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# The Northwest Mexico Marina Market Analysis

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EDAW

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The David and Lucille  
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January 6, 2003

Dear Reader,

The Packard Foundation's program for the Gulf of California is proud to support efforts by Mexican leaders to develop an economically viable and environmentally sustainable future for the Gulf of California, one of the richest marine regions in the world.

The attached report by EDAW, an international consulting firm, hopes to contribute to those aspirations. It responds to a call from business and environmental leaders to conduct an objective and independent economic assessment of the market for nautical tourism in the Gulf of California. The intent of this research is to provide information that may aid in planning successful investments in tourism – one of the critical sectors to the Gulf of California's economic development.

The report's author, Michael Conlon, EDAW's senior economist, is an internationally known expert on economic analysis of tourism development programs. Due to his extensive experience on nautical tourism, he has been called up to analyze major international tourism programs in Costa Rica, China and the Caribbean, and has also helped to design and implement several large regional tourism projects in the United States. He has two decades of experience with boater tourism and marinas, and has prepared economic analyses for many major marinas in California, including Ventura, Marina del Rey, Long Beach, Newport Beach and San Diego. Mr. Conlon is also an avid sailor, and brought quite a bit of practical experience and common sense to this research.

We are pleased to have been able to support this effort, and would like to extend our thanks to EDAW and the market analysts, tourism operators, boaters, and marina owners in Mexico and the United States who contributed their knowledge for the writing of this report. We hope it is useful.

Sincerely,

Sergio Knaebel  
Associate Program Officer

# **NORTHWEST MEXICO MARINA MARKET ANALYSIS**



Prepared for

**The Packard Foundation**

**EDAW**

December 20, 2002

## **TABLE OF CONTENTS**

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<b>Executive Summary .....</b>	<b>1</b>
<b>I. Introduction.....</b>	<b>1</b>
A. Purpose of Study .....	1
B. Approach .....	1
C. Organization of Report.....	1
D. Assumptions and General Limiting Conditions .....	2
<b>II. Existing Marina Supply in Northwest Mexico.....</b>	<b>4</b>
A. Overview of Recreational Boating in Northwest Mexico .....	4
B. Northwest Mexico Marina Inventory: 2002 .....	12
C. Western United States Marina Inventory: 2002.....	14
<b>III. Existing Marina Demand in Northwest Mexico.....</b>	<b>17</b>
A. Occupancy and Slip Rates in Northwest Mexico: 1999-2001 .....	17
B. Boat Arrivals in Northwest Mexico: 1993-2001 .....	17
C. Boat Registrations in Western United States: 1996-2001 .....	19
<b>IV. Projected Marina Demand in Northwest Mexico: 2001-2015 .....</b>	<b>28</b>
A. Projected Boats Over 26 Feet in Western United States: 2001-2015.....	28
B. Projected Potential Boating Market in Northwest Mexico: 2001-2015 .....	30
C. Projected Boating Market Capture in Northwest Mexico: 2001-2015.....	32
D. Projected Marina Demand in Northwest Mexico: 2001-2015.....	33
<b>V. Projected Locations for Marina Development in Northwest Mexico: 2001-2015 .....</b>	<b>34</b>
A. Projections by Market Area in Northwest Mexico .....	34

## List of Tables

Table 1:	Northwest Mexico Marina Inventory 2002	13
Table 2:	Summary Southern California Marina Inventory 2002	14
Table 3:	Detailed Southern California Marina Inventory 2002	15
Table 4:	Boat Arrivals in Northwest Mexico 1993-2001	19
Table 5:	Summary Boat Registrations in Western United States 1996-2001	21
Table 6:	Boat Registrations by Length in Western United States 1996-2001	22
Table 7:	Boat Registrations by Type in Western United States 1996-2001	23
Table 8:	Boat Registrations 26 Feet and Longer in Western United States 1996-2001	25
Table 9:	Boat Registrations in California 1960-2001	26
Table 10:	Jet Ski Registrations in California 1996-2001	27
Table 11:	Boat Registrations in Southern California 1996-2001	27
Table 12:	Projected Boats 26 Feet and Longer in Western United States 2001-2015	29
Table 13:	Projected Southern California Boat Registrations 2001-2015	30
Table 14:	Projected Potential Boating Market in Northwest Mexico 2001-2015	31
Table 15:	Projected Boat Arrivals and Marina Capture in Northwest Mexico 2001-2015	32
Table 16:	Projected Marina Market Demand in Northwest Mexico 2001-2015	33
Table 17:	Projected Locations of Marina Demand in Northwest Mexico 2001-2015	36

## **Appendices**

A. Arizona Boat Registrations 1996-2001

B. California Boat Registrations 1996-2001

C. Oregon Boat Registrations 1996-2001

D. Washington Boat Registrations 1996-2001

# EXECUTIVE SUMMARY

## BACKGROUND

### Historical Overview

Northwest Mexico, stretching over 3,000 miles along the coast from Ensenada to Mazatlan, has been a major center for recreational boating since the 1950's, when Cabo San Lucas became an international focus for sport fishing. In the 1960's and into the early 1970's, increasing numbers of recreational boaters came to the Sea of Cortez to enjoy the warm weather, relaxing atmosphere, striking desert scenery and other attractions of the region.

The first two marinas in the region opened in the 1970's in San Carlos and La Paz. Both were logical marina locations with some boating infrastructure already in place. Through the balance of the 1970's and into the mid 1980's boating activity continued to increase, but no new marinas were developed. Two additional marinas opened in the late 1980's in La Paz and Ensenada. Both marinas responded to the continuing growth of the broader tourist economies in the two areas.

By the early 1990's several key elements of tourist infrastructure were completed in the Los Cabos and Ensenada areas. These included major projects in San Jose del Cabos, the waterfront district in Cabo San Lucas, several large resort/golf projects north of Ensenada, and the start of regularly scheduled jet service to Los Cabos. By the mid 1990's, Ensenada, Los Cabos, La Paz, San Carlos and Mazatlan were ready to accommodate new marinas.

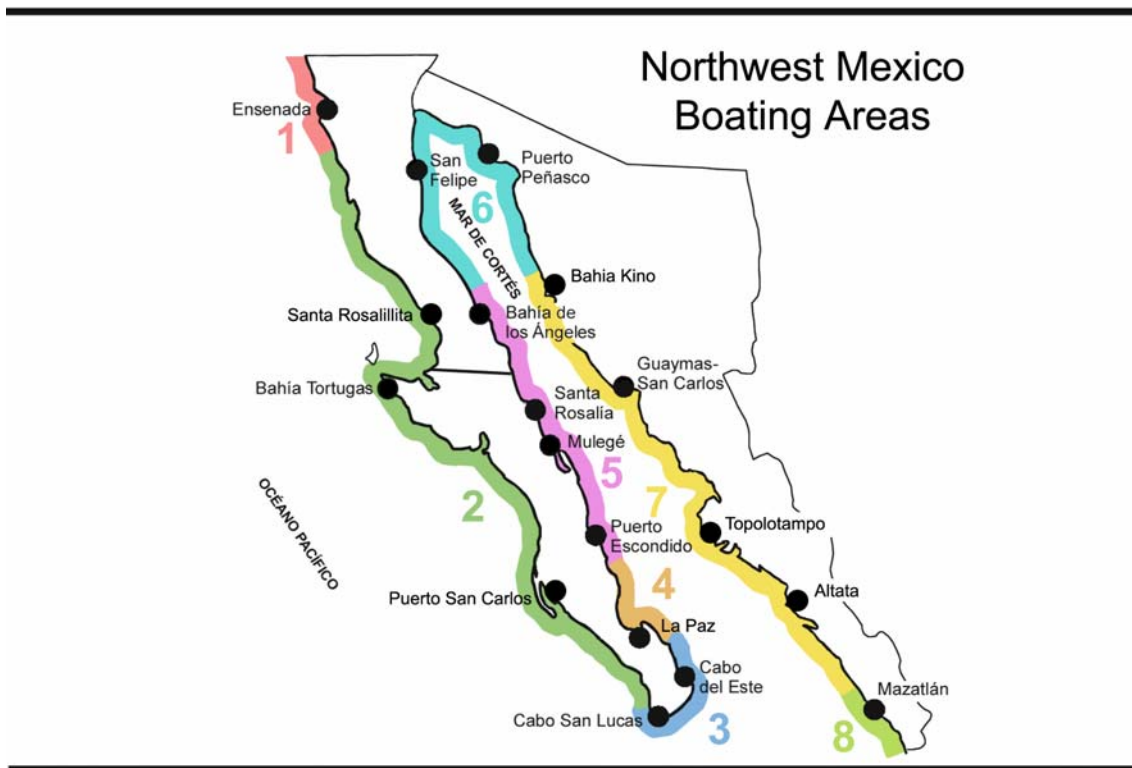
By 2002, as this report is written, the five most established centers of recreational boating activity in Northwest Mexico have developed large modern marinas. These marinas serve as the boating centers for the region, providing a wide range of services.

### Boating Areas in Northwest Mexico

Northwest Mexico contains eight very distinct recreational boating areas, each with its own character based on climate, natural features, access, and nautical tourism infrastructure:

1. The **Ensenada** area, from the resorts south of Tijuana through Ensenada to Punta Banda.
2. The **Pacific coast** of Baja California, from Punta Banda through Bahia de Tortugas, Puerto San Carlos-Bahia Magdalena, to just north of Cabo San Lucas.
3. The **Los Cabos** area, from Cabo San Lucas through San Jose del Cabo, Bahia de Palmas to Bahia de Los Muertos.
4. The **La Paz** area, from north of Bahia de los Muertos through La Paz, the Isla Espiritu Santo area to the Punta Evaristo-Isla San Jose area.

5. The **Baja California central coast of the Sea of Cortez**, from Puerto Escondido and the Loreto National Marine Park, Bahia Concepcion, Mulege, Santa Rosalia, to Bahia de los Angeles.
6. The **northern Sea of Cortez**, from Puertecitos through San Felipe and the adjacent Islas Descansas to Puerto Peñasco in Sonora.
7. The **Central Mainland**, from Bahia Kino through San Carlos-Guaymas to Topolobampo.
8. The **Mazatlan area**, from just north of Mazatlan to San Blas.



## EXISTING SUPPLY

### Northwest Mexico Marina Inventory

Overall, there are about 2,600 slips in the marinas in the region – 2,300 slips in 10 major marinas, and 300 slips in 12 much smaller facilities. The ten largest marinas are high quality modern facilities built to international standards. They offer a broad range of services, and are competitive with the marina inventory in the western United States and elsewhere.



Occupancy rates in 2002 generally approached 90 to 95 percent in the peak season, and dropped to about 60 percent in the off-season. Slip lease rates in 2002 varied widely in the region, with peak season rates between \$8 and \$21 per foot, and off-season rates about 25 to 40 percent less.

Slip sizes vary substantially, averaging about 35 feet. We defined the average slip size demand for planning purposes to be 40 feet, based on an analysis of the boat lengths recorded in recent arrivals in Ensenada and San Carlos.

### **Western United States Marina Inventory**

The four western states of Arizona, California, Oregon and Washington have a total marina inventory of about 87,000 relevant slips. Of this total, Arizona has about 1,000 slips, California has about 62,000 slips, Oregon has about 8,000 slips, and Washington has about 16,000 slips. Of the California total, about 36,000 or 58 percent were in the five coastal counties of southern California.

Because of its size and its proximity to Northwest Mexico, we surveyed the southern California marina inventory in some detail. The southern California marina inventory has similar occupancy rates and slip rental rates to those in Northwest Mexico in peak season. A boat owner moving a boat from southern California to Northwest Mexico will pay generally similar costs for a slip of generally comparable quality with a generally comparable range of services.

### **EXISTING DEMAND**

To estimate the strength of existing demand for marinas in Northwest Mexico, we evaluated trends in several aspects of demand – demand from the existing marinas in the region, spillover demand from existing marinas in the western United States, demand from boats arriving in the region, and demand from increases in boat registrations in the western United States.

#### **Existing Demand from Existing Marinas in Northwest Mexico**

To assess the strength of demand from existing marinas in the region, we reviewed trends in occupancy rates and slip lease rates, and researched plans for new marina development. Both occupancy rates and slip lease rates have been stable during the past three years, with increasing weakness during the past year. Very little new near-term marina development is planned in the region. These trends do not indicate strong existing demand for new facilities.

The marinas in Ensenada and Cabo San Lucas have recorded the best recent market performance, because they are located in areas of continuing demand. Several other boating areas in the region have been seeing stable or decreasing demand in the past two years. Many marina managers in the region are preparing for a more difficult economic climate during the next two to three years, and are focusing on attracting larger boats to increase income.

## **Existing Spillover Demand from Marinas in the Western United States**

To review existing spillover demand from marinas in the western United States, we surveyed occupancy rates and slip lease rates in southern California, the area closest to Northwest Mexico. For the past three years, occupancy rates and slip rates have been high in southern California. But with the end of the boom economy, demand has weakened.

EDAW has concluded that there is effectively no spillover demand from the western United States to Northwest Mexico – a boat owner in the western United States has no identifiable economic gain by moving a boat from the western United States to Northwest Mexico.

In constant dollars, slip lease rates in southern California are still generally well below their highs in the early 1990's. All marina investment in California for the past decade has been funded by low cost public capital sources, since current slip rates will not support the cost of private capital. The marina industry in California is subsidized by public programs and is overbuilt.

The marina industry in southern California has accommodated increases in demand over the past several years, with no expansion in supply, through a very gradual program of upgrading and modernization. This trend has resulted in a slow continuing shift of boats that are smaller, older, and less often used into storage - while boats that are newer, larger, and more often used remain in marinas.

## **Existing Demand from Boat Arrivals in Northwest Mexico**

Since much of the demand for marinas in Northwest Mexico comes from boats arriving in the region, we evaluated information on boat arrivals in the region during the past decade to review long term trends in demand. To paint as accurate a picture as possible, we collected information from several standard governmental sources.

The information shows that boat arrivals in Northwest Mexico increased by 7 percent a year from 1993 to 2001. This trend is constant in all the sources – arrivals logs from ports, information in the *Documento Basico* prepared by FONATUR in July 2001, marina occupancy trends, and western United States boat registration patterns. In 2001 there were 2,900 arrivals of larger, oceangoing boats in the region.

## Boat Arrivals in Northwest Mexico 1993-2001

Location	1993	1994	1995	1996	1997	1998	1999	2000	2001	Annual Increase
Ensenada	645 <sup>1</sup>	745 <sup>1</sup>	781 <sup>1</sup>	1,153 <sup>1</sup>	1,240 <sup>1</sup>	1,460 <sup>2</sup>	1,687 <sup>2</sup>	2,078 <sup>2</sup>	2,232 <sup>2</sup>	16.8%
Cabo San Lucas	1,056 <sup>1</sup>	1,258 <sup>1</sup>	1,446 <sup>1</sup>	1,480 <sup>1</sup>	1,434 <sup>1</sup>	1,093 <sup>1</sup>	1,200 <sup>6</sup>	1,200 <sup>6</sup>	1,200 <sup>6</sup>	0.7%
La Paz	594 <sup>1</sup>	642 <sup>1</sup>	714 <sup>1</sup>	635 <sup>1</sup>	874 <sup>1</sup>	658 <sup>1</sup>	1,000 <sup>6</sup>	2,026 <sup>3</sup>	1,366 <sup>3</sup>	11.0%
San Carlos-Guaymas	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	588 <sup>4</sup>	630 <sup>4</sup>	466 <sup>4</sup>	-11.0%
Mazatlan	100 <sup>6</sup>	100 <sup>6</sup>	100 <sup>6</sup>	100 <sup>6</sup>	100 <sup>6</sup>	109 <sup>5</sup>	118 <sup>5</sup>	123 <sup>5</sup>	68 <sup>5</sup>	-14.4%
Other <sup>7</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	0.0%
<i>Subtotal</i>	<i>3,395</i>	<i>3,745</i>	<i>4,041</i>	<i>4,368</i>	<i>4,648</i>	<i>4,320</i>	<i>5,093</i>	<i>6,557</i>	<i>5,832</i>	<i>7.0%</i>
<b>Total<sup>8</sup></b>	<b>1,698</b>	<b>1,873</b>	<b>2,021</b>	<b>2,184</b>	<b>2,324</b>	<b>2,160</b>	<b>2,547</b>	<b>3,279</b>	<b>2,916</b>	<b>7.0%</b>

<sup>1</sup> Fonatur.

<sup>2</sup> Ensenada.

<sup>3</sup> La Paz.

<sup>4</sup> San Carlos.

<sup>5</sup> Mazatlan.

<sup>6</sup> EDAW extrapolation.

<sup>7</sup> Other includes Puerto San Carlos, Loreto, Santa Rosalia, San Felipe, Puerto Penasco, and Bahia Kino.

<sup>8</sup> Represents 50 percent of subtotal.

Prepared by EDAW (December 17, 2002)

The boat arrivals information showed that over 60 percent of the boats arriving in Ensenada were from San Diego, and almost 80 percent were from California. The San Carlos arrivals showed that over 30 percent of the boats were from Arizona, and almost 60 percent were from Arizona, California, Oregon and Washington. Boat arrivals in Cabo San Lucas and La Paz are somewhat more geographically dispersed. However, arrivals from Arizona, California, Oregon and Washington figure prominently in all the marinas in the region.

The boats arrivals information for Ensenada and San Carlos also showed that the boats arriving were consistently big. The average length was almost 40 feet, with many boats well over that length. Like the marina operators in the region, we expect these larger boats to form the bulk of the demand for marina slips in Northwest Mexico.

### Existing Demand from Trends in Western United States Boat Registrations

We also reviewed trends in boat registrations in Arizona, California, Oregon and Washington to see how rapidly boat registrations were growing in the four states. Because the boats arriving in Northwest Mexico were big, we focused on registrations of boats 26 feet and longer. Evaluating increases in registrations of boats 26 feet and longer is a direct way to assess the strength of demand for marinas – the more rapid the increase in larger boat registrations, the stronger the demand for marinas.

The basic conclusion from the analysis is that boating is a mature, slow growth recreational activity in Arizona, California, Oregon and Washington. The overall rate of increase in boat registrations in the four states for the five year period from 1996 through 2001 was 1.2 percent per year. For boats of 26 feet and longer, the growth was 1.6 percent per year.

In 2001 there were 77,500 boats 26 feet and longer in the four states, representing less than 5 percent of the 1,562,000 boats registered. From 1996 to 2001, the number of boats 26 feet and longer in the four states increased by only 5,800 boats, or about 1,100 additional boats each year.

In California, boats 26 feet and longer grew by only 1.1 percent per year from 1996 through 2001. By comparison, total boat registrations in the state increased by 1.7 percent per year from 1996 to 2001. The number of boats 26 feet and over registered in California increased from 41,100 to 43,500 from 1996 through 2001 – only 2,300 boats during the period, or an average of less than 500 boats per year. This growth rate does not put any pressure on marinas in California and does not provide any market support for marinas in Northwest Mexico.

## **PROJECTED DEMAND**

### **Projected Demand from Western United States Boat Registrations**

To project the increase in registrations of boats 26 feet and longer in Arizona, California, Oregon and Washington through 2015 we continued the trends from 1996 to 2001, and eliminated all negative annual increases. This produced an intentionally generous trend that continues patterns from a period of economic boom, and assumes straight line increases through 2015 with no consideration of any future economic down cycles.

Using this approach, we projected that the total number of boats 26 feet and longer in the potential markets in the four states would increase from 77,000 in 2001 to 97,000 by 2015. This is an annual growth rate of 1.7 percent.

We then compared the projected growth in larger boats with the marina inventories in the four states to assess whether the supply of marinas in these areas can accommodate this demand from larger boats.

We concluded that marina operators will gradually update their facilities as the market evolves, and that the supply will adjust to the larger average size incrementally. The projected growth rate of the larger boats is less than two percent per year, and they represent less than five percent of the total registrations. Marinas should be able to keep pace with the change easily.

### **Projected Demand from Boat Arrivals in Northwest Mexico**

To project arrivals of boats 26 feet or longer in Northwest Mexico, we assumed that arrivals will grow by 10 percent annually through 2015. This is substantially above the 7 percent per year growth from 1993 to 2001 in our analysis of arrivals - it is a generous assumption.

Based on current patterns of boat travel in Northwest Mexico, we estimate that about half the boats arriving in the region now spend part of their stay in a marina. The average marina stay is about two weeks, and many boats stay in several marinas over the course of a season. The other

half the arrivals use natural anchorages near marinas, are in the region for very short stays, or simply cruise for most of their trip.

Based on this assumption, the number of boats going into marinas for a stay will increase from 1,450 in 2001 to 5,500 by 2015. This is a generous, averaged straight line projection.

### Final Projection of Demand

Using the assumptions on the table below, we project that the number of spaces in the marinas in Northwest Mexico would grow from 2,600 in 2001 to about 6,000 by 2015. This represents growth of 6 percent per year. This growth rate is at the high end of our expectations. If there were a significant negative impact on these trends, such as a down economic cycle in the western United States, we would expect the rate of growth to slow substantially.

#### Projected Marina Market Demand in Northwest Mexico 2001-2015

Year	Arrivals to Marinas <sup>1</sup>	Percent Addition to Permanent Fleet	Additional Boats to Permanent Fleet	Percent of Boats Leaving Fleet	Boats Leaving Fleet	Net Boats Added to Fleet	Permanent Fleet	Occupancy Rate	Marina Spaces <sup>2</sup>
2001							2,080	80%	2,600
2002	1,595	15%	239	10%	208	31	2,111	80%	2,639
2003	1,755	15%	263	10%	211	52	2,163	80%	2,704
2004	1,930	15%	289	10%	216	73	2,236	80%	2,796
2005	2,123	15%	318	10%	224	95	2,331	80%	2,914
2006	2,335	15%	350	10%	233	117	2,448	80%	3,061
2007	2,569	15%	385	10%	245	140	2,589	80%	3,236
2008	2,826	15%	424	10%	259	165	2,754	80%	3,442
2009	3,108	15%	466	10%	275	191	2,945	80%	3,681
2010	3,419	15%	513	10%	294	218	3,163	80%	3,954
2011	3,761	15%	564	10%	316	248	3,411	80%	4,264
2012	4,137	15%	621	10%	341	279	3,690	80%	4,613
2013	4,551	15%	683	10%	369	314	4,004	80%	5,005
2014	5,006	15%	751	10%	400	350	4,354	80%	5,443
2015	5,506	15%	826	10%	435	391	4,745	80%	5,931

<sup>1</sup> Assumes 10% annual growth from 2002 through 2015.

<sup>2</sup> Represents average annual rate of growth of 6 percent from 2001-2015.

Prepared by EDAW (October 24, 2002)

### LOCATIONS OF DEMAND

We project that most of the new marina development in the region will be in areas of existing successful marina activity, and that the market shares of the eight recreational boating areas will change incrementally. Essentially, we anticipate that marina development will continue to cluster in areas where there is a good climate, attractive natural scenery, convenient access by water and air, and substantial investments in boating infrastructure.

**Projected Locations of Marina Demand in Northwest Mexico 2001-2015**

<b>Boating Area</b>	<b>Existing Marina Spaces</b>	<b>Percent of Existing Marina Spaces</b>	<b>Total Marina Spaces 2015</b>	<b>Percent of Total Marina Spaces in 2015</b>
Ensenada	751	29%	1,500	25%
Pacific Coast	40	2%	50	1%
Los Cabos Region	362	14%	1,100	18%
La Paz	413	16%	1,200	20%
Central Coast Sea of Cortez	15	1%	450	8%
Northern Sea of Cortez	26	1%	100	2%
Central Coast Mainland	706	27%	1,050	18%
Mazatlan	287	11%	550	9%
<b>Total</b>	<b>2,600</b>	<b>100%</b>	<b>6,000</b>	<b>100%</b>

Prepared by EDAW (December 17, 2002)

The projections also assume that there will be some initial marina development in the Baja California Central Coast Sea of Cortez area, and substantial growth in the La Paz area. In summary, we project the following marina development trends by recreational boating area:

1. The **Ensenada** area marina supply will continue to grow strongly, constrained only by site availability, due to its proximity to San Diego. Boating activity in the area will gradually spread to adjacent coastal locations and around the islands.
2. The **Pacific coast** of Baja California will not see any additional marina development. This area will continue to be part of a rapid journey to the south, with periodic fuel and rest stops at a few key locations. The rest stops can be served by natural anchorages and moorings or buoys.

The cross peninsula boat transport system proposed from Santa Rosalillita to Bahia de los Angeles will not become a significant factor in boating activities in the region because it has no well defined market to serve. It will not serve boats in the 25 to 35 foot range – most of these are sport fishers, coastal cruisers or day sailors that are not designed for ocean use. These boats are too small to be sailed part of the way, too big to be trailered, and must be transported professionally. The larger ocean-going boats of 35 feet and up have no reason to stop in mid trip and switch to a transport vehicle. These larger boats can simply continue to Cabo San Lucas and be in reach of excellent services much more rapidly than they would be via Bahia de los Angeles.

3. The **Los Cabos** area marina supply will expand in several locations as the area continues its maturation into a preeminent role in the southwestern United States/coast of Mexico

resort industry. However, any marina development in the Cabo del Este area will need to be preceded by substantial investment in basic infrastructure.

4. The **La Paz** area marina supply will expand dramatically if Costa Baja and Los Muertos are developed. These projects will provide access to new market segments, and will move La Paz into a new market position
5. The **Baja California central coast of the Sea of Cortez** can start a smaller scale marina development program, together with improvement of natural anchorages, in a few key locations to support gradual growth of tourism in the area. The basic investments are in place in Puerto Escondido; the other locations could follow if a master plan were prepared for the area.
6. The **northern Sea of Cortez** will not see any significant additional marina development because of its isolation, weather, tides, and the current RV park development patterns. This will remain an area for trailered boats.
7. The **Central Mainland** marina supply could expand if resort and tourism development strengthens. Recent trends, however, suggest a slowdown in boating activity in this area.
8. The **Mazatlan** area is well positioned to expand its marina inventory in concert with the continued growth of its tourism base. The major issue is site availability.

# I. INTRODUCTION

## A. PURPOSE OF STUDY

This report summarizes an analysis of the market potential for the development of new marinas in Northwest Mexico through 2015. The analysis has been prepared for the Packard Foundation by EDAW, Inc.

## B. APPROACH

Essentially, our approach has been to understand the key operational assumptions that will define demand for new marina development in each of the recreational boating areas in Northwest Mexico. We have conducted significant independent field research in Mexico and the United States to discuss site-specific market factors and crosscheck third party data.

Our first step was to review the key factors affecting the development of each of the existing major marinas in Northwest Mexico, to identify the eight recreational boating areas in the region, to summarize the character of each area, and to compare the existing marina inventories in Northwest Mexico and the western United States.

Our second step was to assess the strength of current demand for marinas in Northwest Mexico by analyzing occupancy and slip rates trends in marinas in the region during the past few years, arrivals of boats in Northwest Mexico during the past several years, and growth in registrations of larger boats in the western United States during the past several years.

The third step was to project demand for new marina development in Northwest Mexico through 2015 by projecting boat registrations in the western United States during the period, defining the amount of potential demand the region can capture, and by calculating the numbers of boats that will use marinas in the region annually during the period.

As a final step, we recommended the locations that will be most appropriate for development of new marinas in the region by projecting patterns of marina growth based on climate, natural features, access, and nautical tourism infrastructure in the different areas within the region. The goal of the recommendations is to use public and private investment capital efficiently and effectively in the development of marinas.

## C. ORGANIZATION OF REPORT

The report is organized into five sections as follows:

### I. Introduction

This section of the report summarizes the purpose of the study and the approach, outlines the organization of the report, and describes the assumptions and limiting conditions.



## **2. Existing Marina Supply in Northwest Mexico and Western United States**

This section of the report reviews the historical development of the marina inventory in Northwest Mexico, defines the eight recreational boating areas in the region, summarizes the character of nautical tourism in each area, describes the existing marina inventory in Northwest Mexico, and discusses the existing marina inventory in the western United States.

## **3. Existing Marina Demand in Northwest Mexico and Western United States**

This section of the report assesses the existing marina demand in Northwest Mexico by analyzing occupancy and slip rates trends in existing marinas in Northwest Mexico during recent years, arrivals of boats in Northwest Mexico during recent years, and growth in boat registrations in the western United States.

## **4. Projected Marina Demand in Northwest Mexico: 2001-2015**

This section of the report projects the demand for new marina development in Northwest Mexico through 2015 by projecting boat registrations in the western United States during the period, identifying the amount of potential market demand the region can capture from the western United States, and calculating the numbers of boats that will use marinas based on anticipated patterns of boat arrivals to the region annually during the period.

## **5. Projected Locations for Marina Development in Northwest Mexico: 2001-2015**

This section of the report projects where new marina development will be located in Northwest Mexico by delineating patterns of marina growth based on existing marina locations, climate, natural features, access, and nautical tourism infrastructure in the different areas within the region.

## **D. ASSUMPTIONS AND GENERAL LIMITING CONDITIONS**

This report relies heavily on third-party information compiled by EDAW. In preparing this report, EDAW collected and reviewed substantial amounts of market data on several aspects of nautical tourism in Northwest Mexico and the western United States. EDAW also conducted significant independent field research and conducted numerous interviews in Mexico and the United States with government officials at all levels, marina owners and operators, owners and managers of several basic elements of tourism infrastructure, representatives of boating associations and professional organizations, members of nautical tourism groups, university and other researchers, and other stakeholders and interested parties.

EDAW has made extensive efforts to confirm the accuracy and timeliness of the information contained in this study. However, certain of the standard governmental time series data obtained by EDAW during the course of the study are incomplete, and others appear to have been collected by varying methods in various locations. As a result, EDAW does not warrant the accuracy of

information provided by, or derived from, third-party sources. Additionally, EDAW does not assume responsibility to update this report for events and circumstances occurring after the date of this report.

EDAW projections and forecasts in this report are assumptive based and were prepared using current available information and best practice techniques. It is the nature of forecasting that some assumptions may not materialize, unanticipated events occur, and/or fundamental conditions change unexpectedly. In this respect, actual results will likely vary somewhat from projections and some variances may be material to the conclusions of this analysis.

## **II. EXISTING MARINA SUPPLY IN NORTHWEST MEXICO**

This section of the report reviews the historical development of the marina inventory in Northwest Mexico, defines the eight recreational boating areas in the region, summarizes the character of nautical tourism in each area, describes the existing marina inventory in Northwest Mexico, and discusses the existing marina inventory in the western United States.

### **A. OVERVIEW OF RECREATIONAL BOATING IN NORTHWEST MEXICO**

Northwest Mexico, defined in this report as the coast from Ensenada to Mazatlan, has been a major center for recreational boating for several decades. Much of the recreational boating activity in the region started in the 1950's with the acclaimed sport fishing centered in the waters immediately off Cabo San Lucas. As boating expanded significantly in the 1960's and into the early 1970's in the western United States, increasing numbers of recreational boaters came from the major marinas of southern California and the resort areas of Arizona to the Sea of Cortez to enjoy the warm weather, relaxing atmosphere, striking desert scenery and other attractions of the region.

The completion of the Transpeninsular Highway in 1973, together with other roads and related tourism initiatives, improved access to parts of the region and permitted increased boating in some areas. In addition, government tourism development programs began in Loreto-Nopolo, Cabo San Lucas and San Jose del Cabos soon after the completion of the Transpeninsular Highway.

Following these investments and a decade of gradual growth in boating activity in the region, the first two marinas in the region opened in the late 1970's – the Grossman family started the region's first marina in San Carlos in 1976, and the Schroyers followed in La Paz in 1978 (see Table 1 for existing marina inventory in the region). Both were logical marina locations with a critical mass of boating infrastructure already in place. San Carlos was a growing resort with a superb natural harbor, excellent sport fishing and easy access from Arizona. La Paz was a very pleasant city with a good harbor, and convenient access to some of the best boating, fishing and scenery in the Sea of Cortez.

Through the balance of the 1970's and into the mid 1980's boating activity continued to increase steadily, but no new marinas were developed. Most of the boats came to the region for seasonal use during the winter months or stayed in natural anchorages on moorings.

Almost a decade after the opening of the first two marinas, two additional marinas opened in the late 1980's – Marina Palmira in La Paz in 1986 and Baja Naval in Ensenada in 1987. Both marinas responded to the continuing growth of the broader tourist economies in La Paz and Ensenada.

In the late 1980's and into the early 1990's several more crucial elements of tourist infrastructure were completed in the Los Cabos and Ensenada areas. Key among these were (1) the development of major hotel, golf and retail projects in San Jose del Cabos that had started in the 1970's, (2) the development of the waterfront and tourist district in Cabo San Lucas that had started in the 1970's, (3) the development of several large scale residential resort and golf projects along the coast south from Tijuana to Ensenada that had started in the 1980's, and (4) the development of the Los Cabos

airport and the start of regularly scheduled jet service by major airlines to Los Cabos in 1992. With the completion of these infrastructure elements, boating activity was ready to expand as part of a broader tourist economy in a few parts of the region.

By the early to mid 1990's, a few of the maturing nautical tourism centers in the region had developed convenient air access, good hotels, residential resorts, restaurants and other key tourism services. These centers were ready to accommodate a broad range of recreational boating activities including marinas. Markets typically support marinas in the latter stages of tourism development, when much of the infrastructure is completed and operating successfully.

Parallel with these trends in the region, the economic boom of the 1990's in the western United States generated steadily increasing tourism, boating activity and demand for marinas in the region.

In response to the availability of boating infrastructure and the economic boom conditions, several marinas opened throughout the region during the mid 1990's - Marina Cabo San Lucas in 1992 after several years of development, Marina Real in San Carlos in 1994 as part of a real estate development, Marina El Cid in Mazatlan in 1995 as part of a resort development, Marina Coral just north of Ensenada in 1996 as part of a resort development. At the end of economic boom in 2001, the Cruiseport Village Marina opened in Ensenada as part of the cruise facilities.

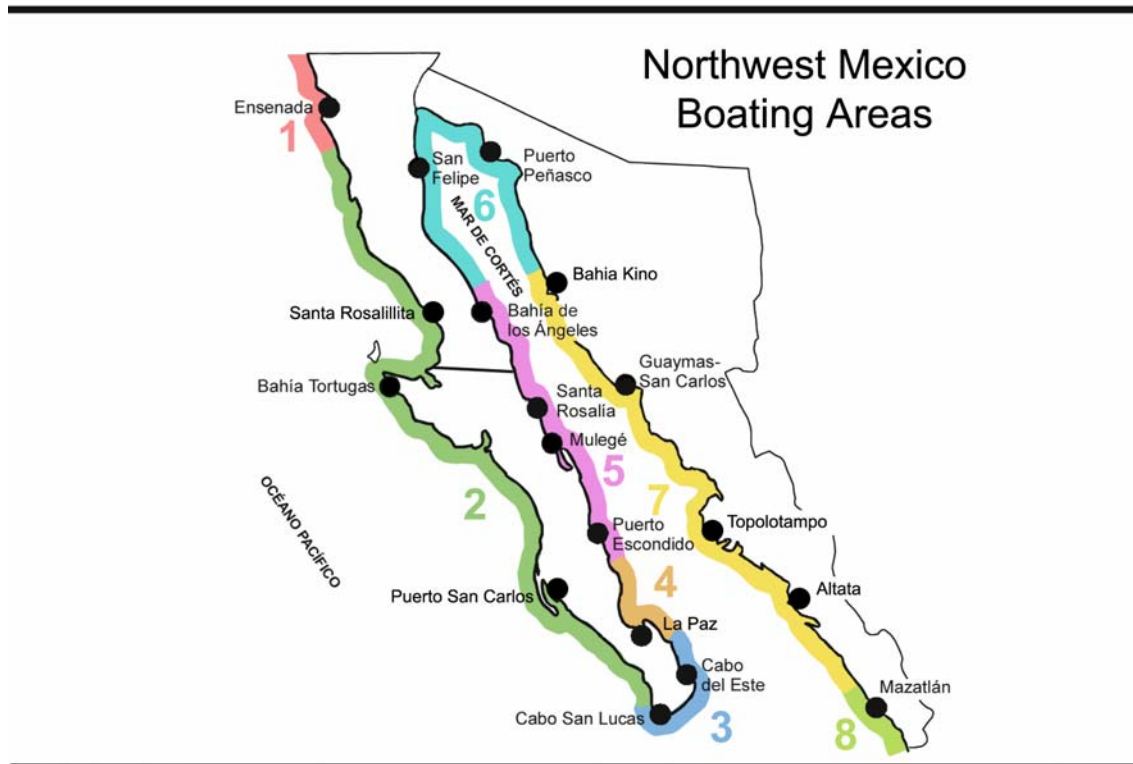
By 2002, as this report is written, five of the most established centers of recreational boating activity in Northwest Mexico have developed larger modern marinas. These marinas serve as the boating centers for the region. In most of the region boating activity is based on natural harbors, anchorages and moorings.

Northwest Mexico is a large and varied boating region. From the perspective of recreational boaters and potential marina occupants it contains eight very distinct areas, each with its own well-defined character and boating opportunities. This report identifies the eight major areas of nautical tourism based on differences of climate, natural features, access, and nautical tourism infrastructure:

1. The **Ensenada** area, from the resorts south of Tijuana through Ensenada to Punta Banda.
2. The **Pacific coast** of Baja California, from Punta Banda through Sahia de Tortugas, Puerto San Carlos-Bahia Magdalena, to just north of Cabo San Lucas.
3. The **Los Cabos** area, from Cabo San Lucas through San Jose del Cabo, Bahia de Palmas to Bahia de Los Muertos.
4. The **La Paz** area, from north of Bahia de los Muertos through La Paz, the Isla Espiritu Santo area to the Punta Evaristo-Isla San Jose area.
5. The **Baja California central coast of the Sea of Cortez**, from Puerto Escondido and the Loreto National Marine Park, Bahia Concepcion, Mulege, Santa Rosalia, to Bahia de los Angeles.
6. The **northern Sea of Cortez**, from Puertecitos through San Felipe and the adjacent Islas Descansas to Puerto Penasco in Sonora.

7. The **Central Mainland**, from Bahia Kino through San Carlos-Guaymas to Topolobampo.
8. The **Mazatlan** area, from just north of Mazatlan to San Blas.

Each of the eight areas is described briefly below. For each area, the description includes a summary of its general character, climate, natural features, access, tourism infrastructure, and boating facilities.



The **Ensenada** area, from the resorts south of Tijuana through Ensenada to Punta Banda, is the first major recreational boating area south of the Mexico-US border. The Ensenada area is in a very convenient and accessible location for boaters from San Diego – Ensenada is only about 70 miles south of San Diego Bay.

From a recreational boating perspective, Ensenada is an attractive destination. The municipal harbor of Ensenada is busy with fishing fleets, shipyards, cruise facilities and several marinas. The harbor is clean and the landside areas are very well planned and maintained. A wide walkway circles the northeast side of the harbor, providing convenient access to the marinas from the adjacent downtown and tourist area.

Ensenada's climate is very similar to that of southern California, with relatively cool weather, coastal clouds and fog in the summers, cold winters with rain and storms, and northwest winds. The coast in the Ensenada area has few significant natural features.

The Ensenada area has excellent access by water and road. The coast from Tijuana to Ensenada has been a tourism destination for the past two decades, and has a complete, high quality tourism infrastructure. Ensenada itself has a compact, high quality tourist district near the harbor with good hotels, shopping, and restaurants. The coastal area north of Ensenada has thousands of first and second homes, RV parks, and golf courses.

There are three large, modern marinas in Ensenada with complete boating facilities and services, and several smaller anchorages (see Table 1). In total, there are about 750 slips available.

There is a marina that has been under development for some time in La Salina, north of Ensenada. At this time it is not complete, and there is no schedule for completion. There are reportedly plans for the expansion of two of the marinas in the Ensenada harbor.

The **Pacific coast** of Baja California, from Punta Banda through Bahia de Tortugas, Puerto San Carlos-Bahia Magdalena, to just north of Cabo San Lucas is a largely unpopulated and undeveloped area. The Transpeninsular Highway generally runs inland through this area, making access to the coast long and difficult. For most recreational boaters, the coast is a route that leads to points to the south, not a destination. There are several natural harbors along the coast that could be used as stopping points, including most notably Bahia de Tortugas and Puerto San Carlos-Bahia Magdalena, where fuel is generally available. These points are far apart, making the southbound trip an exercise in logistics. Northbound, typically against the wind and waves, is a more difficult trip, often called the 'Baja Bash'.

The climate of the Baja California Pacific coast has relatively cool weather, with coastal clouds and fog in the summers, cold winters with rain and storms, and northwest winds. The coast has numerous interesting and significant natural features, including the Laguna San Ignacio reserve.

The Baja California Pacific coast has indirect access by water and road. Along the entire length of the coast itself there are only a few very small towns, most connected to the Transpeninsular Highway by gravel roads. There are very few tourist facilities, and very few boating services. Even fuel is available at only a limited number of locations.

There is one recently completed marina along the coast, in Santa Rosalillita. The marina, with about 40 spaces, is designed as the first step of the proposed boat transport system to truck boats up to about 60 feet in length to Bahia de los Angeles in the central Sea of Cortez. There are numerous natural anchorages and other moorages along the coast.

The **Los Cabos** area, from Cabo San Lucas through San Jose del Cabo, Bahia de Palmas to Bahia de Los Muertos, is by far the most developed destination for nautical tourism in the region. The area has only one developed harbor, at Cabo San Lucas. The Cabo San Lucas harbor is an attractive destination, with a large recreational fishing fleet, boat repair services, anchorages outside the harbor for cruise ships, and one marina. The harbor itself is relatively clean, and the area

around the harbor is very active, with hundreds of major tourist shops and restaurants. A walkway circles the harbor, connecting the marina area to the tourist facilities.

The Los Cabo area's climate is tropical, with very hot weather in the summers, tropical storms and occasional hurricanes in the late summer and early fall, winters that are warm and dry, and variable winds. The southern part of the coast has few significant natural features other than some attractive beaches, but the Cabo del Este has several bays, including the national marine park at Cabo Pulmo.

A large part of the boating activity in the area is focused on fishing. Due to the ocean currents and upwellings of water near the approach to Cabo San Lucas, there were large stocks of game fish within a few miles of the harbor. These stocks have been depleted, and most fishing is now centered further out.

The Los Cabos area has excellent access by water, road and air, including the international airport. The coast from Cabo San Lucas to San Jose del Cabo has been a world class tourism destination for the past decade, and has a very complete, high quality tourism infrastructure with about 4,000 hotel rooms, extensive retail space, numerous upscale residential resorts, several high quality golf courses, restaurants, and beaches.

The coastal area from Cabo San Lucas to San Jose del Cabo has thousands of second homes in a series of gated master planned communities. These homes are owned mostly by residents of the United States. There are thousands of additional lots available for sale. The residential market, which had been strong for several years during the economic boom, has slowed considerably in the past year.

The Cabo del Este area, stretching east from San Jose del Cabo to Bahia de los Muertos, remains largely undeveloped. This area has significant potential for eventual marina development, but will need substantial investments in basic tourism and boating infrastructure for several years before this potential can be realized.

There is one modern, high quality marina in Cabo San Lucas, with about 360 slips. It has been highly successful, with by far the highest slip rates in the region (see Table 1).

There are reportedly plans to develop a second marina in the harbor. In addition, there have been plans announced to develop a large marina near San Jose del Cabo. There are numerous natural anchorages in the Cabo del Este area.

The **La Paz** area, from north of Bahia de los Muertos through La Paz, the Isla Espiritu Santo area to the Punta Evaristo-Isla San Jose area, provides easy access to the most popular cruising grounds in the Sea of Cortez. The area includes a gentle climate, warm waters, several undeveloped islands, varied scenery, and extensive fisheries.

The area is a long trip from the United States, and is visited primarily by boaters who have the time to cruise the Sea of Cortez for an entire season. However, the climate and scenic qualities of the La Paz area make it increasingly popular for recreational boaters who have the time.

The La Paz channel and harbor is a major port, including refineries, industrial facilities, a commercial fishing fleet, boat repair facilities, a ferry terminal, and several marinas. The harbor activities stretch for several miles along the channel. In the main harbor area in front of the downtown, there is an active waterfront street. Several streets run to the water from the immediately adjacent downtown, providing direct access to the harbor. The downtown itself is well planned and well maintained.

The La Paz area's climate is subtropical, with hot and humid weather in the late summer, tropical storms and occasional hurricanes in the late summer and early fall, winters that are relatively warm and dry, and winds from the south in the summer and the north in the winter. The coast and islands to the north of La Paz have substantial numbers of significant natural features. Isla Espiritu Santo in particular has attractive scenery.

A good portion of the boating activity in the area is focused on fishing during the late summer and late fall. There were originally fisheries immediately off La Paz, but the stocks of large game fish have been depleted, and most fishing is now centered out beyond Bahia de los Muertos or near Isla Espiritu Santo.

The La Paz area has excellent access by water and good access by air. The area has been growing as a tourist destination for the past several years, and is developing a good quality tourism infrastructure.

There are two large marinas in La Paz with complete boating facilities and services, and several smaller anchorages (see Table 1). In total there are about 400 slips available. There are numerous natural anchorages in the bays and coastal inlets to the north of La Paz, and a wide range of options for anchorages among the islands.

The Fidepaz marina has been under development for some time along the waterfront to the southwest of the downtown. There are issues related to water depth and channel dredging, and the marina is not complete, with no schedule for completion. There are plans for the development of two additional marinas, one in the harbor and one to the north end of the channel.

The **Baja California central coast of the Sea of Cortez**, from Puerto Escondido and the Loreto National Marine Park, Bahia Concepcion, Mulege, Santa Rosalia, to Bahia de los Angeles is a lightly populated and little developed area, with several pleasant small towns in the bays along the coast. The largest town in the area is Loreto, with a population of perhaps 10,000. The coast provides continuous access to a key cruising ground with several undeveloped bays, varied scenery, long beaches, and diverse fisheries.

The Transpeninsular Highway runs along the coast from Santa Rosalia to south of Loreto, providing direct coastal access to much of the area. There are numerous bays and natural harbors along the coast near the Transpeninsular Highway that are used as stopping points for boaters cruising the area.

The area has developed a strong boating community, dominated by retirees who cruise the islands in the area and other parts of the Sea of Cortez. There are also substantial numbers of people who bring RV's and small trailerable boats to the area, particularly in and around Bahia Concepcion.



The peak season for boating in the area is from November to May. However, there is also some boating activity during the summer.

The climate of the Baja California central coast of the Sea of Cortez is subtropical, with hot weather in the summer, tropical storms and occasional hurricanes in the late summer and early fall, winters that are relatively warm and dry, and winds from the south in the summer and the north in the winter. As the coast proceeds north, the tidal ranges increase, reaching over 10 feet by Bahia de los Angeles.

The coast and islands in the area have varied scenery, with both rocky coastline and extensive beaches. There are numerous interesting and significant natural features, including the Loreto marine national park and Bahia de los Angeles.

There is one marina along the coast, in Santa Rosalia. The marina, with about 15 spaces, is inside a breakwater-enclosed harbor. There are plans to expand the marina, with no schedule. There is also a partially improved harbor in a largely natural all-weather anchorage at Puerto Escondido. This harbor was planned for development as a resort with a marina. However, work stopped on the development pending resolution of several investment issues. There is no schedule for completion at this time. There have been proposals to develop marinas in Bahia de los Angeles – these appear to be hold at the present. There are numerous natural anchorages along the coast.

The **northern Sea of Cortez**, from Puertecitos through San Felipe and the adjacent Islas Descansas to Puerto Penasco in Sonora, is one of the least populated and developed areas in the region. It is also a very minor destination for larger boats that would create demand for marina development. San Felipe, with a population of about 30,000, is the largest town in the area.

Access to the area is good for trailerable boats. Highway 5 runs south from Mexicali to San Felipe, touching the coast just north of San Felipe, and there is also good highway access from the border to Puerto Penasco. The area has an informal boating community, based largely on retirees, and weekend visitors and vacationers, with smaller trailerable boats for coastal fishing. There are a few small bays, points and other anchorages south of San Felipe along the coast that can be used as stopping points for the very small number of boaters who may cruise the area.

The climate of the Baja California central coast of the Sea of Cortez is generally subtropical, with very hot weather in the summer, and chilly winters with strong winds and occasional storms. There is very little rainfall. As the coast proceeds north, the sea becomes shallow and the tidal ranges reach 25 to 30 feet at the northern end of the sea. The weather and tides are major negative factors affecting boating patterns in the area.

The area does not have substantially varied scenery. The outstanding natural feature is the Upper Gulf of California Biosphere Reserve, a two million acre zone where commercial fishing and shrimping are not permitted.

The one marina in the area is in Puerto Penasco, where Plaza las Glorias resort hotel operates about 25 slips in the northwest corner of the harbor. The harbor is substantial, and provides most boating services. There have been plans for some time to develop a marina in the breakwater-

enclosed harbor at San Felipe, located south of the town on an exposed beach. There is no schedule for completion at this time.

The **Central Mainland**, from Bahia Kino through San Carlos-Guaymas to Topolobampo, provides access to the popular cruising ground in the middle of the Sea of Cortez. The area has a good climate, scenic rocky coasts, several undeveloped islands, and extensive fisheries.

The area has excellent access by road and good access by air. It is a short trip by a good highway from southern Arizona. Air access is available at Hermosillo and Guaymas.

San Carlos is located in a superb natural harbor that has two marinas. In addition to the two marinas, the harbor has extensive space for anchorages.

The area's climate is subtropical, with very hot weather in the summer, tropical storms and occasional hurricanes in the late summer and early fall, winters that are relatively warm and dry, and winds from the south in the summer and the north in the winter. The coast and islands near San Carlos are quite scenic.

A good portion of the boating activity in the area is focused on fishing during the late summer and late fall. Fishing was one of the original reasons for the establishment of the first marina in San Carlos. At that time, there were fisheries immediately outside the harbor in San Carlos, but many of the stocks of game fish have been badly depleted by commercial overfishing. Most fishing is now centered at some distance from San Carlos.

The area has been growing slowly as a tourist and second home resort destination for the past several years, and is gradually developing a good quality tourism and resort infrastructure.

There are two large marinas in San Carlos with extensive boating facilities and services (see Table 1). In total there are about 700 slips available. A small marina with about 50 slips is under construction at Altata. There are also dozens of natural anchorages in the bays and coastal inlets near San Carlos, and a wide range of options for anchorages among the islands. There have been reports of plans for eventual development of a marina in Bahia Kino. However, there are no known specific plans for development of additional marinas in the area at this time.

The **Mazatlan** area, from just north of Mazatlan to San Blas, is the southernmost major recreational boating area in the region. Mazatlan is an interesting destination for recreational boating activities. Its main harbor is a busy commercial port that accommodates large ocean-going ships, a fishing fleet, shipyards, cruise facilities. The two marinas are located about five miles north of the main harbor in the tourist area.

Mazatlan's climate is tropical, with very hot and humid weather in the summer, tropical storms and occasional hurricanes in the late summer and early fall, relatively warm winters, and variable winds. The coast north of Mazatlan is generally scenic.

The Mazatlan area has excellent access by water and air. Mazatlan is a major tourism destination and has a substantial tourism infrastructure. The tourist district surrounding the marinas and to the south from Punta Sabalo to Punta Tiburon has good hotels, shopping, and restaurants.

There are two large, modern marinas in Mazatlan with complete boating facilities and services (see Table 1). In total there are about 300 slips available.

## **B. NORTHWEST MEXICO MARINA INVENTORY: 2002**

Overall, there are 2,600 slips in the marinas in the region – 2,300 slips in 10 major marinas, and 300 slips in 12 other much smaller facilities (see Table 1).

The inventory is high quality. The ten largest marinas are modern facilities built to international standards. They offer a broad range of services, and are competitive with much of the marina inventory in the western United States and elsewhere.

Growth of the marina inventory has proceeded slowly. Since the development of the first marina in 1976, additions have come in groups in response to successful infrastructure investments. Much of the most recent growth occurred during the economic boom of the mid 1990's.

Occupancy rates are good. Rates generally approach 90 to 95 percent in the peak season, and drop to about 60 percent in the off-season.

Slip lease rates vary widely in the region, with peak season rates between \$8 and \$21 per foot, and off-season rates about 25 to 40 percent less.

Length of stay varies significantly between marinas, with some boats remaining the same marina for up to several years, and many boats spending only one to three nights in marinas to refuel and load supplies. Based on our research and interviews, we have defined the average length of stay to be between two and four weeks.

Slip sizes vary substantially, averaging about 35 feet. We defined the average slip size demand for planning purposes to be 40 feet, based on an analysis of the boat lengths recorded in recent arrivals in Ensenada and San Carlos.

**Table I: Northwest Mexico Marina Inventory 2002**

<b>Location</b>	<b>Berths</b>	<b>Year Open</b>	<b>Occupancy Rate<sup>1</sup></b>	<b>Slip Rental Rates<sup>2</sup></b>
<b><u>Ensenada</u></b>				
Ensenada Cruiseport	188	2001	95%	\$13.00
Marina Coral	387	1996	95%	\$14.00
Baja Naval	89	1987	100%	\$12.00
Clipper	33			
Baja Fiesta	16			
Normabere	30			
Banditos Boat	8			
<b><u>Pacific Coast</u></b>				
Santa Rosalillita	40	2002		
<b><u>Los Cabos Region</u></b>				
Marina Cabo San Lucas	362	1992	90%	\$21.00
<b><u>La Paz Region</u></b>				
Marina Palmira	197	1986	100%	\$15.00
Marina La Paz	97	1978	95%	\$13.00
Varadero de la Paz	26			
Diving Service	25			
Club Nautico de la Paz	4			
Don Jose Abaroa	38			
Marina Pichilingue	26			
<b><u>Central Coast Sea of Cortez</u></b>				
Marina Sta Rosalia	15			
<b><u>Northern Sea of Cortez</u></b>				
Marina Penasco	26			
<b><u>Central Coast Mainland</u></b>				
Marina San Carlos	350	1976	90%	\$8.75
Marina Real, San Carlos	356	1992	85%	\$8.00
<b><u>Mazatlan Region</u></b>				
Marina Mazatlan	197	1996	90%	\$9.00
Marina El Cid	90	1995	95%	\$11.00
<b>Total</b>	<b>2,600</b>			

<sup>1</sup> Occupancy in 2001/2002 peak season.

<sup>2</sup> Average peak season slip rental rates per foot per month in 2001/2002.

Prepared by EDAW (October 24, 2002)

## C. WESTERN UNITED STATES MARINA INVENTORY: 2002

As a point of reference, we included a brief description of the existing marina supply in the four western states of Arizona, California, Oregon, and Washington in our study. These four states are adjacent to northwestern Mexico and have marinas that traditionally have been related to those in northwestern Mexico. Our description focuses on the marinas in southern California, which are the most directly related to those in northwestern Mexico.

Arizona, California, Oregon, and Washington have a total marina inventory of about 87,000 relevant slips. Of this total, Arizona has about 1,000 slips, California has about 62,000 slips, Oregon has about 8,000 slips, and Washington has about 16,000 slips.

Of the California total, about 36,000 or 58 percent were in the five coastal counties of southern California. Because of its size and its proximity to Northwest Mexico, we surveyed the southern California marina inventory in some detail (see Tables 2 and 3).

**Table 2: Summary Southern California Marina Inventory 2002<sup>1</sup>**

<b>Location</b>	<b>Number of Slips</b>	<b>Number of Marinas</b>	<b>Private Marinas</b>	<b>Public Marinas</b>
<b><u>Santa Barbara County</u></b>				
Santa Barbara Harbor	<u>1,068</u>	<u>4</u>	<u>0</u>	<u>4</u>
<i>subtotal</i>	<i>1,068</i>	<i>4</i>	<i>0</i>	<i>4</i>
<b><u>Ventura County</u></b>				
Ventura Harbor	1,375	5	5	0
Channel Islands Harbor	<u>2,800</u>	<u>9</u>	<u>7</u>	<u>2</u>
<i>subtotal</i>	<i>4,175</i>	<i>14</i>	<i>12</i>	<i>2</i>
<b><u>Los Angeles County</u></b>				
Marina del Rey	6,000	21	20	1
Redondo Beach - King Harbor	1,458	4	4	0
Los Angeles Harbor	885	1	1	0
Long Beach Harbor	<u>3,800</u> <sup>2</sup>	<u>2</u> <sup>3</sup>	<u>0</u>	<u>2</u>
<i>subtotal</i>	<i>12,143</i>	<i>28</i>	<i>25</i>	<i>3</i>
<b><u>Orange County</u></b>				
Huntington Harbor	2,500	4	4	0
Newport Harbor	2,119	16	15	1
Dana Point	<u>2,500</u>	<u>3</u>	<u>2</u>	<u>1</u>
<i>subtotal</i>	<i>7,119</i>	<i>23</i>	<i>21</i>	<i>2</i>
<b><u>San Diego County</u></b>				
Oceanside Harbor	950	1	0	1
Mission Bay	1,350	11	11	0
San Diego Bay	<u>9,000</u>	<u>21</u>	<u>21</u>	<u>0</u>
<i>subtotal</i>	<i>11,300</i>	<i>33</i>	<i>32</i>	<i>1</i>
<b>Total</b>	<b>35,805</b>	<b>98</b>	<b>90</b>	<b>8</b>

<sup>1</sup> Source: Santa Monica Bay Restoration Project, The Southern California Boater's Guide, 1999.

<sup>2</sup> Includes 1,831 slips in the Long Beach Downtown Marina and 1,969 slips in Alamitos Bay.

<sup>3</sup> Includes Long Beach Downtown Marina and Alamitos Bay.

Prepared by EDAW (October 21, 2002)

**Table 3: Detailed Southern California Marina Inventory 2002**

<b>Location</b>	<b>Number of Slips<sup>1</sup></b>	<b>Occupancy Rate 2001<sup>2</sup></b>	<b>Slip Rental Rates<sup>3</sup></b>
<b><u>Santa Barbara County</u></b>			
Santa Barbara Harbor	1,068	95%	Low: \$6.08/ft; High: \$7.85/ft
<i>subtotal</i>	<i>1,068</i>		
<b><u>Ventura County</u></b>			
Ventura Harbor	1,375	85%	
Ventura Isle Marina			Low: \$9.27/ft; High: \$10.08/ft
Ventura West Marina			Low: \$8.60/ft; High: \$10.00/ft
Channel Islands Harbor	2,800	85%	
Anacapa Isle Marina	493		Low: \$9.88/ft; High: \$13.10/ft
Channel Islands Marina	500		
Pacific Corinthian Marina			
Vintage Marina			
<i>subtotal</i>	<i>4,175</i>		
<b><u>Los Angeles County</u></b>			
Marina del Rey	6,000	92%	Low: \$9.75/ft; High: \$11.25/ft
Deauville Marina			
Dolphin Marina			
Holiday Harbor Marina			
Marina City Club Marina	390		
Marina Harbor Anchorage			
Redondo Beach - King Harbor	1,458	90%	
King Harbor Marina			
Port Royal Marina	338		Low: \$9.25/ft; High: \$12.95/ft
Portofina Marina			
Los Angeles Harbor	885	85%	
California Yacht Marina	885		Low: \$8.50/ft; High: \$12.40/ft
Long Beach Harbor	3,800	98%	
Downtown Marina	1,844		Low: \$7.75/ft; High: \$9.00/ft
Alamitos Bay Marina	<u>1,967</u>		Low: \$8.26/ft; High: \$9.63/ft
<i>subtotal</i>	<i>12,143</i>		
<b><u>Orange County</u></b>			
Huntington Harbor	2,500	95%	Low: \$11.50/ft; High: \$15.00/ft
Peter's Landing Marina			
Sunset Aquatic Marina			
Newport Harbor	2,119	98%	Low: \$17.00/ft; High: \$21.15/ft
Balboa Marina			
Bay Shore Marina			
Bayside Marina			
Lido Peninsula Marina			
Newport Dunes Marina	440		
Villa Cove Marina			
Dana Point	2,500	99%	
Dana Point Marina Company	1,400		Low: \$9.26/ft; High: \$15.68/ft
Dana West Marina	<u>1,000</u>		Low: \$10.63/ft; High: \$14.00/ft
<i>subtotal</i>	<i>7,119</i>		

**Table 3: Detailed Southern California Marina Inventory 2002 (cont.)**

<b>Location</b>	<b>Number of Slips<sup>1</sup></b>	<b>Occupancy Rate 2001<sup>2</sup></b>	<b>Slip Rental Rates<sup>3</sup></b>
<b>San Diego County</b>			
Oceanside Harbor	950	95%	
Oceanside Harbor Marina	950		Low: \$7.58/ft ; High: \$8.58/ft
Mission Bay	1,350	95%	
Bahia Hotel Marina			
Campland Marina	124		
Dana Inn Marina	145		Low: \$7.25/ft; High: \$7.75/ft
Dana Landing Marina			
Driscoll Mission Bay Marina	220		Low: \$8.00/ft; High: \$9.24/ft
Hyatt Islandia Marina			
Marina Village Marina			
Sea World Marina			
Seaforth Marina	230		
San Diego Bay	9,000	96%	
Bay Club Hotel and Marina	154		
Best Western Island Palms Marina	188		Low: \$11.00/ft; High: \$11.75/ft
California Yacht Marina	352		Low: \$8.00/ft; High: \$9.00/ft
Cabrillo Island Marina	420		Low: \$10.96/ft; High: \$12.28/ft
Chula Vista Marina	559		Low: \$8.25/ft; High: \$9.25/ft
Glorietta Bay Marina	100		
Half Moon Anchorage	180		
Harbor Island West Marina	600		Low: \$10.25; High: \$11.00/ft
Marina Cortez	535		
Marriott Marina	446		
Shelter Cove Marina	161		
Shelter Point/Marina Kona Kai	520		
Sun Harbor Marina	130		
Sunroad Resort Marina	<u>608</u>		
<i>subtotal</i>	<i>11,300</i>		
<b>Total</b>	<b>35,805</b>		

<sup>1</sup> Source: Santa Monica Bay Restoration Project, The Southern California Boater's Guide, 1999.

<sup>2</sup> Various municipalities and marina operators.

<sup>3</sup> Information from marina websites.

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Essentially, our conclusion from the survey of the southern California marina inventory is that the southern California marina inventory has similar occupancy rates and slip rental rates to those in Northwest Mexico in peak season. A boat owner moving a boat from southern California to Northwest Mexico will pay generally similar costs for a slip of generally comparable quality with a generally comparable range of services.

Occupancy rates have been stable in southern California for the past few years, with some marinas having waiting lists. Slip rental rates have increased somewhat in certain marinas. However, in constant dollars slip rental rates are still generally below their highs in the early 1990's. Essentially all marina investment in southern California for the past decade has been based on capital provided through low cost public sources, since slip rates will not support the cost of private capital.

### **III. EXISTING MARINA DEMAND IN NORTHWEST MEXICO**

This section of the report assesses the existing marina demand in Northwest Mexico by reviewing occupancy and slip rates trends in existing marinas in Northwest Mexico during the past few years, arrivals of boats in Northwest Mexico during the past decade, and growth in boat registrations in the western United States during the past five years.

#### **A. OCCUPANCY AND SLIP RATES IN NORTHWEST MEXICO: 1999-2001**

Overall, there are 2,600 slips in the marinas in Northwest Mexico. Growth of the marina inventory has proceeded slowly since the development of the first marina in 1976, with much of the most recent growth occurring during the economic boom of the mid 1990's. Very little new near-term marina development is planned in the region.

To assess growth in demand within the current inventory, we researched occupancy rates and slip lease rates for the past three years. Essentially, both occupancy rates and slip lease rates have been stable during the past three years, with increasing weakness during the past year. This does not indicate strong demand for new facilities.

Occupancy rates have generally approached 90 to 95 percent in the peak season for the past three years, and have dropped to about 60 percent in the off-season. This most recent off-season showed some weakness compared to the previous years.

Slip lease rates vary widely in the region, with peak season rates between \$8 and \$21 per foot, and off-season rates about 25 to 40 percent less. These rates are unchanged from the previous years. Bookings are now underway for the coming peak season.

Based on our interviews with marina managers and related research, it appears that the marinas in Ensenada and Cabo San Lucas have recorded the best recent market performance, because they are located in areas of strong demand.

Marina management is a difficult, demanding, highly competitive business. Since boating is a major discretionary expenditure for a high income clientele, successful marina management is based on providing a high level of personal service to marina occupants. Because the financial performance of marinas closely follows economic cycles, marina managers must be able to adapt rapidly to changes in the economic climate. Our interviews revealed that many marina managers in the region are preparing for a more difficult economic climate during the next two to three years, and are focusing on attracting larger boats to increase income.

#### **B. BOAT ARRIVALS IN NORTHWEST MEXICO: 1993-2001**

Since much of the demand for marinas in Northwest Mexico comes from boats arriving in the region, we spent a significant amount of time and effort collecting and evaluating information on boat arrivals in the region during the past decade. We planned to use the past decade as the analytical period to identify and evaluate longer-term trends in demand.



To collect the data, we contacted the port captains of the five major ports in the region to request data on arrivals, in some instances making the request several times via telephone calls, faxed letters, and e-mail. We received some data from these requests.

To supplement these data we incorporated the arrivals data from the *Documento Basico* prepared by FONATUR, dated July 10, 2001, pages 10-14, which generally encompass the period 1993-1998. We compared the data we had received with the data from the *Documento Basico*, and found them to be closely compatible in all instances, and identical in some instances.

To evaluate the data, we requested copies of the actual logs and record books from two of the ports that had sent detailed data. The logs covered all arrivals recorded for a three-year period, 1999-2001. By reviewing the logs, we reconstructed the data collection methodologies for the two ports.

As we analyzed the data, we concluded that the numbers of arrivals in fact included both arrivals and departures. In some cases, a single boat was counted multiple times in a port as an arrival and a departure during a single year. This was possible because a boat may have entered and left a port several times during an extended cruise over a season, on both the outbound and return legs of the trip.

The analysis of the data also indicated that there was no specific standard method of data collection for boat arrivals. Different ports and different port staff recorded arrivals data in somewhat varying ways.

Finally, the data were incomplete in varying ways. To complete the time series, EDAW extrapolated for certain months in certain years, following the trends that had been set by the portion of the data sets that were available.

Based on this approach, the data show that boat arrivals in Northwest Mexico increased by 7 percent a year from 1993 to 2001. In spite of variances in collection methods and the incomplete time series of some of the data sets, this result is compatible with the *Documento Basico* data, the marina occupancy trends, and the western United States boat registration data.

After a thorough review of the detailed data sets from Ensenada and San Carlos in addition to the data from the other ports, we arrived at a recorded total of 5,832 arrivals in the region in 2001 (see Table 4). Based on our review of the Ensenada and San Carlos logs, essentially all the arrivals are boats in the 26 feet and longer category. All these boats are appropriately sized to create marina demand.

We estimated in general terms that the number of arrivals should be reduced by 50 percent to account for the overcounts at each port (i.e., counting both the arrivals and departures) and the multiple counts at different ports (where a single boat has been counted each time it arrives – and departs – a new port during a long cruise). This produces a revised total of 2,900 arrivals in the region in 2001 (see Table 4). This is also consistent with the FONATUR data.

**Table 4: Boat Arrivals in Northwest Mexico 1993-2001**

Location	1993	1994	1995	1996	1997	1998	1999	2000	2001	Annual Increase
Ensenada	645 <sup>1</sup>	745 <sup>1</sup>	781 <sup>1</sup>	1,153 <sup>1</sup>	1,240 <sup>1</sup>	1,460 <sup>2</sup>	1,687 <sup>2</sup>	2,078 <sup>2</sup>	2,232 <sup>2</sup>	16.8%
Cabo San Lucas	1,056 <sup>1</sup>	1,258 <sup>1</sup>	1,446 <sup>1</sup>	1,480 <sup>1</sup>	1,434 <sup>1</sup>	1,093 <sup>1</sup>	1,200 <sup>6</sup>	1,200 <sup>6</sup>	1,200 <sup>6</sup>	0.7%
La Paz	594 <sup>1</sup>	642 <sup>1</sup>	714 <sup>1</sup>	635 <sup>1</sup>	874 <sup>1</sup>	658 <sup>1</sup>	1,000 <sup>6</sup>	2,026 <sup>3</sup>	1,366 <sup>3</sup>	11.0%
San Carlos-Guaymas	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	588 <sup>4</sup>	630 <sup>4</sup>	466 <sup>4</sup>	-11.0%
Mazatlan	100 <sup>6</sup>	100 <sup>6</sup>	100 <sup>6</sup>	100 <sup>6</sup>	100 <sup>6</sup>	109 <sup>5</sup>	118 <sup>5</sup>	123 <sup>5</sup>	68 <sup>5</sup>	-14.4%
Other <sup>7</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	500 <sup>6</sup>	0.0%
<i>Subtotal</i>	<i>3,395</i>	<i>3,745</i>	<i>4,041</i>	<i>4,368</i>	<i>4,648</i>	<i>4,320</i>	<i>5,093</i>	<i>6,557</i>	<i>5,832</i>	<i>7.0%</i>
<b>Total<sup>8</sup></b>	<b>1,698</b>	<b>1,873</b>	<b>2,021</b>	<b>2,184</b>	<b>2,324</b>	<b>2,160</b>	<b>2,547</b>	<b>3,279</b>	<b>2,916</b>	<b>7.0%</b>

<sup>1</sup> Fonatur.<sup>2</sup> Ensenada.<sup>3</sup> La Paz.<sup>4</sup> San Carlos.<sup>5</sup> Mazatlan.<sup>6</sup> EDAW extrapolation.<sup>7</sup> Other includes Puerto San Carlos, Loreto, Santa Rosalia, San Felipe, Puerto Penasco, and Bahia Kino.<sup>8</sup> Represents 50 percent of subtotal.

Prepared by EDAW (December 17, 2002)

### C. BOAT REGISTRATIONS IN WESTERN UNITED STATES: 1996-2001

The next step in the analysis of demand was to compare the arrivals data for Northwest Mexico with information on boat registrations from the four western states of Arizona, California, Oregon and Washington in the United States.

The detailed boat arrivals data we reviewed showed that over 60 percent of the boats arriving in Ensenada were from the San Diego area, and almost 80 percent were from California. The San Carlos arrivals data indicated that over 30 percent of the arrivals were from Arizona, and almost 60 percent were from the four western states of Arizona, California, Oregon and Washington.

Based on interviews with marina operators in other locations in the region, it appears that boat arrivals in Cabo San Lucas and La Paz are somewhat more geographically dispersed. However, arrivals from the four states of Arizona, California, Oregon and Washington figure prominently in all the marinas in the region.

Based on these patterns, we concluded that arrivals from the four states are a determining factor in evaluating demand in the region. We then reviewed boat registrations in Arizona, California, Oregon and Washington in the western United States to see how rapidly boat registrations were growing in the four states.

One other conclusion from our analysis of the detailed boat arrivals data in Ensenada and San Carlos appeared significant. In both locations the arrivals data include excellent, complete information on the lengths of the boats. The boats in the arrivals data in both locations were consistently big, with an average length of almost 40 feet and many boats well over that length. Because of this factor, we focused on registrations of boats of 26 feet or longer. Like the marina

operators in the region, we expect these larger boats to form the bulk of the demand for marina slips in Northwest Mexico.

Evaluating increases in registrations of boats 26 feet and longer is a direct way to assess the strength of demand for marinas – the more rapid the increase in boat registrations, the stronger the demand for marinas.

However, even considering boats of 26 feet and longer overstates the market support that Northwest Mexico may receive from the four states. Many boats in the 26 to 35 foot range are sport fishers, coastal cruisers or day sailors that are not designed for ocean use, and are in fact dangerous in any winds or waves. These boats are too big to be trailered, and must be transported professionally.

The analysis of increases in boat registrations in the four states is summarized in Table 5 and illustrated in more detail in Tables 6-11. In addition, Appendices A-D provide substantial detail on registrations by type of boat and length. Essentially we reviewed the data on boat registrations to assess the overall rates of increase in registrations, and rates of increase by length of boat.

The basic conclusion from the analysis is that boating is a mature, slow growth recreational activity in the four states of Arizona, California, Oregon and Washington. Boating activity (and boat registrations) experienced rapid growth from the early 1960's through the mid 1970's in all four states. Since that time the growth in boat registrations has generally kept pace with population growth.

As is shown in Table 5, the overall rate of increase in boat registrations in the four states for the five year period from 1996 through 2001 was 1.2 percent per year, somewhat below the national rate of increase of 1.6 percent per year.

Since most of the demand for marinas is from boats of 26 feet or longer, we focused our review on growth in registrations of these larger boats. Our conclusion is that the growth in boat registrations has been relatively comparable for boats of all lengths in the four states. The overall growth in boat registrations from 1996 to 2001 in the four states was 1.2 percent per year. For boats of 26 feet and longer, the growth was 1.6 percent per year (see Table 6).

The growth in boats 26 feet or longer in the four states did not produce substantial increases in demand in Northwest Mexico from 1996 to 2001. Boats of 26 feet and longer represented just under 5 percent of the total 1,562,000 boats registered in the four states in 2001. And from 1996 to 2001, the number of boats 26 feet and longer in the four states increased from 71,700 to 77,500 – an increase of only 5,800 boats, or about 1,100 additional boats each year.

Because of the size of California and its proximity to Northwest Mexico, we also reviewed California boat registrations in more detail. Growth in boat registrations has closely paralleled population growth in California in the past decade. The number of boats per 1,000 people in the state was 26.7 in 1990 and 26.2 in 2000, which represents a slight decrease in boats compared to population (see Table 9).

Larger boats were not a source of significant growth in registrations in California from 1996 through 2001. In California, boats 26 feet and longer grew slowly during the period – only increasing by 1.1 percent per year from 1996 to 2001 (see Table 6). By comparison, total boat registrations in the state increased much more rapidly - by 1.7 percent per year from 1996 to 2001 (see Table 5).

In fact, the number of boats 26 feet and over registered in California increased by only about 2,300 from 1996 through 2001 – an average increase of much less than 500 boats per year. As a result of this slow growth, the percentage of total boat registrations in the state accounted for by boats of 26 feet and over fell from 4.7 percent in 1996 to 4.5 percent in 2001 (see Table 10). Growth of 500 boats per year does not provide any significant market support for marinas in Northwest Mexico, and does not put much pressure on marinas in California.

Interestingly, most of the growth in boat registrations in California from 1996 to 2001 was from jet skis. As shown in Table 10, registrations of jet skis increased by about 47,000 from 1996 through 2001. This accounted for 62 percent of the total increase in boat registrations of about 76,000 boats during the period. Essentially all the balance of the increase was in boats less than 26 feet in length.

As a final check, we reviewed increases in boat registrations in the five counties of southern California to see if the area had experienced relatively growth in boating activity recently. From 1996 through 2001 southern California had average annual growth in boat registrations of 1.8 percent in the five coastal counties. This was almost the same as the state average of 1.7 percent per year. We concluded from this comparison that the patterns of boat ownership were similar in southern California to those of the state overall.

**Table 5: Summary Boat Registrations in Western United States 1996-2001<sup>1</sup>**

	1996	1997	1998	1999	2000	2001	Annual Increase
<b>Total State Registrations</b>							
Arizona	150,108	155,010	158,726	153,517	148,748	148,713 <sup>2</sup>	-0.2%
California	881,092 <sup>3</sup>	894,347	895,132	955,700	904,863	957,463	1.7%
Oregon	195,080	197,315	197,634	196,102	195,691	195,636	0.1%
Washington	<u>246,257</u>	<u>245,962</u>	<u>249,968</u>	<u>250,606</u>	<u>257,625</u>	<u>260,335</u>	<u>1.1%</u>
<i>Total of Four States</i>	<i>1,472,537</i>	<i>1,492,634</i>	<i>1,501,460</i>	<i>1,555,925</i>	<i>1,506,927</i>	<i>1,562,147</i>	<i>1.2%</i>
<b>Total U.S. Registrations</b>	<b>11,877,938</b>	<b>12,312,982</b>	<b>12,565,930</b>	<b>12,738,271</b>	<b>12,782,143</b>	<b>12,884,166</b>	<b>1.6%</b>

<sup>1</sup> Source: U.S Coast Guard for 1996-20001 registration data.

<sup>2</sup> 2001 Arizona data from State of Arizona Game and Fish Department.

<sup>3</sup> 1996 California data from the California Department of Motor Vehicles.

Prepared by EDAW (October 21, 2002)

**Table 6: Boat Registrations by Length in Western United States 1996-2001<sup>1</sup>**

Size of Boat	1996	1997	1998	1999	2000	2001 <sup>2</sup>	Annual Increase
<b>Under 16 Feet</b>							
Arizona	36,199	35,666	35,206	34,649	34,239	33,461	-1.6%
California	260,004	263,699	248,547	261,601	239,244	261,014	0.1%
Oregon	100,870	103,029	101,913	99,334	97,859	95,553	-1.1%
Washington	<u>101,700</u>	<u>102,452</u>	<u>102,561</u>	<u>102,092</u>	<u>103,895</u>	<u>103,039</u>	<u>0.3%</u>
<i>Total of Four States</i>	<i>498,773</i>	<i>504,846</i>	<i>488,227</i>	<i>497,676</i>	<i>475,237</i>	<i>493,067</i>	<i>-0.2%</i>
<b>Total U.S. Registrations</b>	<b>5,225,704</b>	<b>5,285,704</b>	<b>5,250,923</b>	<b>5,254,300</b>	<b>4,934,103</b>	<b>4,943,338</b>	<b>-1.1%</b>
<b>16 to 26 Feet</b>							
Arizona	66,833	68,613	70,216	72,123	73,632	73,775	2.0%
California	323,605	354,329	332,442	354,930	346,045	390,213	3.8%
Oregon	85,415	87,046	88,285	89,332	90,227	92,322	1.6%
Washington	<u>123,078</u>	<u>123,012</u>	<u>125,337</u>	<u>125,761</u>	<u>130,412</u>	<u>133,651</u>	<u>1.7%</u>
<i>Total of Four States</i>	<i>598,931</i>	<i>633,000</i>	<i>616,280</i>	<i>642,146</i>	<i>640,316</i>	<i>689,961</i>	<i>2.9%</i>
<b>Total U.S. Registrations</b>	<b>5,146,608</b>	<b>5,380,677</b>	<b>5,514,969</b>	<b>5,680,040</b>	<b>5,679,180</b>	<b>5,868,292</b>	<b>2.7%</b>
<b>26 to 40 Feet</b>							
Arizona	3,612	3,891	4,099	4,334	4,688	5,023	6.8%
California	35,262	34,833	34,300	37,338	34,419	37,010	1.0%
Oregon	4,368	4,406	4,454	4,327	4,286	4,332	-0.2%
Washington	<u>17,511</u>	<u>16,529</u>	<u>17,884</u>	<u>18,359</u>	<u>18,775</u>	<u>18,990</u>	<u>1.6%</u>
<i>Total of Four States</i>	<i>60,753</i>	<i>59,659</i>	<i>60,737</i>	<i>64,358</i>	<i>62,168</i>	<i>65,355</i>	<i>1.5%</i>
<b>Total U.S. Registrations</b>	<b>367,035</b>	<b>388,430</b>	<b>401,097</b>	<b>418,018</b>	<b>428,083</b>	<b>446,193</b>	<b>4.0%</b>
<b>40 to 65 Feet</b>							
Arizona	577	607	614	622	628	567	-0.3%
California	5,167	5,056	4,911	5,218	4,853	5,182	0.1%
Oregon	469	456	471	435	402	398	-3.2%
Washington	<u>3,747</u>	<u>3,853</u>	<u>4,024</u>	<u>4,205</u>	<u>4,327</u>	<u>4,416</u>	<u>3.3%</u>
<i>Total of Four States</i>	<i>9,960</i>	<i>9,972</i>	<i>10,020</i>	<i>10,480</i>	<i>10,210</i>	<i>10,563</i>	<i>1.2%</i>
<b>Total U.S. Registrations</b>	<b>45,062</b>	<b>47,688</b>	<b>48,563</b>	<b>50,508</b>	<b>55,822</b>	<b>57,916</b>	<b>5.1%</b>
<b>Over 65 Feet</b>							
Arizona	54	53	55	60	67	69	5.0%
California	702	992	717	800	785	1,280	12.8%
Oregon	24	19	21	15	16	16	-7.8%
Washington	<u>221</u>	<u>116</u>	<u>162</u>	<u>189</u>	<u>216</u>	<u>239</u>	<u>1.6%</u>
<i>Total of Four States</i>	<i>1,001</i>	<i>1,180</i>	<i>955</i>	<i>1,064</i>	<i>1,084</i>	<i>1,604</i>	<i>9.9%</i>
<b>Total U.S. Registrations</b>	<b>6,192</b>	<b>7,099</b>	<b>7,581</b>	<b>7,899</b>	<b>8,413</b>	<b>9,606</b>	<b>9.2%</b>
<b>Total Boats Over 26 Feet</b>							
Arizona	4,243	4,551	4,768	5,016	5,383	5,659	5.9%
California	41,131	40,881	39,928	43,356	40,057	43,472	1.1%
Oregon	4,861	4,881	4,946	4,777	4,704	4,746	-0.5%
Washington	<u>21,479</u>	<u>20,498</u>	<u>22,070</u>	<u>22,753</u>	<u>23,318</u>	<u>23,645</u>	<u>1.9%</u>
<i>Total of Four States</i>	<i>71,714</i>	<i>70,811</i>	<i>71,712</i>	<i>75,902</i>	<i>73,462</i>	<i>77,522</i>	<i>1.6%</i>
<b>Total U.S. Registrations</b>	<b>418,289</b>	<b>443,217</b>	<b>457,241</b>	<b>476,425</b>	<b>492,318</b>	<b>513,715</b>	<b>4.2%</b>

<sup>1</sup> Source: U.S Coast Guard.

<sup>2</sup> 2001 Arizona data from State of Arizona Game and Fish Department.

Prepared by EDAW (October 21, 2002)

**Table 7: Boat Registrations by Type in Western United States 1996-2001<sup>1</sup>**

Size of Boat	1996	1997	1998	1999	2000	2001 <sup>2</sup>	Annual Increase
<b>Under 16 Feet</b>							
<i>Power Boat</i>							
Arizona	36,161	35,626	35,169	34,623	34,078	33,294	-1.6%
California	258,464	262,202	247,101	260,087	237,879	259,571	0.1%
Oregon	99,325	101,498	100,433	97,940	96,511	94,202	-1.1%
Washington	99,766	100,514	100,605	100,090	101,788	102,431	0.5%
<i>subtotal</i>	493,716	499,840	483,308	492,740	470,256	489,498	-0.2%
<i>Auxiliary Sail</i>							
Arizona	38	40	37	26	161	167	34.5%
California	1,540	1,497	1,446	1,514	1,365	1,443	-1.3%
Oregon	1,545	1,531	1,480	1,394	1,348	1,351	-2.6%
Washington	1,934	1,938	1,956	2,002	2,107	608	-20.7%
<i>subtotal</i>	5,057	5,006	4,919	4,936	4,981	3,569	-6.7%
<b>Total Under 16 Feet</b>	<b>498,773</b>	<b>504,846</b>	<b>488,227</b>	<b>497,676</b>	<b>475,237</b>	<b>493,067</b>	<b>-0.2%</b>
<b>16 to 26 Feet</b>							
<i>Power Boats</i>							
Arizona	66,720	68,506	70,111	72,037	72,734	72,893	1.8%
California	316,480	347,339	323,095	347,619	339,238	382,976	3.9%
Oregon	82,765	84,382	85,652	86,745	87,680	89,754	1.6%
Washington	118,846	118,830	121,162	121,653	126,233	129,779	1.8%
<i>subtotal</i>	584,811	619,057	600,020	628,054	625,885	675,402	2.9%
<i>Auxiliary Sail</i>							
Arizona	113	107	105	86	898	882	50.8%
California	7,125	6,990	9,347	7,311	6,807	7,237	0.3%
Oregon	2,650	2,664	2,633	2,587	2,547	2,568	-0.6%
Washington	4,232	4,182	4,175	4,108	4,179	3,872	-1.8%
<i>subtotal</i>	14,120	13,943	16,260	14,092	14,431	14,559	0.6%
<b>Total 16 to 26 Feet</b>	<b>598,931</b>	<b>633,000</b>	<b>616,280</b>	<b>642,146</b>	<b>640,316</b>	<b>689,961</b>	<b>2.9%</b>
<b>26 to 40 Feet</b>							
<i>Power Boats</i>							
Arizona	3,526	3,799	4,004	4,238	4,479	4,805	6.4%
California	23,184	23,020	22,748	25,296	23,105	25,210	1.7%
Oregon	3,352	3,377	3,429	3,343	3,323	3,385	0.2%
Washington	13,678	13,702	14,123	14,610	14,997	15,327	2.3%
<i>subtotal</i>	43,740	43,898	44,304	47,487	45,904	48,727	2.2%
<i>Auxiliary Sail</i>							
Arizona	86	92	95	96	209	218	20.4%
California	12,078	11,813	11,552	12,042	11,314	11,800	-0.5%
Oregon	1,016	1,029	1,025	984	963	947	-1.4%
Washington	3,833	2,827	3,761	3,749	3,778	3,663	-0.9%
<i>subtotal</i>	17,013	15,761	16,433	16,871	16,264	16,628	-0.5%
<b>Total 26 to 40 Feet</b>	<b>60,753</b>	<b>59,659</b>	<b>60,737</b>	<b>64,358</b>	<b>62,168</b>	<b>65,355</b>	<b>1.5%</b>

**Table 7: Boat Registrations by Type in Western United States 1996-2001<sup>1</sup> (cont.)**

<b>Size of Boat</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001<sup>2</sup></b>	<b>Annual Increase</b>
<b>40 to 65 Feet</b>							
<i>Power Boats</i>							
Arizona	572	602	609	616	623	562	-0.4%
California	4,309	4,249	4,168	4,434	4,139	4,420	0.5%
Oregon	376	367	389	358	328	325	-2.9%
Washington	<u>3,171</u>	<u>3,273</u>	<u>3,434</u>	<u>3,629</u>	<u>3,762</u>	<u>3,856</u>	<u>4.0%</u>
<i>subtotal</i>	8,428	8,491	8,600	9,037	8,852	9,163	1.7%
<i>Auxiliary Sail</i>							
Arizona	5	5	5	6	5	5	0.0%
California	858	807	743	784	714	762	-2.3%
Oregon	93	89	82	77	74	73	-4.7%
Washington	<u>576</u>	<u>580</u>	<u>590</u>	<u>576</u>	<u>565</u>	<u>560</u>	<u>-0.6%</u>
<i>subtotal</i>	1,532	1,481	1,420	1,443	1,358	1,400	-1.8%
<b>Total 40 to 65 Feet</b>	<b>9,960</b>	<b>9,972</b>	<b>10,020</b>	<b>10,480</b>	<b>10,210</b>	<b>10,563</b>	<b>1.2%</b>
<b>Over 65 Feet</b>							
<i>Power Boats</i>							
Arizona	54	53	55	60	67	69	5.0%
California	681	971	698	779	766	1,257	13.0%
Oregon	22	17	18	12	14	14	-8.6%
Washington	<u>211</u>	<u>103</u>	<u>151</u>	<u>179</u>	<u>206</u>	<u>231</u>	<u>1.8%</u>
<i>subtotal</i>	968	1,144	922	1,030	1,053	1,571	10.2%
<i>Auxiliary Sail</i>							
Arizona	0	0	0	0	0	0	0.0%
California	21	21	19	21	19	23	1.8%
Oregon	2	2	3	3	2	2	0.0%
Washington	<u>10</u>	<u>13</u>	<u>11</u>	<u>10</u>	<u>10</u>	<u>8</u>	<u>-4.4%</u>
<i>subtotal</i>	33	36	33	34	31	33	0.0%
<b>Total Over 65 Feet</b>	<b>1,001</b>	<b>1,180</b>	<b>955</b>	<b>1,064</b>	<b>1,084</b>	<b>1,604</b>	<b>9.9%</b>
<b>Other Boats</b>							
Arizona	42,833	46,180	48,536	41,729	35,494	35,818	-3.5%
California	256,352 <sup>3</sup>	235,438	274,215	295,813	279,517	262,764	0.5%
Oregon	3,934	2,359	2,490	2,659	2,901	3,015	-5.2%
Washington	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0.0%</u>
<b>Total Other Boats</b>	<b>303,119</b>	<b>283,977</b>	<b>325,241</b>	<b>340,201</b>	<b>317,912</b>	<b>301,597</b>	<b>-0.1%</b>
<b>Total State Registrations</b>							
Arizona	150,108	155,010	158,726	153,517	148,748	148,713	-0.2%
California	881,092 <sup>3</sup>	894,347	895,132	955,700	904,863	957,463	1.7%
Oregon	195,080	197,315	197,634	196,102	195,691	195,636	0.1%
Washington	246,257	245,962	249,968	250,606	257,625	260,335	1.1%
<b>Total of Four States</b>	<b>1,472,537</b>	<b>1,492,634</b>	<b>1,501,460</b>	<b>1,555,925</b>	<b>1,506,927</b>	<b>1,562,147</b>	<b>1.2%</b>

<sup>1</sup> Source: U.S Coast Guard.

<sup>2</sup> 2001 Arizona data from State of Arizona Game and Fish Department.

<sup>3</sup> From California Department of Motor Vehicles.

Prepared by EDAW (October 21, 2002)

**Table 8: Boat Registrations 26 Feet and Longer in Western United States 1996-2001<sup>1</sup>**

<b>Size of Boat</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001<sup>2</sup></b>	<b>Annual Increase</b>
<b><u>26 to 40 Feet</u></b>							
Arizona	3,612	3,891	4,099	4,334	4,688	5,023	6.8%
California	35,262	34,833	34,300	37,338	34,419	37,010	1.0%
Oregon	4,368	4,406	4,454	4,327	4,286	4,332	-0.2%
Washington	17,511	16,529	17,884	18,359	18,775	18,990	1.6%
<b>Total 26 to 40 Feet</b>	<b>60,753</b>	<b>59,659</b>	<b>60,737</b>	<b>64,358</b>	<b>62,168</b>	<b>65,355</b>	<b>1.5%</b>
<b><u>40 to 65 Feet</u></b>							
Arizona	577	607	614	622	628	567	-0.3%
California	5,167	5,056	4,911	5,218	4,853	5,182	0.1%
Oregon	469	456	471	435	402	398	-3.2%
Washington	3,747	3,853	4,024	4,205	4,327	4,416	3.3%
<b>Total 40 to 65 Feet</b>	<b>9,960</b>	<b>9,972</b>	<b>10,020</b>	<b>10,480</b>	<b>10,210</b>	<b>10,563</b>	<b>1.2%</b>
<b><u>Over 65 Feet</u></b>							
Arizona	54	53	55	60	67	69	5.0%
California	702	992	717	800	785	1,280	12.8%
Oregon	24	19	21	15	16	16	-7.8%
Washington	221	116	162	189	216	239	1.6%
<b>Total Over 65 Feet</b>	<b>1,001</b>	<b>1,180</b>	<b>955</b>	<b>1,064</b>	<b>1,084</b>	<b>1,604</b>	<b>9.9%</b>
<b><u>Total Boats Over 26 Feet</u></b>							
Arizona	4,243	4,551	4,768	5,016	5,383	5,659	5.9%
California	41,131	40,881	39,928	43,356	40,057	43,472	1.1%
Oregon	4,861	4,881	4,946	4,777	4,704	4,746	-0.5%
Washington	21,479	20,498	22,070	22,753	23,318	23,645	1.9%
<b>Total Over 26 Feet</b>	<b>71,714</b>	<b>70,811</b>	<b>71,712</b>	<b>75,902</b>	<b>73,462</b>	<b>77,522</b>	<b>1.6%</b>

<sup>1</sup> Source: U.S Coast Guard.

<sup>2</sup> 2001 Arizona data from State of Arizona Game and Fish Department.

Prepared by EDAW (October 21, 2002)



**Table 9: Boat Registrations in California 1960-2001<sup>1</sup>**

Year	Number of Registered Boats	Annual Increase	California Population	Annual Increase	Boats per 1000 People
1960	177,800	43.5%	15,860,000	3.2%	11.2
1961	255,100	-4.0%	16,360,000	3.3%	15.6
1962	245,000	8.2%	16,900,000	2.1%	14.5
1963	265,000	7.5%	17,250,000	4.5%	15.4
1964	285,000	7.0%	18,020,000	2.6%	15.8
1965	305,000	5.6%	18,490,000	1.9%	16.5
1966	322,000	9.6%	18,850,000	2.0%	17.1
1967	353,000	6.5%	19,236,000	1.4%	18.4
1968	376,000	5.3%	19,513,000	2.4%	19.3
1969	396,000	6.3%	19,980,000	1.2%	19.8
1970	420,800	3.4%	20,220,000	2.5%	20.8
1971	435,000	4.8%	20,720,000	1.0%	21.0
1972	456,000	4.2%	20,930,000	0.0%	21.8
1973	475,000	4.8%	20,930,000	1.0%	22.7
1974	498,000	4.0%	21,130,000	1.3%	23.6
1975	518,000	4.4%	21,400,000	1.5%	24.2
1976	541,000	0.4%	21,720,000	1.7%	24.9
1977	543,000	1.5%	22,100,000	1.7%	24.6
1978	551,000	2.5%	22,471,000	2.6%	24.5
1979	565,000	-1.6%	23,049,000	2.0%	24.5
1980	556,000	3.6%	23,511,000	2.2%	23.6
1981	576,000	1.8%	24,032,300	2.1%	24.0
1982	586,190	3.6%	24,531,700	2.1%	23.9
1983	607,097	3.2%	25,052,200	2.0%	24.2
1984	626,439	3.8%	25,555,400	2.0%	24.5
1985	650,264	4.9%	26,072,300	2.4%	24.9
1986	682,125	4.3%	26,693,700	2.4%	25.6
1987	711,193	3.6%	27,338,400	2.5%	26.0
1988	737,143	3.4%	28,018,700	3.7%	26.3
1989	762,008	4.4%	29,063,200	2.4%	26.2
1990	795,335	2.9%	29,760,021	3.0%	26.7
1991	818,143	0.5%	30,646,000	2.1%	26.7
1992	822,430	0.8%	31,283,000	1.5%	26.3
1993	829,157	1.5%	31,746,000	1.2%	26.1
1994	841,311	2.3%	32,140,000	0.6%	26.2
1995	860,672	2.4%	32,344,000	-0.3%	26.6
1996	881,092	1.5%	32,231,000	2.3%	27.3
1997	894,347	0.0%	32,957,000	0.9%	27.1
1998	894,725	6.7%	33,252,000	1.6%	26.9
1999	954,716	-5.2%	33,773,000	2.1%	28.3
2000	904,843	5.8%	34,480,000	0.8%	26.2
2001	957,463 <sup>2</sup>	N/A	34,758,000	N/A	27.5

<sup>1</sup> Source: California Department of Motor Vehicles.<sup>2</sup> 2001 California State registration data from U.S. Coast Guard.

Prepared by EDAW (October 21, 2002)

**Table 10: Jet Ski Registrations in California 1996-2001**

	1996	1997	1998	1999	2000	2001	Annual Increase
Total California Boat Registrations <sup>1</sup>	881,092	894,347	895,132	955,700	904,863	957,463	1.7%
Total Jet Skis <sup>2</sup>	173,353	188,780	195,468	212,342	203,272	220,397	4.9%
As a Percent of Total CA Registrations	19.7%	21.1%	21.8%	22.2%	22.5%	23.0%	
Total Boats over 26 Feet <sup>3</sup>	41,131	40,881	39,928	43,356	40,057	43,472	1.1%
As a Percent of Total CA Registrations	4.7%	4.6%	4.5%	4.5%	4.4%	4.5%	

<sup>1</sup> Source: 1997-2001 data from U.S. Coast Guard. 1996 data from California Department of Motor Vehicles.

<sup>2</sup> Source: California Department of Motor Vehicles.

<sup>3</sup> Source: U.S. Coast Guard.

**Table 11: Boat Registrations in Southern California 1996-2001<sup>1</sup>**

County	1996	1997	1998	1999	2000	2001	Annual Increase
Santa Barbara	9,890	10,116	10,129	10,783	10,310	11,038	2.2%
Ventura	25,019	25,651	25,723	27,357	26,093	27,743	2.1%
Los Angeles	124,365	124,907	124,609	131,920	124,038	132,081	1.2%
Orange	75,037	76,734	76,723	81,778	76,818	81,594	1.7%
San Diego	61,198	62,769	63,406	68,979	65,000	70,104	2.8%
Total of Five Counties	295,509	300,177	300,590	320,817	302,259	322,560	1.8%
<b>California</b>	<b>881,092</b>	<b>894,347</b>	<b>894,725</b>	<b>954,716</b>	<b>904,843</b>	<b>957,463</b> <sup>2</sup>	<b>1.7%</b>

**As Percent of California Registrations**

Santa Barbara	1.1%	1.1%	1.1%	1.1%	1.1%	1.2%
Ventura	2.8%	2.9%	2.9%	2.9%	2.9%	2.9%
Los Angeles	14.1%	14.0%	13.9%	13.8%	13.7%	13.8%
Orange	8.5%	8.6%	8.6%	8.6%	8.5%	8.5%
San Diego	6.9%	7.0%	7.1%	7.2%	7.2%	7.3%
Total of Five Counties	33.5%	33.6%	33.6%	33.6%	33.4%	33.7%

<sup>1</sup> Source: California Department of Motor Vehicles.

<sup>2</sup> 2001 California State registration data from U.S. Coast Guard.

Prepared by EDAW (October 21, 2002)

## **IV. PROJECTED MARINA DEMAND IN NORTHWEST MEXICO: 2001-2015**

This section of the report projects the demand for new marina development in Northwest Mexico through 2015 by projecting the amount of potential market demand the region can capture from the western United States, and by calculating the numbers of boats that will use marinas based on anticipated patterns of boat arrivals to the region annually during the period.

### **A. PROJECTED BOATS OVER 26 FEET IN WESTERN UNITED STATES: 2001-2015**

As an initial basis for projecting marina demand, we estimated the increase in registrations of boats 26 feet and longer in Arizona, California, Oregon and Washington through 2015, by following recent patterns in growth of registrations of boats 26 feet and longer in the four states.

To create the projections, we continued the trends from 1996 to 2001, with the assumption that no annual increase could be less than 1.0 percent. As is shown in Table 12, this meant that we eliminated all negative annual increases that occurred from 1996 to 2001, and replaced them with positive 1.0 percent increases per year.

The projections are therefore generous for several reasons – they replace negative increases with positive increases, they continue trends that occurred during a period of economic boom, and they assume straight line increases through 2015 with no consideration of any future economic down cycles.

Using this generous approach, we projected that the total number of boats 26 feet and longer in the potential markets in the four states would increase from 77,000 in 2001 to 97,000 by 2015. This is an annual growth rate of 1.7 percent.

To crosscheck these projections, we compared them with a series of detailed projections for growth in boats in the five coastal counties in southern California (see Table 13). The results appear compatible.

As a final step, we compared the projected growth in larger boats with the marina inventories in the in Arizona, California, Oregon, Washington and the five coastal counties in southern California to assess whether the supply of marinas in these areas can accommodate this demand from larger boats.

We concluded that marina operators will gradually update their facilities as the market evolves, and that the supply will adjust to the larger average size incrementally. Essentially, we project that some of the smaller, older, more marginal slips in the current inventories will slowly be replaced with larger slips as part of ongoing facility modernization and renovation programs. Because the growth rate of the larger boats is projected to be less than two percent per year, the facilities updates should be able to keep pace with the change easily.

**Table 12: Projected Boats 26 Feet and Longer in Western United States 2001-2015<sup>1</sup>**

<b>Size of Boat</b>	<b>1996-2001 Annual Increase</b>	<b>Projected Annual Increase<sup>2</sup></b>	<b>2001<sup>3</sup></b>	<b>2005</b>	<b>2010</b>	<b>2015</b>
<b><u>26 to 40 Feet</u></b>						
Arizona	6.8%	6.8%	5,023	6,539	9,094	12,646
California	1.0%	1.0%	37,010	38,471	40,378	42,379
Oregon	-0.2%	1.0%	4,332	4,508	4,738	4,980
Washington	1.6%	1.6%	18,990	20,263	21,974	23,830
<b>Total 26 to 40 Feet</b>	<b>1.5%</b>	<b>1.6%</b>	<b>65,355</b>	<b>69,506</b>	<b>75,067</b>	<b>81,073</b>
<b><u>40 to 65 Feet</u></b>						
Arizona	-0.3%	1.0%	567	590	620	652
California	0.1%	1.0%	5,182	5,392	5,667	5,957
Oregon	-3.2%	1.0%	398	414	435	457
Washington	3.3%	3.3%	4,416	5,036	5,935	6,995
<b>Total 40 to 65 Feet</b>	<b>1.2%</b>	<b>1.9%</b>	<b>10,563</b>	<b>11,392</b>	<b>12,519</b>	<b>13,758</b>
<b><u>Over 65 Feet</u></b>						
Arizona	5.0%	5.0%	69	84	107	137
California	12.8%	12.8%	1,280	2,070	3,774	6,881
Oregon	-7.8%	1.0%	16	17	17	18
Washington	1.6%	1.6%	239	254	275	298
<b>Total Over 65 Feet</b>	<b>9.9%</b>	<b>10.0%</b>	<b>1,604</b>	<b>2,350</b>	<b>3,787</b>	<b>6,103</b>
<b><u>Total Boats Over 26 Feet</u></b>						
Arizona	5.9%	5.9%	5,659	7,125	9,503	12,674
California	1.1%	1.1%	43,472	45,440	48,027	50,760
Oregon	-0.5%	1.0%	4,746	4,939	5,191	5,455
Washington	1.9%	1.9%	23,645	25,534	28,109	30,944
<b>Total Over 26 Feet</b>	<b>1.6%</b>	<b>1.7%</b>	<b>77,522</b>	<b>82,814</b>	<b>89,940</b>	<b>97,680</b>

<sup>1</sup> Projections based on EDAW projected annual rate of increase.

<sup>2</sup> EDAW assumes a minimum growth rate of 1.0 percent per year.

<sup>3</sup> 2001 Arizona data from State of Arizona Game and Fish Department.

Prepared by EDAW (October 21, 2001)

**Table 13: Projected Southern California Boat Registrations 2001-2015<sup>1</sup>**

County	1996-2001				
	Annual Increase	2001 <sup>2</sup>	2005	2010	2015
Santa Barbara	2.2%	11,038	12,052	13,451	15,012
Ventura	2.1%	27,743	30,134	33,415	37,053
Los Angeles	1.2%	132,081	138,597	147,196	156,329
Orange	1.7%	81,594	87,250	94,874	103,164
San Diego	2.8%	70,104	78,153	89,527	102,555
<i>Total of Five Counties</i>	1.8%	322,560	345,973	377,644	412,213
<b>California</b>	<b>1.7%</b>	<b>957,463</b>	<b>1,023,299</b>	<b>1,111,996</b>	<b>1,208,382</b>

**As Percent of California Registrations**

Santa Barbara	1.2%	1.2%	1.2%	1.2%
Ventura	2.9%	2.9%	3.0%	3.1%
Los Angeles	13.8%	13.5%	13.2%	12.9%
Orange	8.5%	8.5%	8.5%	8.5%
San Diego	7.3%	7.6%	8.1%	8.5%
<i>Total of Five Counties</i>	33.7%	33.8%	34.0%	34.1%

<sup>1</sup> Projections based on average annual rate of increase.

<sup>2</sup> 2001 state data from U.S. Coast Guard. 2001 county data from California Department of Motor Vehicles.

Prepared by EDAW (October 21, 2002)

## **B. PROJECTED POTENTIAL BOATING MARKET IN NORTHWEST MEXICO: 2001-2015**

To calculate the size of the potential boating market from the increases in boat registrations, we used a set of assumptions to estimate what percentages of boats 26 feet and longer might consider a trip to Northwest Mexico, by length of boat and state of registration.

The analysis, which is summarized in Table 14, assumes, for example, that 10 percent of the boats 26 to 40 feet long in Washington would consider making a trip to Northwest Mexico in both 2001 and 2015. This approach produces a potential market of about 10,000 boats in 2001, increasing to about 15,000 boats by 2015.

This represents perhaps 50 to 75 percent of the potential market, based on the arrivals patterns in the detailed data from Ensenada and San Carlos. We reviewed the capture rates implied in this calculation, and concluded that the market sizing and rates of increase were appropriate.

**Table 14: Projected Potential Boating Market in Northwest Mexico 2001-2015**

Size of Boat	2001			2015		
	Total Boats <sup>1</sup>	Percent Capture	Potential Market	Total Boats <sup>2</sup>	Percent Capture	Potential Market
<b><u>26 to 40 Feet</u></b>						
Arizona	5,023	10%	502	12,646	10%	1,265
California	37,010	10%	3,701	42,379	10%	4,238
Oregon	4,332	10%	433	4,980	10%	498
Washington	18,990	10%	1,899	23,830	10%	2,383
<b>Total 26 to 40 Feet</b>	<b>65,355</b>	<b>10%</b>	<b>6,536</b>	<b>81,073</b>	<b>10%</b>	<b>8,107</b>
<b><u>40 to 65 Feet</u></b>						
Arizona	567	25%	142	652	25%	163
California	5,182	25%	1,296	5,957	25%	1,489
Oregon	398	25%	100	457	25%	114
Washington	4,416	25%	1,104	6,995	25%	1,749
<b>Total 40 to 65 Feet</b>	<b>10,563</b>	<b>25%</b>	<b>2,641</b>	<b>13,758</b>	<b>25%</b>	<b>3,440</b>
<b><u>Over 65 Feet</u></b>						
Arizona	69	50%	35	137	50%	69
California	1,280	50%	640	6,881	50%	3,441
Oregon	16	50%	8	18	50%	9
Washington	239	50%	120	298	50%	149
<b>Total Over 65 Feet</b>	<b>1,604</b>	<b>50%</b>	<b>802</b>	<b>6,103</b>	<b>50%</b>	<b>3,051</b>
<b><u>Total Boats Over 26 Feet</u></b>						
Arizona	5,659		679	12,674		1,496
California	43,472		5,637	50,760		9,168
Oregon	4,746		541	5,455		622
Washington	23,645		3,123	30,944		4,281
<b>Total Over 26 Feet</b>	<b>77,522</b>		<b>9,978</b>	<b>97,680</b>		<b>14,598</b>

<sup>1</sup> Source: U.S. Coast Guard.

<sup>2</sup> EDAW projections.

Prepared by EDAW (October 21, 2002)

### **C. PROJECTED BOATING MARKET CAPTURE IN NORTHWEST MEXICO: 2001-2015**

To project arrivals of boats 26 feet or longer in Northwest Mexico, we assumed that arrivals will grow by 10 percent annually through 2015. Although this is substantially above the 7 percent per year growth that we derived from 1993 to 2001 in our analysis of arrivals (see Table 7), it appears to be a generous, but reasonable, assumption.

Based on current patterns of boat travel in Northwest Mexico, we estimate that approximately half the boats 26 feet and longer arriving in the region now spend a significant amount of their stay in a marina. The other half of the arrivals use natural anchorages near marinas (both La Paz and San Carlos are examples of this pattern), are in the region for very short stays (Ensenada has a considerable amount of this type of stay), or simply cruise to areas well outside the marinas for most of their trip.

Based on this assumption, the number of boats going into marinas for a significant stay will increase from 1,450 in 2001 to 5,500 by 2015. This is an averaged straight line projection.

**Table 15: Projected Boat Arrivals and Marina Capture in Northwest Mexico 2001-2015<sup>1</sup>**

<b>Year</b>	<b>Total Arrivals</b>	<b>Capture Rate</b>	<b>Total in Marinas</b>
2001	2,900	50%	1,450
2002	3,190	50%	1,595
2003	3,509	50%	1,755
2004	3,860	50%	1,930
2005	4,246	50%	2,123
2006	4,670	50%	2,335
2007	5,138	50%	2,569
2008	5,651	50%	2,826
2009	6,216	50%	3,108
2010	6,838	50%	3,419
2011	7,522	50%	3,761
2012	8,274	50%	4,137
2013	9,101	50%	4,551
2014	10,012	50%	5,006
2015	11,013	50%	5,506

<sup>1</sup> Assumes 10 percent growth per year for all categories.

Prepared by EDAW (October 24, 2002)

## D. PROJECTED MARINA DEMAND IN NORTHWEST MEXICO: 2001-2015

As a final market conclusion, we projected the growth in marina demand in Northwest Mexico from 2001 to 2015 by assuming that:

- Every year 15 percent of the boats arriving into the marinas, or about one out of every seven boats, would decide to stay in the marinas in Northwest Mexico. This assumption is based on interviews with marina operators in the region.
- Every year 10 percent of the boats in the marinas in the region would leave – this equates to an average ten-year stay. This assumption is also based on interviews with marina operators in the region.
- The average annual occupancy rate of the marinas would be about 80 percent, or similar to current occupancy rates.

Using this approach, the number of spaces in the marinas in Northwest Mexico would grow from 2,600 in 2001 to about 6,000 by 2015. This represents an average growth of 6 percent per year.

Based on the trends in arrivals and boat registrations reviewed in previous sections of the report, this growth rate is at the high end of our expectations. If there were a significant negative impact on these trends, such as a down economic cycle in the western United States, we would expect the rate of growth to slow substantially.

**Table 16: Projected Marina Market Demand in Northwest Mexico 2001-2015**

Year	Arrivals to Marinas <sup>1</sup>	Percent Addition to Permanent Fleet	Additional Boats to Permanent Fleet	Percent of Boats Leaving Fleet	Boats Leaving Fleet	Net Boats Added to Fleet	Permanent Fleet	Occupancy Rate	Marina Spaces <sup>2</sup>
2001							2,080	80%	2,600
2002	1,595	15%	239	10%	208	31	2,111	80%	2,639
2003	1,755	15%	263	10%	211	52	2,163	80%	2,704
2004	1,930	15%	289	10%	216	73	2,236	80%	2,796
2005	2,123	15%	318	10%	224	95	2,331	80%	2,914
2006	2,335	15%	350	10%	233	117	2,448	80%	3,061
2007	2,569	15%	385	10%	245	140	2,589	80%	3,236
2008	2,826	15%	424	10%	259	165	2,754	80%	3,442
2009	3,108	15%	466	10%	275	191	2,945	80%	3,681
2010	3,419	15%	513	10%	294	218	3,163	80%	3,954
2011	3,761	15%	564	10%	316	248	3,411	80%	4,264
2012	4,137	15%	621	10%	341	279	3,690	80%	4,613
2013	4,551	15%	683	10%	369	314	4,004	80%	5,005
2014	5,006	15%	751	10%	400	350	4,354	80%	5,443
2015	5,506	15%	826	10%	435	391	4,745	80%	5,931

<sup>1</sup> Assumes 10% annual growth from 2002 through 2015.

<sup>2</sup> Represents average annual rate of growth of 6 percent from 2001-2015.

Prepared by EDAW (October 24, 2002)



## V. PROJECTED LOCATIONS FOR MARINA DEVELOPMENT IN NORTHWEST MEXICO: 2001-2015

This section of the report projects where new marina development will be located in Northwest Mexico by delineating patterns of marina growth based on existing marina locations, climate, natural features, access, and nautical tourism infrastructure in the different areas within the region.

### A. PROJECTIONS BY MARKET AREA IN NORTHWEST MEXICO

Our projections of where new marina development will be located are summarized in Table 17. As Table 17 indicates, we project that most of the new marina development will be in areas of existing successful marina activity, and that the market shares of the various recreational boating areas will change incrementally.

Essentially, we anticipate that marina development will continue to cluster in areas where a combination of a good climate, attractive natural scenery, convenient access by water and air, and most importantly substantial investments in boating infrastructure will support new marinas.

The projections do assume that, in addition to the continued clustering, there will be some initial marina development in the Baja California Central Coast Sea of Cortez area, and substantial growth in the La Paz area.

In summary, we project the following marina development trends by recreational boating area:

1. The **Ensenada** area marina supply will continue to grow strongly, constrained only by site availability, due to its proximity to San Diego. Boating activity in the area will gradually spread to adjacent coastal locations and around the islands. Continued public and private investment in the harbor, waterfront and tourist district will be essential to support new marina development.
2. The **Pacific coast** of Baja California will not see any additional marina development. This area will continue to be part of a rapid journey to the south, with periodic fuel and rest stops at a few key locations. The rest stops can be served by natural anchorages and moorings or buoys.

The cross peninsula boat transport system proposed from Santa Rosalilla to Bahia de los Angeles will not become a significant factor in boating activities in the region because it has no well defined market to serve. It will not serve smaller boats in the 20 to 35 foot range – most of these are sport fishers, coastal cruisers, or day sailors that are not designed for ocean use. These boats are too small to be sailed part of the way, too big to be trailered, and must be transported professionally. The larger ocean-going boats of 35 feet and up have no reason to stop in mid trip and switch to a transport vehicle. These larger boats can simply continue to Cabo San Lucas and be in reach of excellent services much more rapidly than they would be via Bahia de los Angeles.

3. The **Los Cabos** area marina supply will expand in several locations as the area continues its maturation into a preeminent role in the southwestern United States/coast of Mexico

resort industry. However, any marina development in the Cabo del Este area will need to be preceded by substantial investment in basic infrastructure.

4. The **La Paz** area marina supply will expand dramatically if Costa Baja and Los Muertos are developed. These projects will provide access to new market segments, and will move La Paz into a new market position. This repositioning can be accomplished by private investment.
5. The **Baja California central coast of the Sea of Cortez** can start a smaller scale marina development program together with i-9 in a few key locations to support gradual growth of eco-based tourism in the area. The basic investments are in place in Puerto Escondido; the other locations could follow if a master plan were prepared for the area.
6. The **northern Sea of Cortez** will not see any significant additional marina development because of its isolation, weather, tides, and the current RV park development patterns. This will remain an area for trailered boats.
7. The **Central Mainland** marina supply could expand if resort and tourism development strengthens. Recent trends, however, suggest a slowdown in boating activity in this area.
8. The **Mazatlan** area is well positioned to expand its marina inventory in concert with the continued growth of its tourism base. The major issue is site availability.

**Table 17: Projected Locations of Marina Demand in Northwest Mexico 2001-2015**

<b>Location</b>	<b>Existing Marina Spaces</b>	<b>Percent of Existing Marina Spaces</b>	<b>Total Marina Spaces 2015</b>	<b>Percent of Total Marina Spaces in 2015</b>
<b><u>Ensenada</u></b>				
Ensenada	751	29%	1500	25%
<b><u>Pacific Coast</u></b>				
Sta. Rosalillita	40	2%	50	1%
Bahia de Tortugas		0%	0	0%
Puerto San Carlos		0%	0	0%
<b><u>Los Cabos Region</u></b>				
Cabo San Lucas	362	14%	600	10%
Cabo del Este		0%	500	8%
<b><u>La Paz Region</u></b>				
La Paz	413	16%	1200	20%
<b><u>Central Coast Sea of Cortez</u></b>				
Puerto Escondido		0%	200	3%
Mulege		0%	100	2%
Santa Rosalia	15	1%	50	1%
Bahia de los Angeles		0%	100	2%
<b><u>Northern Sea of Cortez</u></b>				
San Felipe		0%	50	1%
Puerto Penasco	26	1%	50	1%
<b><u>Central Coast Mainland</u></b>				
Bahia Kino		0%	0	0%
Guaymas-San Carlos	706	27%	1000	17%
Huatabampo		0%	0	0%
Topolobampo		0%	0	0%
Altata		0%	50	1%
<b><u>Mazatlan Region</u></b>				
Mazatlan	287	11%	550	9%
<b>Total</b>	<b>2,600</b>	<b>100%</b>	<b>6,000</b>	<b>100%</b>

Prepared by EDAW (December 17, 2002)

## **APPENDICES**

## Appendix A: Arizona Boat Registrations: 1996 - 2001<sup>1</sup>

<b>Size of Boat</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001<sup>2</sup></b>
<b><u>Under 16 Feet</u></b>						
<i>Power Boats</i>						
Wood	194	192	175	154	143	141
Fiberglass	10,849	10,468	10,125	9,845	9,506	9,148
Metal	21,831	21,681	21,631	21,466	21,324	21,001
Inflatable	1,849	1,800	1,761	1,717	1,654	1,569
Other	<u>1,438</u>	<u>1,485</u>	<u>1,477</u>	<u>1,441</u>	<u>1,451</u>	<u>1,435</u>
<i>subtotal</i>	<i>36,161</i>	<i>35,626</i>	<i>35,169</i>	<i>34,623</i>	<i>34,078</i>	<i>33,294</i>
<i>Auxiliary Sail</i>						
Wood	5	5	4	3	15	15
Fiberglass	24	27	23	17	128	130
Metal	2	2	2	2	2	1
Inflatable	2	1	2	1	1	2
Other	<u>5</u>	<u>5</u>	<u>6</u>	<u>3</u>	<u>15</u>	<u>19</u>
<i>subtotal</i>	<i>38</i>	<i>40</i>	<i>37</i>	<i>26</i>	<i>161</i>	<i>167</i>
<b>Total Under 16 Feet</b>	<b>36,199</b>	<b>35,666</b>	<b>35,206</b>	<b>34,649</b>	<b>34,239</b>	<b>33,461</b>
<b><u>16 to 26 Feet</u></b>						
<i>Power Boats</i>						
Wood	331	326	326	305	306	280
Fiberglass	54,672	55,939	57,192	58,649	59,051	58,976
Metal	11,148	11,688	12,032	12,545	12,808	13,061
Inflatable	51	51	52	65	75	86
Other	<u>518</u>	<u>502</u>	<u>509</u>	<u>473</u>	<u>494</u>	<u>490</u>
<i>subtotal</i>	<i>66,720</i>	<i>68,506</i>	<i>70,111</i>	<i>72,037</i>	<i>72,734</i>	<i>72,893</i>
<i>Auxiliary Sail</i>						
Wood	1	1	1	0	4	2
Fiberglass	104	99	98	81	887	875
Metal	3	2	2	2	3	4
Inflatable	0	0	0	0	0	0
Other	<u>5</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>4</u>	<u>1</u>
<i>subtotal</i>	<i>113</i>	<i>107</i>	<i>105</i>	<i>86</i>	<i>898</i>	<i>882</i>
<b>Total 16 to 26 Feet</b>	<b>66,833</b>	<b>68,613</b>	<b>70,216</b>	<b>72,123</b>	<b>73,632</b>	<b>73,775</b>
<b><u>26 to 40 Feet</u></b>						
<i>Power Boats</i>						
Wood	50	52	50	47	46	43
Fiberglass	2,446	2,631	2,814	3,043	3,269	3,557
Metal	947	1,016	1,041	1,052	1,062	1,101
Inflatable	46	64	61	58	65	66
Other	<u>37</u>	<u>36</u>	<u>38</u>	<u>38</u>	<u>37</u>	<u>38</u>
<i>subtotal</i>	<i>3,526</i>	<i>3,799</i>	<i>4,004</i>	<i>4,238</i>	<i>4,479</i>	<i>4,805</i>
<i>Auxiliary Sail</i>						
Wood	2	2	2	2	1	4
Fiberglass	84	89	92	92	207	213
Metal	0	1	1	2	1	1
Inflatable	0	0	0	0	0	0
Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<i>subtotal</i>	<i>86</i>	<i>92</i>	<i>95</i>	<i>96</i>	<i>209</i>	<i>218</i>
<b>Total 26 to 40 Feet</b>	<b>3,612</b>	<b>3,891</b>	<b>4,099</b>	<b>4,334</b>	<b>4,688</b>	<b>5,023</b>

**Appendix A: Arizona Boat Registrations: 1996 – 2001<sup>1</sup> (cont.)**

<b>Size of Boat</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001<sup>2</sup></b>
<b>40 to 65 Feet</b>						
<i>Power Boats</i>						
Wood	9	3	3	4	4	4
Fiberglass	87	93	97	109	115	103
Metal	470	498	500	493	495	446
Inflatable	0	0	0	0	0	0
Other	<u>6</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>9</u>	<u>9</u>
<i>subtotal</i>	<i>572</i>	<i>602</i>	<i>609</i>	<i>616</i>	<i>623</i>	<i>562</i>
<i>Auxiliary Sail</i>						
Wood	2	1	1	2	1	1
Fiberglass	2	3	3	3	3	3
Metal	0	0	0	0	0	0
Inflatable	0	0	0	0	0	0
Other	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>
<i>subtotal</i>	<i>5</i>	<i>5</i>	<i>5</i>	<i>6</i>	<i>5</i>	<i>5</i>
<b>Total 40 to 65 Feet</b>	<b>577</b>	<b>607</b>	<b>614</b>	<b>622</b>	<b>628</b>	<b>567</b>
<b>Over 65 Feet</b>						
<i>Power Boats</i>						
Wood	0	0	0	0	0	0
Fiberglass	4	2	3	2	3	4
Metal	46	47	48	53	57	58
Inflatable	0	0	0	0	0	0
Other	<u>4</u>	<u>4</u>	<u>4</u>	<u>5</u>	<u>7</u>	<u>7</u>
<i>subtotal</i>	<i>54</i>	<i>53</i>	<i>55</i>	<i>60</i>	<i>67</i>	<i>69</i>
<i>Auxiliary Sail</i>						
Wood	0	0	0	0	0	0
Fiberglass	0	0	0	0	0	0
Metal	0	0	0	0	0	0
Inflatable	0	0	0	0	0	0
Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<i>subtotal</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
<b>Total Over 65 Feet</b>	<b>54</b>	<b>53</b>	<b>55</b>	<b>60</b>	<b>67</b>	<b>69</b>
<b>Other Boats</b>	<b>42,833</b>	<b>46,180</b>	<b>48,536</b>	<b>41,729</b>	<b>35,494</b>	<b>35,818</b>
<b>TOTAL REGISTRATIONS</b>	<b>150,108</b>	<b>155,010</b>	<b>158,726</b>	<b>153,517</b>	<b>148,748</b>	<b>148,713</b>

<sup>1</sup> Source: U.S Coast Guard.

<sup>2</sup> 2001 Arizona data from State of Arizona Game and Fish Department.

**Appendix B: California Boat Registrations: 1996 – 2001<sup>1</sup>**

<b>Size of Boat</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b><u>Under 16 Feet</u></b>						
<i>Power Boats</i>						
Wood	7,369	6,871	6,211	6,365	5,336	5,642
Fiberglass	93,604	97,195	88,910	94,411	84,565	95,539
Metal	116,580	115,876	112,855	116,928	109,419	114,511
Inflatable	4,963	4,428	3,861	3,740	3,090	3,010
Other	<u>35,948</u>	<u>37,832</u>	<u>35,264</u>	<u>38,643</u>	<u>35,469</u>	<u>40,869</u>
<i>subtotal</i>	<i>258,464</i>	<i>262,202</i>	<i>247,101</i>	<i>260,087</i>	<i>237,879</i>	<i>259,571</i>
<i>Auxiliary Sail</i>						
Wood	199	191	185	187	160	168
Fiberglass	1,146	1,122	1,090	1,146	1,042	1,098
Metal	81	78	73	81	73	77
Inflatable	3	2	1	1	1	2
Other	<u>111</u>	<u>104</u>	<u>97</u>	<u>99</u>	<u>89</u>	<u>98</u>
<i>subtotal</i>	<i>1,540</i>	<i>1,497</i>	<i>1,446</i>	<i>1,514</i>	<i>1,365</i>	<i>1,443</i>
<b>Total Under 16 Feet</b>	<b>260,004</b>	<b>263,699</b>	<b>248,547</b>	<b>261,601</b>	<b>239,244</b>	<b>261,014</b>
<b><u>16 to 26 Feet</u></b>						
<i>Power Boats</i>						
Wood	8,072	7,713	7,092	7,375	6,428	6,844
Fiberglass	273,793	302,661	280,775	299,828	292,071	330,237
Metal	31,786	34,061	32,570	37,621	38,182	42,953
Inflatable	59	55	47	43	36	35
Other	<u>2,770</u>	<u>2,849</u>	<u>2,611</u>	<u>2,752</u>	<u>2,521</u>	<u>2,907</u>
<i>subtotal</i>	<i>316,480</i>	<i>347,339</i>	<i>323,095</i>	<i>347,619</i>	<i>339,238</i>	<i>382,976</i>
<i>Auxiliary Sail</i>						
Wood	252	243	225	239	197	207
Fiberglass	6,692	6,574	6,484	6,904	6,456	6,871
Metal	58	58	2,528	55	46	48
Inflatable	2	2	2	2	2	2
Other	<u>121</u>	<u>113</u>	<u>108</u>	<u>111</u>	<u>106</u>	<u>109</u>
<i>subtotal</i>	<i>7,125</i>	<i>6,990</i>	<i>9,347</i>	<i>7,311</i>	<i>6,807</i>	<i>7,237</i>
<b>Total 16 to 26 Feet</b>	<b>323,605</b>	<b>354,329</b>	<b>332,442</b>	<b>354,930</b>	<b>346,045</b>	<b>390,213</b>
<b><u>26 to 40 Feet</u></b>						
<i>Power Boats</i>						
Wood	5,300	5,021	4,730	4,956	4,311	4,563
Fiberglass	14,985	15,078	15,087	16,274	15,798	17,441
Metal	2,639	2,666	2,684	3,803	2,756	2,953
Inflatable	2	2	1	1	1	1
Other	<u>258</u>	<u>253</u>	<u>246</u>	<u>262</u>	<u>239</u>	<u>252</u>
<i>subtotal</i>	<i>23,184</i>	<i>23,020</i>	<i>22,748</i>	<i>25,296</i>	<i>23,105</i>	<i>25,210</i>
<i>Auxiliary Sail</i>						
Wood	397	389	378	410	365	388
Fiberglass	11,427	11,172	10,926	11,381	10,706	11,156
Metal	45	48	50	53	51	54
Inflatable	0	0	0	0	0	0
Other	<u>209</u>	<u>204</u>	<u>198</u>	<u>198</u>	<u>192</u>	<u>202</u>
<i>subtotal</i>	<i>12,078</i>	<i>11,813</i>	<i>11,552</i>	<i>12,042</i>	<i>11,314</i>	<i>11,800</i>
<b>Total 26 to 40 Feet</b>	<b>35,262</b>	<b>34,833</b>	<b>34,300</b>	<b>37,338</b>	<b>34,419</b>	<b>37,010</b>

**Appendix B: California Boat Registrations: 1996 – 2001<sup>1</sup> (cont.)**

<b>Size of Boat</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b><u>40 to 65 Feet</u></b>						
<i>Power Boats</i>						
Wood	945	913	888	947	836	885
Fiberglass	1,520	1,459	1,384	1,473	1,297	1,382
Metal	1,776	1,803	1,832	1,951	1,945	2,086
Inflatable	2	1	1	1	1	1
Other	<u>66</u>	<u>73</u>	<u>63</u>	<u>62</u>	<u>60</u>	<u>66</u>
<i>subtotal</i>	4,309	4,249	4,168	4,434	4,139	4,420
<i>Auxiliary Sail</i>						
Wood	125	118	106	106	99	105
Fiberglass	684	639	593	633	574	614
Metal	30	32	28	29	27	29
Inflatable	0	0	0	0	0	0
Other	<u>19</u>	<u>18</u>	<u>16</u>	<u>16</u>	<u>14</u>	<u>14</u>
<i>subtotal</i>	858	807	743	784	714	762
<b>Total 40 to 65 Feet</b>	<b>5,167</b>	<b>5,056</b>	<b>4,911</b>	<b>5,218</b>	<b>4,853</b>	<b>5,182</b>
<b><u>Over 65 Feet</u></b>						
<i>Power Boats</i>						
Wood	33	35	34	37	35	36
Fiberglass	404	677	412	460	447	895
Metal	148	163	159	179	183	212
Inflatable	12	8	8	7	4	4
Other	<u>84</u>	<u>88</u>	<u>85</u>	<u>96</u>	<u>97</u>	<u>110</u>
<i>subtotal</i>	681	971	698	779	766	1,257
<i>Auxiliary Sail</i>						
Wood	3	4	4	5	5	6
Fiberglass	17	16	15	16	14	17
Metal	1	1	0	0	0	0
Inflatable	0	0	0	0	0	0
Other	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<i>subtotal</i>	21	21	19	21	19	23
<b>Total Over 65 Feet</b>	<b>702</b>	<b>992</b>	<b>717</b>	<b>800</b>	<b>785</b>	<b>1,280</b>
<b>Other Boats</b>	82,999	235,438	274,215	295,813	279,517	262,764
<b>TOTAL REGISTRATIONS</b>	<b>707,739</b>	<b>894,347</b>	<b>895,132</b>	<b>955,700</b>	<b>904,863</b>	<b>957,463</b>

<sup>1</sup> Source: U.S Coast Guard.



## Appendix C: Oregon Boat Registrations: 1996 – 2001<sup>1</sup>

<b>Size of Boat</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b><u>Under 16 Feet</u></b>						
<i>Power Boats</i>						
Wood	3,724	3,367	3,025	2,722	2,510	2,325
Fiberglass	40,622	43,183	43,292	42,016	41,226	39,333
Metal	49,535	49,548	48,934	48,225	47,866	47,552
Inflatable	0	0	0	0	0	0
Other	<u>5,444</u>	<u>5,400</u>	<u>5,182</u>	<u>4,977</u>	<u>4,909</u>	<u>4,992</u>
<i>subtotal</i>	<i>99,325</i>	<i>101,498</i>	<i>100,433</i>	<i>97,940</i>	<i>96,511</i>	<i>94,202</i>
<i>Auxiliary Sail</i>						
Wood	141	135	127	119	118	114
Fiberglass	1,376	1,369	1,328	1,244	1,200	1,210
Metal	23	22	20	22	21	19
Inflatable	0	0	0	0	0	0
Other	<u>5</u>	<u>5</u>	<u>5</u>	<u>9</u>	<u>9</u>	<u>8</u>
<i>subtotal</i>	<i>1,545</i>	<i>1,531</i>	<i>1,480</i>	<i>1,394</i>	<i>1,348</i>	<i>1,351</i>
<b>Total Under 16 Feet</b>	<b>100,870</b>	<b>103,029</b>	<b>101,913</b>	<b>99,334</b>	<b>97,859</b>	<b>95,553</b>
<b><u>16 to 26 Feet</u></b>						
<i>Power Boats</i>						
Wood	2,213	2,048	1,899	1,740	1,644	1,584
Fiberglass	57,761	58,429	58,665	58,696	58,062	58,533
Metal	22,550	23,681	24,861	26,084	27,744	29,396
Inflatable	0	0	0	0	0	0
Other	<u>241</u>	<u>224</u>	<u>227</u>	<u>225</u>	<u>230</u>	<u>241</u>
<i>subtotal</i>	<i>82,765</i>	<i>84,382</i>	<i>85,652</i>	<i>86,745</i>	<i>87,680</i>	<i>89,754</i>
<i>Auxiliary Sail</i>						
Wood	152	141	137	131	130	134
Fiberglass	2,450	2,475	2,446	2,415	2,372	2,388
Metal	37	38	42	35	37	37
Inflatable	0	0	0	0	0	0
Other	<u>11</u>	<u>10</u>	<u>8</u>	<u>6</u>	<u>8</u>	<u>9</u>
<i>subtotal</i>	<i>2,650</i>	<i>2,664</i>	<i>2,633</i>	<i>2,587</i>	<i>2,547</i>	<i>2,568</i>
<b>Total 16 to 26 Feet</b>	<b>85,415</b>	<b>87,046</b>	<b>88,285</b>	<b>89,332</b>	<b>90,227</b>	<b>92,322</b>
<b><u>26 to 40 Feet</u></b>						
<i>Power Boats</i>						
Wood	608	568	543	486	449	444
Fiberglass	2,446	2,496	2,565	2,535	2,541	2,605
Metal	288	300	309	310	322	326
Inflatable	0	0	0	0	0	0
Other	<u>10</u>	<u>13</u>	<u>12</u>	<u>12</u>	<u>11</u>	<u>10</u>
<i>subtotal</i>	<i>3,352</i>	<i>3,377</i>	<i>3,429</i>	<i>3,343</i>	<i>3,323</i>	<i>3,385</i>
<i>Auxiliary Sail</i>						
Wood	59	55	51	42	40	41
Fiberglass	938	956	958	929	909	891
Metal	11	12	10	9	9	9
Inflatable	0	0	0	0	0	0
Other	<u>8</u>	<u>6</u>	<u>6</u>	<u>4</u>	<u>5</u>	<u>6</u>
<i>subtotal</i>	<i>1,016</i>	<i>1,029</i>	<i>1,025</i>	<i>984</i>	<i>963</i>	<i>947</i>
<b>Total 26 to 40 Feet</b>	<b>4,368</b>	<b>4,406</b>	<b>4,454</b>	<b>4,327</b>	<b>4,286</b>	<b>4,332</b>

**Appendix C: Oregon Boat Registrations: 1996 – 2001 (cont.)<sup>1</sup>**

<b>Size of Boat</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b><u>40 to 65 Feet</u></b>						
<i>Power Boats</i>						
Wood	73	74	76	68	62	60
Fiberglass	216	211	228	205	180	173
Metal	85	80	84	85	86	91
Inflatable	0	0	0	0	0	0
Other	2	2	1	0	0	1
<i>subtotal</i>	376	367	389	358	328	325
<i>Auxiliary Sail</i>						
Wood	17	14	10	11	10	12
Fiberglass	63	60	57	49	48	47
Metal	9	11	9	11	10	10
Inflatable	0	0	0	0	0	0
Other	4	4	6	6	6	4
<i>subtotal</i>	93	89	82	77	74	73
<b>Total 40 to 65 Feet</b>	<b>469</b>	<b>456</b>	<b>471</b>	<b>435</b>	<b>402</b>	<b>398</b>
<b><u>Over 65 Feet</u></b>						
<i>Power Boats</i>						
Wood	4	2	1	1	2	2
Fiberglass	4	2	3	1	2	3
Metal	14	13	14	10	10	9
Inflatable	0	0	0	0	0	0
Other	0	0	0	0	0	0
<i>subtotal</i>	22	17	18	12	14	14
<i>Auxiliary Sail</i>						
Wood	2	2	3	3	2	2
Fiberglass	0	0	0	0	0	0
Metal	0	0	0	0	0	0
Inflatable	0	0	0	0	0	0
Other	0	0	0	0	0	0
<i>subtotal</i>	2	2	3	3	2	2
<b>Total Over 65 Feet</b>	<b>24</b>	<b>19</b>	<b>21</b>	<b>15</b>	<b>16</b>	<b>16</b>
<b>Other Boats</b>	<b>3,934</b>	<b>2,359</b>	<b>2,490</b>	<b>2,659</b>	<b>2,901</b>	<b>3,015</b>
<b>TOTAL REGISTRATIONS</b>	<b>195,080</b>	<b>197,315</b>	<b>197,634</b>	<b>196,102</b>	<b>195,691</b>	<b>195,636</b>

<sup>1</sup> Source: U.S Coast Guard.

## Appendix D: Washington Boat Registrations: 1996 – 2001<sup>1</sup>

<b>Size of Boat</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b><u>Under 16 Feet</u></b>						
<i>Power Boats</i>						
Wood	1,917	1,652	1,531	1,397	1,324	1,327
Fiberglass	45,945	45,040	44,253	42,701	42,667	61,941
Metal	33,716	33,267	32,815	33,162	34,148	35,000
Inflatable	3,389	3,474	3,517	3,528	3,656	3,766
Other	<u>14,799</u>	<u>17,081</u>	<u>18,489</u>	<u>19,302</u>	<u>19,993</u>	<u>397</u>
<i>subtotal</i>	<i>99,766</i>	<i>100,514</i>	<i>100,605</i>	<i>100,090</i>	<i>101,788</i>	<i>102,431</i>
<i>Auxiliary Sail</i>						
Wood	199	196	202	201	183	126
Fiberglass	935	932	929	950	986	468
Metal	709	708	717	746	829	9
Inflatable	71	80	87	83	87	0
Other	<u>20</u>	<u>22</u>	<u>21</u>	<u>22</u>	<u>22</u>	<u>5</u>
<i>subtotal</i>	<i>1,934</i>	<i>1,938</i>	<i>1,956</i>	<i>2,002</i>	<i>2,107</i>	<i>608</i>
<b>Total Under 16 Feet</b>	<b>101,700</b>	<b>102,452</b>	<b>102,561</b>	<b>102,092</b>	<b>103,895</b>	<b>103,039</b>
<b><u>16 to 26 Feet</u></b>						
<i>Power Boats</i>						
Wood	2,149	1,954	1,849	1,734	1,735	1,865
Fiberglass	99,471	98,840	100,369	99,793	102,450	105,005
Metal	15,115	15,900	16,726	17,807	19,542	22,781
Inflatable	62	77	69	69	74	83
Other	<u>2,049</u>	<u>2,059</u>	<u>2,149</u>	<u>2,250</u>	<u>2,432</u>	<u>45</u>
<i>subtotal</i>	<i>118,846</i>	<i>118,830</i>	<i>121,162</i>	<i>121,653</i>	<i>126,233</i>	<i>129,779</i>
<i>Auxiliary Sail</i>						
Wood	349	333	330	312	315	353
Fiberglass	3,728	3,705	3,692	3,627	3,662	3,504
Metal	133	123	135	150	177	5
Inflatable	4	3	1	1	4	1
Other	<u>18</u>	<u>18</u>	<u>17</u>	<u>18</u>	<u>21</u>	<u>9</u>
<i>subtotal</i>	<i>4,232</i>	<i>4,182</i>	<i>4,175</i>	<i>4,108</i>	<i>4,179</i>	<i>3,872</i>
<b>Total 16 to 26 Feet</b>	<b>123,078</b>	<b>123,012</b>	<b>125,337</b>	<b>125,761</b>	<b>130,412</b>	<b>133,651</b>
<b><u>26 to 40 Feet</u></b>						
<i>Power Boats</i>						
Wood	2,383	2,243	2,174	2,105	2,043	1,871
Fiberglass	10,986	11,152	11,624	12,150	12,604	13,064
Metal	257	255	277	298	297	363
Inflatable	1	2	2	3	1	1
Other	<u>51</u>	<u>50</u>	<u>46</u>	<u>54</u>	<u>52</u>	<u>28</u>
<i>subtotal</i>	<i>13,678</i>	<i>13,702</i>	<i>14,123</i>	<i>14,610</i>	<i>14,997</i>	<i>15,327</i>
<i>Auxiliary Sail</i>						
Wood	352	338	336	332	334	241
Fiberglass	3,427	2,434	3,375	3,365	3,400	3,376
Metal	35	34	31	33	29	31
Inflatable	1	2	1	1	1	1
Other	<u>18</u>	<u>19</u>	<u>18</u>	<u>18</u>	<u>14</u>	<u>14</u>
<i>subtotal</i>	<i>3,833</i>	<i>2,827</i>	<i>3,761</i>	<i>3,749</i>	<i>3,778</i>	<i>3,663</i>
<b>Total 26 to 40 Feet</b>	<b>17,511</b>	<b>16,529</b>	<b>17,884</b>	<b>18,359</b>	<b>18,775</b>	<b>18,990</b>

**Appendix D: Washington Boat Registrations: 1996 – 2001 (cont.)<sup>1</sup>**

<b>Size of Boat</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
<b><u>40 to 65 Feet</u></b>						
<i>Power Boats</i>						
Wood	793	761	774	771	777	779
Fiberglass	2,249	2,381	2,521	2,713	2,829	2,893
Metal	107	110	118	123	134	161
Inflatable	0	0	0	0	0	0
Other	<u>22</u>	<u>21</u>	<u>21</u>	<u>22</u>	<u>22</u>	<u>23</u>
<i>subtotal</i>	3,171	3,273	3,434	3,629	3,762	3,856
<i>Auxiliary Sail</i>						
Wood	99	92	98	91	94	84
Fiberglass	432	441	447	436	423	431
Metal	21	22	21	22	23	21
Inflatable	0	0	0	0	0	0
Other	<u>24</u>	<u>25</u>	<u>24</u>	<u>27</u>	<u>25</u>	<u>24</u>
<i>subtotal</i>	576	580	590	576	565	560
<b>Total 40 to 65 Feet</b>	<b>3,747</b>	<b>3,853</b>	<b>4,024</b>	<b>4,205</b>	<b>4,327</b>	<b>4,416</b>
<b><u>Over 65 Feet</u></b>						
<i>Power Boats</i>						
Wood	29	28	31	37	40	42
Fiberglass	109	50	67	84	105	134
Metal	48	16	33	35	48	49
Inflatable	5	1	2	2	1	6
Other	<u>20</u>	<u>8</u>	<u>18</u>	<u>21</u>	<u>12</u>	<u>0</u>
<i>subtotal</i>	211	103	151	179	206	231
<i>Auxiliary Sail</i>						
Wood	5	5	4	4	4	3
Fiberglass	1	4	2	3	3	3
Metal	3	4	5	3	3	2
Inflatable	0	0	0	0	0	0
Other	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<i>subtotal</i>	10	13	11	10	10	8
<b>Total Over 65 Feet</b>	<b>221</b>	<b>116</b>	<b>162</b>	<b>189</b>	<b>216</b>	<b>239</b>
<b>Other Boats</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL REGISTRATIONS</b>	<b>246,257</b>	<b>245,962</b>	<b>249,968</b>	<b>250,606</b>	<b>257,625</b>	<b>260,335</b>

<sup>1</sup> Source: U.S Coast Guard.