

Clearly, the divergence between the above two methods is explained by differences in the estimates of non-respondents; 75 from method 1 and 98 from method 2. Using the same average employment of 8.6 times the different number of non-respondents (23) equals 198, which is the difference between 1480 and 1282.

The two estimates are used as a 2008 employment range to contrast with the 2002 survey. Results are shown in table 7 below.

ANNAPOLIS MARITIME INDUSTRY EMPLOYMENT ESTIMATES

TABLE 7

Survey Year	Low	High	Average
2002	1,650	1,787	1,719
2008	1,305	1,525	1,415
Change 1 (Low-Low) (High-High)	-345	-262	
Change 2 (High-Low) (Low-High)	-482	-125	
Change Average			-304
Percent Change 1	-20.9%	-15%	
Percent Change 2	-27.0%	-7.6%	
Percent Change Average			-17.7%

Source: City of Annapolis Maritime Survey, 2008

Change 1 represents differences between the matched highs and lows from each survey, i.e. the low 2008 subtracted from the low 2002 (-345) and the high 2008 subtracted from the high 2002 (-262). Change 2 represents differences between the 2002 high estimate and the 2008 low estimate (-482) and differences between the 2002 low estimate and the 2008 high estimate (-125).

The above table represents a matrix of possible employment change in the Annapolis marina industry's employment between 2002 and 2008. All estimates of employment change are negative ranging from a low of -125 to a high of -482. The spread represents a decline of 357 jobs. For comparison to the 2002 survey, this analysis adjusted the 2008 estimates as far as possible to insure that only city businesses were included. The averaging of both highs and lows results in a decline maritime of -17.7 percent, with a loss of 304 jobs.

FULL-TIME PART-TIME AND CONTRACTUAL EMPLOYMENT

No adjustments have been made to estimates of full-time, part-time, and contractual employment. Any imprecision in total employment estimates would surely be compounded in those subsets. Therefore these estimates are presented as percentages and compared to 2002 full-time employment, the only related statistic available from the 2002 survey.

PERCENTAGES OF FULL-TIME, PART-TIME, CONTRACTUAL EMPLOYMENT 2008

TABLE 8

Emp. Type	Total Study Area 2002	Total Study Area 2008	Annapolis City
Full-time	47.5%	68.7%	61.5%
Part-time	N/A	27.0%	33.2%
Contractual	N/A	4.3%	5.3%

Source: City of Annapolis Maritime Survey, 2008

During the period between the 2002 and 2008 surveys, the proportion of workers employed full-time grew from 47.5 percent to 61.5 percent in the city. Conversely, the proportion of workers employed part-time or contractually fell from an implied 62.5 percent to 38.5 percent. These changes suggest a work force that grew more stable and permanent over the eight years.

PAYROLL

Slightly over half of all businesses located in Annapolis City shared information on annual payroll. Thirty-seven employers reported aggregate payroll of \$17,233,860. These businesses employed 472 persons with average annual pay of \$36,512. This average is lowered significantly by the inclusion of part-time and contractual employees as well as those working full-time. The average annual employee pay increased by \$8,281, up by 29.3 percent between 2002 and 2008. The 2008 average annual pay of \$36,512 is significantly above the rate of inflation of the 2002 wage adjustment of \$34,333 or the nominal average annual pay of \$28,231.

The questionnaire did not break out types of employment by employer payroll. However, those employers reporting only full-time employment allow some insight into how the pay of full-time workers differs from all workers. Half of the respondents who reported payroll information employed only full-time workers. Average annual wage for that group were \$56,629. Average payrolls were \$472,420. The median payroll was \$250,000.

The 2002 survey reported an average annual wage of \$28,231. For full-time workers, the annual wage was “between \$45,000 and \$50,000,” but the method of computation was not explained.

MARITIME BUSINESS REAL ESTATE: AREA, OWNERSHIP AND LOCATION

Businesses were asked about their facilities in terms of square footage, whether they owned or rented their place of business and if proximity to the water was critical to business operation. City businesses occupied nearly 750,000 square feet in their operations. Of the total, 177,459 square feet were described as interior and 543,674 square feet were put to exterior use. Both the 2002 and the 2008 surveys described a nearly identical average of 3,500 interior square feet for business operations.

Regarding ownership vs. renting, 21 percent of respondents reported owning their facilities and 79 percent rented. This is a notable decline from the 30 percent ownership reported in the 2002 survey. When asked if access to the water was critical to business operation, 71 percent said Yes. This was a marked increase from the approximately 55 percent who so indicated in 2002.

NUMBER AND ORIGIN OF CUSTOMER BASE

In 2008, 54 respondents indicated a total number of 175,016 customers. The average business had 3,241 customers. The range of customers reported from the survey ranged between 8 and 100,000. The mid-range (midpoint 50%) was 100 to 400 and the median customer base was 200.

ORIGIN OF CUSTOMER BASE

TABLE 9

Origin of Customer Base	1993 Survey	2002 Survey	2008 Survey
Local	47.5%	68.7%	28.3%
Regional	28.0%	35.8%	30.9%
National	35.5%	4.3%	25.9%
International	2.4%	4.2%	14.9%

Source: City of Annapolis Maritime Survey, 2008

Comparison of 2008 survey to earlier surveys suggests significant change in the customer base. The origin of the customer base has shifted markedly to international markets. This has represented a continued growth trend noticed in the 2002 survey. International customer base increased from 2.4 percent in 1993 to 4.2 percent in 2002 to 14.9 percent in 2008. The recent growth of international customers is offset by declines in regional and local shares, while national customer remains relatively stable in 2008.

The surveys did not distinguish the flow of international business as import or export. However, comparative currency values can help explain the flow of international trade and the overall increase in the international share of customer base. In periods of high US dollar strength against foreign currencies, international trade tilts to imports. In contrast, when the U.S. Dollar is weak against European and Asian currencies international trade tilts to exports. Over the past 3 years, the relative strength of European and Asian currencies has contributed to significant increase in U.S. exports. This has lead to the growth of international customer base from 4.2 percent share in 2002 to 14.9 percent in 2008.

LONGEVITY OF BUSINESS

Ninety percent of respondents reported the number of years they have been in business. The average was 19.5 years and the median was 17 years in business. The range was 1.5 years to 40 years. The average remains stable since the 2002 survey, which measured the average age of the business surveyed to 20 years. The share of new business doubled from 8.4 percent in 2002 to 17.5 percent in 2008, which accounted for the slight drop in the average age of business from 20 years in 2002 to 19.5 years in 2008. However, there is a significant increase in the businesses over 30 years, up from 14.7 percent in 2002 to 17.5 percent in 2008.

MARITIME BUSINESS LONGEVITY

TABLE 10

Years in Business	2002 Survey	2008 Survey
0-5 years	8.4%	17.5%
6-10 years	10.5%	10.5%
11-15 years	15.8%	19.3%
16-20 years	13.7%	8.8%
21-30 years	36.8%	26.3%
30+ years	14.7%	17.5%
Average Years	20	19.5

Source: City of Annapolis Maritime Survey, 2008

PRIOR LOCATIONS OF BUSINESSES

Seven businesses reported that they had relocated to Annapolis from elsewhere. Origins of these moves included Rhode Island, Florida, Overseas, Eastern Shore, and Alexandria, Virginia. There were two business reported moving from Edgewater, Maryland. The survey respondents did not report when their moves took place, so there is no way to determine if any of the respondents were among those reported in the 2002.

PLANS FOR EXPANSION

In 2008, fifty-five respondents or 87 percent of all respondents answered the question concerning business expansion. Forty-four percent indicated plans to expand. This is down from 54.3 percent of the respondents in the 2002 survey. The decline in businesses planning to expand is understandable as many businesses feel pressure with 2007 and 2008 rise in energy costs and slower consumer spending.

REASONS FOR BUSINESS EXPANSION

TABLE 11

Reason for Expansion	2002 Survey*	2008 Survey*
New Employees	53.8%	50.0%
Space	28.8%	50.0%
New Equipment	34.6%	37.5%
New Services	38.5%	33.3%
New Products	40.4%	37.5%
Other ¹	7.7%	25.0%

*Percentage of respondents who indicated that reason (exceeds 100% because of multiple selections).

Source: City of Annapolis Maritime Survey, 2008

In 2008, a larger share of respondents reported that their plans included adding space. A higher percentage of the respondents (37.5 percent vs. 34.6 percent) indicated plans for new equipment purchasers. Fewer 2008 respondents reported expansion plans for new services and new products. The share of “Other” as an indicated in expansion plans appears to be overstated. Other category was used to clarify a chosen prescribed expansion type. For example, one respondent reports plans to add space and new services, but also clarified and expound on the answer by indicating, “acquire restaurant” in “Other.”

BUSINESS INCOME

Forty-six percent of all respondents reported their gross business income. The average annual gross business income was \$3,487,662. The median was \$770,300 and the mode (2 responses) was \$500,000. The range of incomes reported varied between

\$32,000 and \$32,000,000. The total gross business income of all responding businesses was \$101,142,192. This compared with 2002 survey results of gross business income of average of \$2,155,498, median \$600,000, mode (2) 1 \$1,000,000 and 2 at \$800,000. The range was \$25,000 to \$40,000,000. Comparing the two survey results, the average annual gross business income was up by 61.8 percent between 2002 and 2008. For the period of 2002-2008, median gross income rose 28.4 percent.

BUSINESS CONDITIONS

In 2008, 87 percent of all respondents answered the question regarding business conditions. This was down from 94.1 percent response rate in the 2002 survey. From the 2008 survey, 33.4 percent of respondents reported either somewhat worse or considerably worse business conditions compared to one year ago. This compared with 23.1 percent of respondents in 2002 who reported conditions were somewhat or considerably worse to one year ago. When comparing 2008 business conditions with those of three years ago, the results are similar. In 2008, 32.7 percent of the businesses reported somewhat or considerably worse conditions, while in the 2002 survey 22.1 percent of the businesses reported.

ANNAPOLIS MARITIME BUSINESS CONDITIONS

TABLE 12

Conditions	One Year Ago		Three Years Ago	
	2002	2008	2002	2008
Considerably Better	5.3%	1.8%	21.1%	25.5%
Somewhat Better	42.1%	28.1%	42.1%	30.9%
The Same	30.5%	36.8%	13.7%	10.9%
Somewhat Worse	16.8%	28.1%	16.8%	21.8%
Considerable Worse	6.3%	5.3%	5.3%	10.9%

Source: City of Annapolis Maritime Survey, 2008

Fewer businesses reported improved business conditions in 2008. Only 29.9 percent of businesses surveyed reported conditions were considerably better or somewhat better than one year ago. This compared to 47.4 percent in 2002. When respondents looked back three years, the pattern was similar though the differences narrowed, 56.4 percent in 2008 versus 63.2 percent in 2002.

These findings seem to be in keeping with the general economic conditions at the time of the surveys, respectful for the periods they referenced. There are just beginning signs of a 2008 recession as consumers have begun to reduce purchases. In March of 2001, a recession began and lasted through November 2001. Thus, respondents in the 2008 survey were looking back at better times, while respondents from 2002 survey were looking back at worse times. The results of the two surveys reflect those perspectives.

BUSINESS CONDITIONS

Fifty-six of the respondents indicated whether they participated in trade shows. The majority had participated in trade shows, 37 said Yes and 19 said No. There were 30 different choices of in trade shows the majority of those who participated in trade shows, participated in the Annapolis Sail Show (30 responses) and the Annapolis Power Boat Show (23 responses). The Baltimore Boat Show and the Bay Bridge Boat Show followed with 7 and 6 responses, respectively. For more distant events, the Miami Boat Show received a modest mention. Three respondents said they participated in international shows.

ADVERTISING

Fifty-two of the respondents indicated whether they advertised or not, 36 said Yes to advertising and 16 said No, they did not advertise. Of the 36 who said they advertised did so in 50 different magazines, journals, and other media forms. The most often mentioned sources were SpinSheet (15 responses), the Portbook (7 responses), PropTalk (6 responses), Newspapers (5 responses), Chesapeake Bay Magazine, Cruising World, and the Internet each garnered 4 responses. Passagemaker Sail, Sail Magazine, Sailing, Salty Dog, Yachting World, and the Yellow Pages each received three responses.

ANNAPOLIS MARITIME BUSINESS ECONOMIC IMPACT

To examine the economic contribution of the maritime businesses to the local economy of the City of Annapolis, Market-Economics used the IMPLAN (Impact Analysis for Planning) model specified to reflect the City of Annapolis. The IMPLAN model captures direct, indirect, and induced effects resulting from the changes of final demands. Inputs in the model we use total employment of the maritime sector provided by Dun & Bradstreet count for 2007 of \$78,300,000 in sales and 747 jobs.

Using the IMPLAN model for the City of Annapolis, Market-Economics ran separately for each of the major maritime sectors to look at the individual contributions to the City of Annapolis economy. The direct effects measure the spending as result of the total employment inputs of that sector. As shown in Table 13, boat dealers including retail marine stores have the highest direct spending. Indirect measure reflects spending of business buying and selling among each other. The commissioning or outfitting of new or existing boat at point of sale requires installation of new equipment, which includes direct purchases, as well as installers of the marine equipment. Induced measures reflect spending of households as dollars are generated to households as result of the initial spending. City of Annapolis - Economic Impacts of Maritime Employment

TABLE 13

Maritime Industry Share	Direct	Indirect	Induced	Total
Ship Repair	\$376,742	\$60,804	\$85,999	\$523,545
Boat Building	\$17,774,138	\$2,662,685	\$2,977,280	\$23,404,313
Pleasure Boats Merchandising Wholesale	\$955,510	\$185,593	\$260,512	\$1,401,619
Boat Dealers	\$21,145,492	\$4,030,363	\$6,097,375	\$31,273,229
Excursion Sightseeing Boats, Water Taxi	\$4,050,894	\$537,680	\$1,657,527	\$6,246,100
Marinas	\$7,253,612	\$1,855,119	\$1,674,402	\$10,783,133
Boat Pleasure Repair	\$17,087,168	\$3,180,508	\$2,097,712	\$22,365,389
TOTAL	\$68,643,556	\$12,512,752	\$14,850,807	\$95,997,328

Source: IMPLAN, Market-Economics, Inc. 2008

A second effort is to use the **Boat Economic Impact Model** developed by Mahoney, Stynes, and Cui. The economic impact model is used to examine a “destination marina” in Annapolis, Maryland and the spending as result of trips and maintenance of craft kept in the marina. As a “destination marina,” it is characterized as being in a part of a high spending area with many different spending opportunities including restaurants, entertainment, and shopping. Using a marina we selected in the City of Annapolis, the marina has 165 slips with space for 10 boats up to 65 feet in length. More than half of the slips are of sailboats, with the average length 35 feet in length. It is estimated that the 165

seasonal/annual slip renters will take their boats out on the water a total of 5,430 days in 2007. The average number of boating days per boat is 32 days. The marina rents slips to transient boaters a total of 90 nights in 2007.

NUMBER OF BOATS KEPT AT THE MARINA AND THEIR ESTIMATE NUMBER OF BOATING DAYS

TABLE 9

Boat Type and Size	Number of Boats	Average Days Per Boat	Total Boat Days
Power <40'	30	28	853
Power 40'+	45	30	1,372
Sail <40'	36	28	1,020
Sail 40'+	54	39	2,095
Transient Power	-	-	60
Transient Sail	-	-	30
TOTAL	165	32	5,430

Source: Boat Economic Impact Model, 2008

Included in the calculations are the boaters who rent slips for the season or annually contribute to the local and state economies through spending on the upkeep and maintenance of their craft and spending on their boating trips. Boaters who keep their boats in slips will spend about \$3,082,000 annually on craft upkeep and maintenance not counting fuel. This spending is broken down as follows: 21% on slip/storage fees, 31% to loan payments including principal and interest, 21% for repairs, 7% for insurance, and 15% for accessories. Combining trip and craft spending, a typical boat spends \$2,893 per year on boating trips and \$12,088 per year on craft-related expenses. Total trip spending by these boats kept at the marina is estimated to be \$1 million, with 17% spent on marina services, 25% on restaurants and bars, 21% groceries, 5% auto fuel and 19% boat fuel.

The direct economic effects on the local economy of this spending are 28 jobs⁵, \$0.7 million in labor income and \$1.2 million in value added⁶. The marina's non-labor operating costs such as purchases of supplies and services from other firms are not included as value added by the marina. Direct effects cover the impacts in businesses

⁵ Jobs are not full time equivalents, but include full time and part time jobs. Seasonal positions are adjusted to an annual basis, e.g., two jobs for six months equates to one job on an annual basis. Labor income includes wages and salaries, payroll benefits and income of sole proprietors. Value added includes labor income as well as profits and rents and sales taxes and other indirect business taxes.

⁶ Value added is the income accruing to households in the region plus rents and profits of businesses and indirect business taxes. As the name implies, it is the net value added to the region's economy. For example, the value added by a marina includes wages and salaries paid to employees, their payroll benefits, profits of the marina, and sales and other indirect business taxes.

selling goods and services directly to these boaters. This includes 12 jobs in marina services, 4 jobs in restaurants and bars, and 5 jobs in retail stores.

Including secondary effects, the total impact on the local economy is 40 jobs, \$1.1 million in labor income and \$1.9 million in value added.

ECONOMIC IMPACT OF BOTH CRAFT AND TRIPS SPENDING BY BOATS KEPT AT THE MARINA

TABLE 10

Sector/Spending category	Sales (\$ Thousands)	Jobs	Labor Income (\$ Thousands)	Value Added (\$ Thousands)
Direct Effects				
Lodging	9.4	0.2	4.1	6.7
Marina Services	782.5	12.2	289.5	485.9
Restaurant	187.3	4.4	78.3	88.4
Recreation & Entertainment	31.0	0.5	11.5	19.2
Repair & Maintenance	638.1	4.0	130.8	300.6
Insurance & Credit	79.8	0.7	37.6	67.9
Gas Service	41.0	0.4	17.1	22.3
Other Retail Trade	248.3	5.3	117.8	163.4
Wholesale Trade	-	-	-	-
Other Local Production of Goods	-	-	-	-
Total Direct Effects	2,017.4	27.7	686.7	1,154.4
Secondary Effects	1,204.3	11.9	419.2	697.2
Total Effects	3,221.8	39.6	1,105.9	1,851.7

Source: Boat Economic Impact Model, 2008

CONCLUSIONS

The 2008 maritime business survey and analysis conducted in August and September 2008 represents a comprehensive survey of marine business conducted since 2002. The study combines data from the government records from the U.S. Economic Census and a survey of maritime businesses in the City of Annapolis. The survey response rate 37.7 percent of all 212 maritime businesses and the broad range of types of businesses responding creating a representative sample. In addition, Market-Economics attempted to quantify the contributions of the maritime businesses to the local economy.



The key findings that Market-Economics to this conclusion are the following:

- Employment numbers in the maritime industry show from the survey an average decline of -12.1 percent between 2002 and 2008.
- Maritime business contribute \$96 million in both direct, indirect, induced spending in the City of Annapolis.
- A single “destination marina” in the City of Annapolis contributes \$3.2 million in total sales, \$1.8 million value added, and 40 jobs to the local economy.
- The average maritime business has been in existence for 21.8 years.
- There has been a decline in the number of new maritime businesses moving to Annapolis –down from eight who moved to the City in 2002 to four who moved in 2008.

MARKET ECONOMICS' RECOMMENDATIONS

The 2008 survey points to a need for development of a maritime business retention program. Several boat manufacturers have reported difficulty in the permitting process and building expansion. They have considered relocations to other jurisdictions in Maryland and in North Carolina that have a more aggressive maritime attraction programs. North Carolina offers a Small Business and Technology Development Center that is focus on the maritime industry. The center offers special market development service supporting business and employment growth for the state's marinas, boatyards, boat dealers, boat builders, marine construction firms, and product/service providers.

GENERAL RECOMMENDATIONS

- Development of Maritime Business Appreciation Week –city staff from the key departments visit the maritime businesses. Get to know the issues of maritime business owners reduce the view that government is a hindrance to business development.
- The marketing of Annapolis as the “Sailing Capital” should include a marketing of its maritime businesses. Private directories such as the “Portbook” should be encouraged to list all business at not cost with a subsidy from the City of Annapolis as oppose to separate publications. The Portbook is distributed widely and provides a reference guide for maritime services.
- Development of a website identifying services and/or products provided in the maritime industry. This could be done in conjunction with Marine Trades Association of Maryland, Portbook, Guide to Cruising the Chesapeake Bay, and Waterway Guide publications –not recreating the wheel, but make a better wheel.
- Work with statewide economic development agencies to serve as a confidential resource for potential new-to-the-state boating industry business owners.
- Promoting marketing efforts through trade shows, media advertisement and articles, monthly newsletters, and development of website of maritime services. North Carolina has created separate promotional materials for the maritime industry.
- Develop a one-stop shop for permit activity and flow process for permitting. Many business owners are not aware of the procedures and processes of seeking permit approvals. As a result, they become frustrated not know whom to contact in the City of Annapolis government.

SPECIFIC RECOMMENDATIONS

Annapolis is ahead of other maritime communities in creating a Maritime Zone. However, the maritime zone without maritime businesses is just preserving an empty shell. The difficulty becomes with creating tax incentives as well as sources of business financing to assist maritime businesses. We have created a series of recommendations to attempt to provide assistance to maritime business.

RECOMMENDATION ONE

Follow through with creating a Maritime Enterprise Zone and creating a low cost revolving loan pool for maritime businesses to draw on for purchase of capital goods and targeted employment. This loan pool would be financed through Industrial Revenue Bonds. The proceeds from the bond sale are loaned to businesses to pay for capital investment projects of equipment and targeted job hiring. In turn, the company must pay the loans back over a set term. The sponsoring government gives its name to the bond issue, but not its credit rating.

An example is of Indiana that created a Maritime Opportunity District. The District granted ten-year tax abatement for new manufacturing equipment; ten-year property tax abatement for all inventory produced for export according to a specific schedule; a reduction in the adjusted gross income tax according to a schedule ranging from 100 percent in the first year to 20 percent in the eighth year. The goal of the program is to increase port activity. However, for Annapolis businesses, the goals could be a measurable outcome in terms of new employment and growth in business earnings. This would be a pro-active approach to help the maritime businesses to grow.

RECOMMENDATION TWO

The City of Annapolis creates a Maritime Business Technology Center similar to that of the Life Science Center in Baltimore City. The focus would combine technology applications for the maritime business particularly as increasing number of recreational boats are composites requiring more advanced methods of boat repair and construction. The use of former David Taylor Research Center as an added maritime center for repair and new construction would add value to the Annapolis maritime business for large-scale repairs and fabrications.

One such example is Maine's North Star Alliance, which is a maritime industry focus on economic development initiative devised to grow new business and to create jobs along coastal Maine. The initiative includes business, R&D, education, and workforce development centered on Maine's boat building, marine, and composite industries. The program was created at the state level and brings together three major industry associations; they consist of the Maine Composites Alliance, Maine Built Boats Inc., and the Maine Marine Trade Association. Additional partners include the University of

Maine, Maine Community College System, Maine Technology Institute, Maine Community Foundation, local and regional Workforce Investment Boats, regional economic development districts, Governor's Office, and the State Department of Labor, Economic and Community Development, and Education.