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**Department of State Development,  
Infrastructure and Planning**

**Cassowary Coast Maritime Facilities  
Demand Forecasting Study**

**Final Report**

GHD and Economic Associates

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## Glossary of Terms and Abbreviations

|         |   |
|---------|---|
| ABS     | Australian Bureau of Statistics   |
| BIAQ    | Boating Industry Association of Queensland  |
| CCRC    | Cassowary Coast Regional Council  |
| CPMA    | Coastal Protection and Management Act 1995  |
| DSDIP   | Department of State Development, Infrastructure and Planning (formerly Department of Employment, Economic Development and Innovation (DEEDI)) |
| DEHP    | Department of Environment and Heritage Protection (formerly Department of Environment and Resource Management (DERM))                         |
| FNQ     | Far North Queensland  |
| IDAS    | Integrated Development Assessment System  |
| LGA     | Local Government Area   |
| MDA     | Maritime Development Area   |
| MSQ     | Maritime Safety Queensland  |
| OESR    | Office of Economic & Statistical Research   |
| QCP     | Queensland Coastal Plan   |
| RBC     | Recreational Boating Catchment  |
| SD      | Statistical Division  |
| SEID    | Socio-Economic Index of Disadvantage  |
| SEIFA   | Socio-Economic Indexes for Areas  |
| SPA     | Sustainable Planning Act 2009   |
| SPP     | State Planning Policy   |
| TMR     | Department of Transport and Main Roads  |
| TNQ REP | Tropical North Queensland Regional Economic Plan  |
| TNQ TOP | Tropical North Queensland Tourism Opportunity Plan  |

# 1. Introduction

## 1.1 Study Purpose and Scope

### 1.1.1 Purpose

The Department of State Development, Infrastructure and Planning (DSDIP) has commissioned consultants, GHD and Economic Associates, to prepare a statistically robust analysis of current and future demand for maritime infrastructure in the Cassowary Coast Regional Council area.

The primary objective of the study is to:

*Provide an analysis of current and future marine infrastructure demand to inform development of the Cassowary Coast Marine Infrastructure Plan under the Queensland Coastal Plan policies. In particular, the study will inform site identification for any future declaration as a Maritime Development Area (MDA).*

The study comprises four key elements:

- **Existing Supply** - A baseline of the existing situation to understand local communities, their boating ownership levels and current maritime infrastructure supply.
- **Trends Analysis** – Review of boating industry trends and demographic profiles to identify needs, impacts, opportunities, potential growth and factors influencing maritime infrastructure demand, in consultation with key stakeholders.
- **Future Demand Projections** – Statistical estimation of future vessel registrations and demand for maritime infrastructure (i.e. quantify number of wet berths and dry storage) within the Cassowary Coast Region generated by private recreational boats, charters, visitors and commercial boats, taking into account any pent-up demand for these facilities.
- **Reporting** – Final report presenting full study findings and recommendations.



Example of wet berth marina facilities



Example of dry storage facilities

### 1.1.2 Scope

Maritime infrastructure assessments will focus on:

- Cassowary Coast Region Local Government Area (LGA).
- Wet berth (marina) and dry storage facilities only.
- Facilities for recreational, commercial and tourist vessels e.g. private recreational boats, fishing charters, visitors/ touring boats, commercial boats.
- A planning horizon of 19 years up to 2031.

The scope of the study excludes:

- Small scale public infrastructure such as boat ramps, jetties, pontoons and floating walkways, which have been analysed separately through the state-wide *Recreational Boating Facilities Demand Forecasting Study* (Department of Transport and Main Roads, 2011).
- Support infrastructure such as landside facilities and breakwaters.
- Site suitability or site selection. This will be dealt with separately by the Public Maritime Infrastructure Planning Study to be undertaken by the Queensland Government in the future.
- Dredging activities.
- Great Barrier Reef Marine Park Authority fishing zones.

### 1.1.3 Disclaimer

This Report has been prepared by GHD for the Department of State Development, Infrastructure and Planning (DSDIP) and may only be used and relied on by DSDIP for the purpose agreed between GHD and the DSDIP as set out in Section 1.1.1 of this Report.

GHD otherwise disclaims responsibility to any person other than DSDIP arising in connection with this Report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this Report were limited to those specifically detailed in the Report and are subject to the scope limitations set out in the Report.

The opinions, conclusions and any recommendations in this Report are based on conditions encountered and information reviewed at the date of preparation of the Report. GHD has no responsibility or obligation to update this Report to account for events or changes occurring subsequent to the date that the Report was prepared.

The opinions, conclusions and any recommendations in this Report are based on assumptions made by GHD described within this Report. GHD disclaims liability arising from any of the assumptions being incorrect.



## 1.2 Background and Context

Maritime Development Areas (MDA's) are designated in the *Queensland Coastal Plan* (QCP) for medium to large-scale maritime infrastructure, often involving a mix of maritime and other uses.

Declaration of a MDA will be the responsibility of the Department of Environment and Heritage Protection (DEHP). Proactively designating appropriate areas for this kind of development serves two purposes:

- ▶ Provides greater certainty for proponents and the community about the locations for maritime development; and
- ▶ Protects these areas from non-coastal-dependent development.

The QCP contains the boundaries of existing marinas, however the Queensland Government intends to undertake a public maritime infrastructure planning study (at a later date), which will:

- ▶ Examine the nature and scale of maritime infrastructure needs along the coast; and
- ▶ Assess potential sites from a social, environmental and economic perspective to determine if and where new MDA's are required to be included in the Coastal Plan.

The Cassowary Coast Region has considerable potential for tourism industry development and already supports a number of maritime-related tourism businesses. The standard and capacity of maritime and boating facilities available within the Region have been a longstanding cause for concern. Existing marinas were significantly damaged during Cyclone Yasi in 2011, and the Queensland Government is assisting with reinstatement of existing infrastructure.

Therefore, this *Cassowary Coast Maritime Facilities Demand Forecasting Study* will inform the Queensland Government whether there is a demand for maritime infrastructure and the areas in which to focus their study efforts to ensure a publically acceptable and commercially viable outcome.



### 1.3 Process

The study methodology comprised four stages as shown below:

#### STAGE 1 – Project Inception and Scope Definition

- Project Inception Meeting with DSDIP
- Literature review – to set study context and identify planning implications
- Define maritime infrastructure Catchments in study area
- Submit Detailed Methodology to DSDIP (full scope definition and forecasting assumptions)

#### STAGE 2 – Supply Analysis and Catchment Profiling

- Maritime infrastructure supply analysis (desktop)
- Socio-economic analysis for each maritime infrastructure Catchment
- Boating industry trend analysis
- Historic analysis of vessel registrations in the study area

#### STAGE 3 (Phase 1) – Recreational In-water Infrastructure Demand Analysis

- Targeted stakeholder consultation - marina operator interviews and Council discussions
- Preliminary statistical projection of future maritime infrastructure forecasting for wet and dry berths (by catchment)
- Synthesis of preliminary research, statistical analysis and stakeholder feedback
- Submit Progress report to DSDIP – preliminary findings, emerging directions and needs

#### STAGE 3 (Phase 2) – Key Stakeholder Workshops

- Workshops in Innisfail, Mission Beach and Cardwell targeting key stakeholders to validate statistical analysis, with input from:
  - *Local and state government*
  - *Marina operators*
  - *Marine facility user groups e.g. fishing clubs, boating clubs, charter operators, volunteer marine rescue*
  - *Regional tourism authority*
  - *Community interest groups*
- Facility needs identification
- Data synthesis and sensitivity testing of statistical analysis

#### STAGE 4 – Reporting

- Preparation of Draft Report
- Submission to DSDIP for review and comment
- Refinement of Draft Report based on DSDIP feedback
- Project finalisation

## 2. The Study Area – Cassowary Coast Region

### 2.1 Introduction

The Cassowary Coast Region is located in Far North Queensland and is bounded by Hinchinbrook Shire to the south, Cairns Region to the north, Tablelands Region to the west and the Coral Sea to the east. The study area is shown in Figure 1.

The Cassowary Coast Region was formed on 15 March 2008 with the amalgamation of Cardwell Shire and Johnstone Shire. Cassowary Coast offers an enviable blend of township, coastal and rural living choices, and is spread over a geographic area of 4,700 km<sup>2</sup>. It has a widely dispersed population of about 31,000 people, with major population centres in Innisfail and Tully, together with the key coastal townships of Mission Beach and Cardwell.

**Figure 1 – Cassowary Coast Region Local Government Area**



Source: OESR (2011)

Cassowary Coast is well connected to other parts of the nation via the Bruce Highway, connecting the regional cities of Cairns to the north and Townsville to the south (CCRC, 2011).

Innisfail is the largest town in the Cassowary Coast and contains a diverse range of commercial, retail and administrative functions, providing a wide range of services to the local area and surrounding district.

Innisfail's population growth has been subdued over the past decade, particularly after Cyclone Larry in 2006. Flooding constraints associated with the Johnstone River also limit future growth opportunities (DLGP, 2011).

Tully is a sugar town south of Innisfail centred on the Tully mill, which is supported by primary industries including agriculture, horticulture, beef cattle, fishing, quarrying and forestry. It contains a district regional activity centre including business, employment and administrative functions for the Cassowary Coast (DLGP, 2011).

Mission Beach is located near Tully and consists of North Mission, Wongaling and South Mission Beaches. The urban footprint of Mission Beach is constrained to minimise impacts on the local environment, as well as coastal hazard risks.

The township requires higher levels of self-containment of services to avoid travel and relieve pressure on the main centres of Innisfail and Tully (DLGP, 2011).

The coastal community of Cardwell is located in the southern portion of the region. It is home to Port Hinchinbrook, the largest maritime facility<sup>1</sup> in the Cassowary Coast. According to the *FNQ Regional Plan* (2011), growth in this small coastal settlement should be constrained to the existing urban area given land and infrastructure constraints.



<sup>1</sup> Port Hinchinbrook Marina closed since February 2011 due to cyclone damage.

## 2.2 Population Snapshot

### 2.2.1 Current Population

Key characteristics of the Cassowary Coast Region's demographic profile are:

#### Total Population

- ▮ As at 30 June 2011, the estimated resident population was 31,263 persons.
- ▮ This represents an increase of 1,621 persons between 2006 and 2011 at a rate of 1.1% p.a., which is slower than the state's average growth rate of 2.3% p.a. over the same period.
- ▮ Innisfail is the largest urban centre accounting for almost 28% of the total population (8,881 residents), followed by Tully with 2,538 (8%) and Cardwell with 1,496 (5%).
- ▮ Key hotspots of population growth since 2001 are focussed on the coastal localities of Cardwell, Mission Beach, Mission Beach South and Wongaling Beach. Moderate growth was also experienced in Innisfail.
- ▮ Refer to Tables 2.1 and 2.2.

**Table 2.1 – Estimated Resident Population of Cassowary Coast Region (2006-2011)**

| Locality               | 2006      | 2011 <sup>P</sup> | Pop'n Change (2006-2011) | Average annual growth rate |
|------------------------|-----------|-------------------|--------------------------|----------------------------|
| Cassowary Coast Region | 29,642    | 31,263            | + 1,621                  | 1.1%                       |
| Queensland             | 4,090,908 | 4,580,282         | + 489,374                | 2.3%                       |

Source: Queensland Regional Profiles, Cassowary Coast Region (OESR, 2011)

P = preliminary

**Table 2.2 – Estimated Resident Population by Urban Centre/ Locality (2001-2011)**

| Urban Centre/Locality   | 2001  | 2006  | 2011 <sup>P</sup> | Pop'n Change (2001-2011) |
|-------------------------|-------|-------|-------------------|--------------------------|
| Flying Fish Point (L)   | 693   | 761   | 807               | +114                     |
| Innisfail               | 8,754 | 8,813 | 8,881             | +127                     |
| Mourilyan (L)           | 476   | 451   | 465               | -11                      |
| Johnstone South (L)     | 496   | 514   | 484               | -12                      |
| Mission Beach (L)       | 480   | 551   | 625               | +145                     |
| Mission Beach South (L) | 646   | 734   | 902               | +256                     |
| Silkwood (L)            | 361   | 347   | 351               | -10                      |
| Kurrimine (L)           | 648   | 657   | 631               | -17                      |
| Bingil Bay (L)          | 427   | 429   | 494               | +67                      |
| Cardwell                | 1,202 | 1,336 | 1,496             | +294                     |

| Urban Centre/Locality | 2001  | 2006  | 2011 <sup>P</sup> | Pop'n Change (2001-2011) |
|-----------------------|-------|-------|-------------------|--------------------------|
| Tully                 | 2,533 | 2,620 | 2,538             | +5                       |
| Tully Heads (L)       | 456   | 489   | 484               | +28                      |
| Wongaling Beach       | 950   | 1,057 | 1,191             | +241                     |

Source: OESR (2012). <http://www.oesr.qld.gov.au/subjects/demography/population-estimates/tables/erp-ucld-qld/index.php>

Note: ERP figures as at 30 June. P = preliminary.

### Age Profile

- As at 30 June 2010, the median age for Cassowary Coast Region was 41.2 years, compared to 36.2 years for Queensland.
- The Region has an older age profile with a high representation of people aged over 45 (44.4%) compared with 37.4% for Queensland.
- The Region has a marginally lower proportion of children aged under 15 (19.2%) when compared to the State average (20.0%). The representation of youths and adults aged under 45 is also lower.
- Refer Table 2.3 and Figure 2.

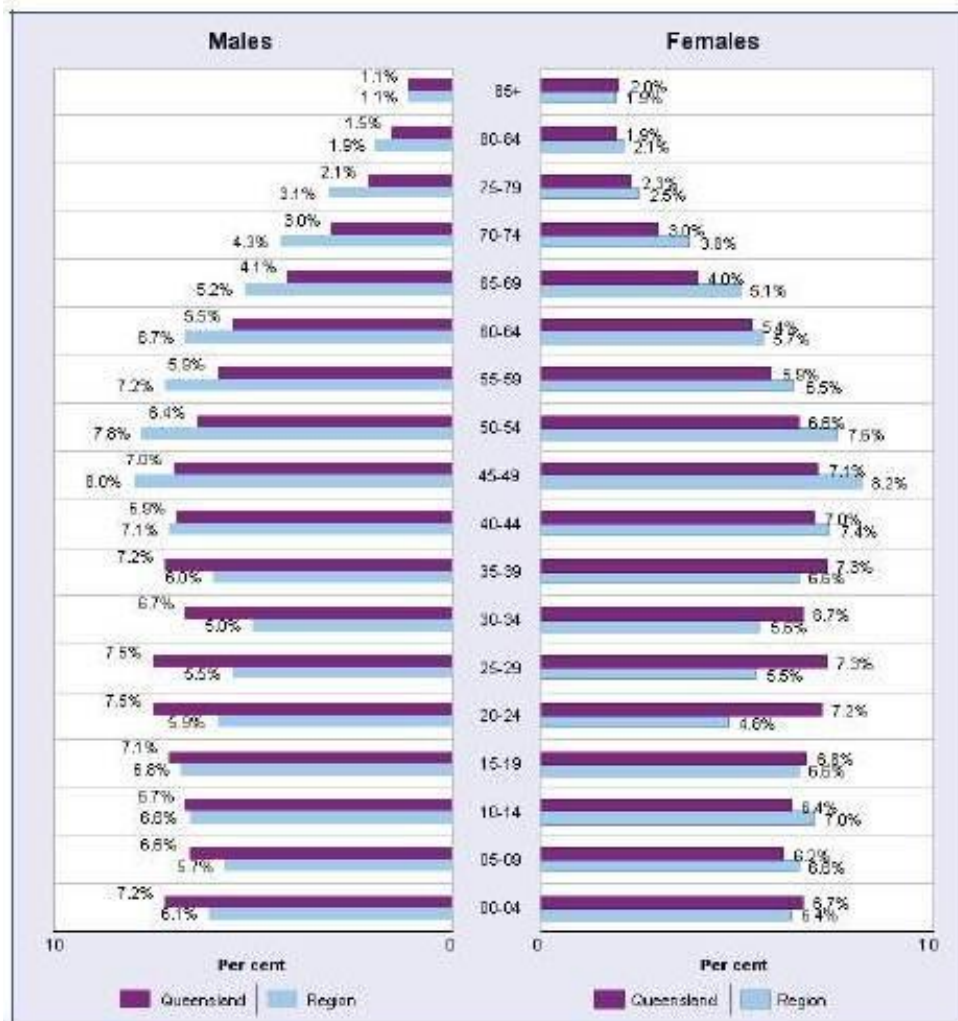
**Table 2.3 – Age Profile for Cassowary Coast Region (2011)**

| Age Group              | 0-14    |      | 15-24   |      | 25-44     |      | 45-64     |      | 65+     |      |
|------------------------|---------|------|---------|------|-----------|------|-----------|------|---------|------|
| Locality               | Number  | %    | Number  | %    | Number    | %    | Number    | %    | Number  | %    |
| Cassowary Coast Region | 6,000   | 19.2 | 3,789   | 12.1 | 7,619     | 24.4 | 9,027     | 28.9 | 4,856   | 15.5 |
| Queensland             | 901,542 | 20.0 | 644,985 | 14.3 | 1,278,876 | 28.3 | 1,121,066 | 24.8 | 567,381 | 12.6 |

Source: Queensland Regional Profiles, Cassowary Coast Region (OESR, 2011)



**Figure 2 – Population Pyramid for Cassowary Coast Region and QLD (30 June 2010)<sup>p</sup>**



p - preliminary

Note: Based on ASGC 2011.

Source: Australian Bureau of Statistics, *Population by Age and Sex, Regions of Australia, 2010*, cat. no. 3235.0

## 2.2.2 Future Population

### Population Projections

- State Government projections suggest that future population growth will be subdued, reaching a total resident population of about 34,841 by 2031, at growth rate of 0.5% p.a.
- This equates to almost 3,500 additional residents over the next 19 years (refer to Table 2.4).
- The primary hotspots of future population growth will be Innisfail and Tully. The future growth of Mission Beach and Cardwell will be constrained to minimise future impacts on ecological values, coastal hazard risks and loss of the village character (DLGP, 2009).

**Table 2.4 – Population Projections for Cassowary Coast Region (2011-2031)**

| Year                   | 2011      | 2016      | 2021      | 2026      | 2031      | Population Change (2011-31) | Average Annual Growth Rate 2011 -2031 |
|------------------------|-----------|-----------|-----------|-----------|-----------|-----------------------------|---------------------------------------|
| Locality               |           |           |           |           |           |                             |                                       |
| Cassowary Coast Region | 31,371    | 32,307    | 33,198    | 34,046    | 34,841    | 3,470                       | 0.5% p.a.                             |
| Queensland             | 4,611,491 | 5,092,858 | 5,588,618 | 6,090,548 | 6,592,858 | 1,981,367                   | 1.8% p.a.                             |

Source: Queensland Regional Profiles, Cassowary Coast Region (OESR, 2011). Medium series projections.

### Population Ageing

The Region's population profile will continue to age over the next two decades.

Based on 2006 ABS data for the former Johnstone Shire area (northern part of amalgamated region) the proportion of people aged over 65 is set to reach 26.2% by 2026. Corresponding decreases are forecast for all age groups under 45 years (PIFU, 2006).

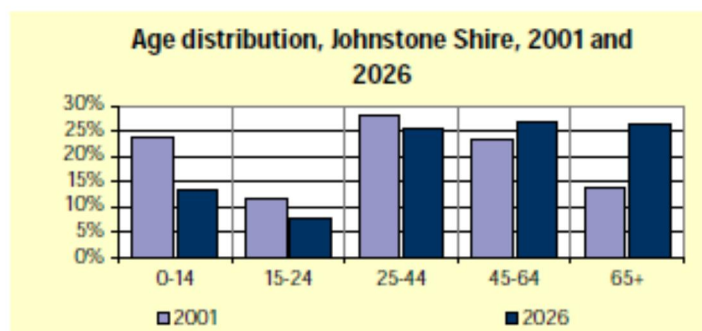
No age projection data for the former Cardwell Shire or Cassowary Coast Region was available at the time of writing to provide a full assessment.

**Table 2.5 – Future Age Projections (former Johnstone Shire)**

#### Population by age group, Johnstone Shire

|           | Age group      |                |                |                |                | Median Age |
|-----------|----------------|----------------|----------------|----------------|----------------|------------|
|           | 0-14           | 15-24          | 25-44          | 45-64          | 65+            |            |
| 2001      | 4,577<br>23.5% | 2,280<br>11.7% | 5,455<br>28.0% | 4,494<br>23.1% | 2,647<br>13.6% | 37         |
| 2026<br>* | 2,712<br>13.5% | 1,573<br>7.8%  | 5,150<br>25.6% | 5,432<br>27.0% | 5,278<br>26.2% | 48         |

\* Medium series



Source: PIFU (September 2006), Population and Housing Fact Sheet – Johnstone Shire



### 2.2.3 Households and Workforce

Other key characteristics include:

- Based on the 2006 ABS Census, persons of Aboriginal or Torres Strait Islander origin comprised 8.3% of the Region's total population which is significantly higher than the state average of 3.3%.
- Couple only families (without dependent children) are the dominant family type (42.3%), possibly reflecting the older age profile. Couple families with children accounted for 41.0% of the total.
- The Region has higher unemployment and lower median incomes than the Queensland average. Unemployment peaked at 9.7% for March quarter 2010 and declined to 7.7% for the December quarter 2011, compared with a state average of 5.5%.
- The Socio-Economic Indexes for Areas (SEIFA) is a measure of the social and economic conditions of geographic areas across Queensland. According to the Socio-Economic Index of Disadvantage (SEID), 42.9% of the population of Cassowary Coast Region were in the most disadvantaged quintile, compared to 20% for the State.
- The largest industries of employment for Cassowary Coast residents are Agriculture, Forestry and Fishing (17.6%), Retail Trade (11.2%), Manufacturing (10.7%) and Construction (8.4%).
- The Region produced over 10% of the total value of crops in Queensland on an annual basis, and the four largest contributors to agricultural productions were Bananas, Sugar, Fishing and Cattle (CCRC, 2011).
- The commercial and recreation fishing industry provides significant economic value to the Region through direct employment, processing fish products and support services. Local fisheries activities include commercial fisheries, game fishing, aquarium, recreational, traditional and aquaculture (DLGP, 2009).

## 2.3 Summary

- Future population growth in the Region will be subdued over the next 20 years, with an increase of approximately 3,500.
- The primary hotspots of future population growth will be Innisfail and Tully.
- The Region has an older age profile than Queensland.
- The Region has higher unemployment and lower median incomes than the Queensland average, together with pockets of social disadvantage based on the SEID Index.
- The commercial and recreation fishing industry provides significant economic value to the Region.
- The Region hosts a significant tourism industry.

## 3. Recreational Boating Industry Overview

### 3.1 Introduction

Boat ownership is the most significant demand driver for maritime infrastructure, namely boat ramps, marina berths (both wet and dry), moorings and pontoons. The composition of a region's boating fleet will determine the quantity and type of maritime infrastructure demanded.

The recreational boating market refers to those boat owners who use their boat to take recreational day trips, cruising in relatively protected waters as opposed to the open sea.

Smaller boats can be easily towed on trailers. Industry consultations undertaken by Economic Associates previously reveal that the suitability for towing varies between boat types (i.e. boats with sails and boats without sails). For example, sail boats with keels become difficult to tow, especially if they do not have a retractable keel, at around five metres in length, whereas motorboats can generally be towed up to around eight metres.

Similarly, the suitability of vessels for dry storage depends on type and length of vessel. Dry storage is most suitable for vessels with shallow drafts. Therefore, dry storage is most suitable for smaller sail boats (i.e. sail boats up to eight metres) and boats without sails up to around ten metres.

Wet berthing a boat represents a much greater expense than trailing or dry berthing. Therefore, wet berths are generally used only by larger vessels, such as sail boats over five metres and boats without sails over eight metres.

### 3.2 Industry Size

The exact size and contribution of the recreational boating industry is not regularly assessed, however BIAQ (2003) estimated the overall size of the boating and related industries in Queensland as at June 2003<sup>2</sup>. This was undertaken through a self-completion questionnaire, with a total of 253 responses collected from BIAQ members.

In 2002-03, there were an estimated 6,785 persons employed in boating and related industries in Queensland, with employment concentrated in boat manufacturing (2,365 employees), retail (845 employees) and other related manufacturing (840 employees). Employment in the industry increased by 4.5% between 2001 and 2003.

Turnover of the boating industry was estimated at \$1,324 million in 2002/03, being highest for boat manufacturing (\$269 million), wholesale, distribution and import (\$235 million) and repair / chandlery (\$167 million). Turnover in the industry was estimated to have increased by 10.5% since 2001.

The industry recorded high levels of turnover growth from overseas exports, almost doubling from \$110 million in 2001 to \$200 million in 2002-03.

The BIAQ survey highlights the significance of boating and related industries to the Queensland economy, and the importance of providing sufficient supporting maritime infrastructure.

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<sup>2</sup> Related industries include boat charter, boat manufacturing, boat repair, chandlery, club or sailing school, finance and insurance, marine, marine brokerage, marine construction, marine electronics, marine engines, media, retail, supply of raw materials, trailer / accessories / other manufacturing and wholesale, distribution or import.

### 3.3 Economic Performance of Queensland Marinas

Recreational Marine Research Centre (2011) estimated that in 2011 there were 67 marinas in Queensland, with total gross revenue of \$205.78 million. There were an estimated 708 persons employed at marinas in Queensland. In addition to revenue generated from marina operation, there was an estimated \$24.5 million paid in rent by business tenants at marinas in Queensland. Business tenants at Queensland marinas employed an estimated 4,049 persons.

Despite the recent economic downturn, marinas in all states continued to record strong average occupancy rates in the 2010-11 financial year, with Queensland recording an average occupancy rate of 79.8%, slightly below the national average of 83.1%.

### 3.4 Industry Characteristics and Trends

International Marina Consultants Pty Ltd (2006) undertook an overview of the changing characteristics within the recreational boating industry. The major trends noted in recreational boating are as follows:

- ▶ **The average size of recreational boats is increasing** – The average length has increased from about 10 metres to 13.5 metres over the last ten years. There is little demand for eight metre berths which can be found in some older marinas, with vessels of this size typically being towed. The report suggests the minimum marina size in most new marinas should be 12 metres. However, if the marina will mainly be occupied by power boats, the minimum marina size should be larger than 12 metres.
- ▶ **Boats are being used less frequently** – The number of boats being used at any one time has not increased at the same rate as the number of boat registrations (i.e. the average rate of usage for each boat is declining). The damage to the marine environment as a result of the rapid rise in boat registration is likely to be less than anticipated, as the average rate of usage is not proportionate to registration growth.
- ▶ **Larger boats are being placed in rack and storage buildings** – Dry storage buildings are being designed in Australia and overseas to cater for boats up to 12 metres in length. Currently, the demand for dry storage in Australia is quite low. However, the demand for dry storage is expected to increase significantly as the price of marina berths increases in line with strong demand. There are a number of advantages associated with dry storage including potentially significant cost savings (in cases where reduced boat maintenance costs outweigh the additional costs of lifting boats in and out of the water), protection from UV damage and reduced need for dredging as the boats do not require water space for berths. However, racked dry storage may create a significant visual impact due to the size of the storage and as a result, has historically not been included in association with residential development. Dry storage could be included in boat harbours and working marinas.



- ▶ **Marina sized boats which are used infrequently are parked on hardstands** – There has been a growing trend towards storage of power boats and yachts on hard stands due to lower usage and lack of available marina berths. The rates associated with hardstand storage are also less than for boats moored in a floating marina.
- ▶ **The growth in boat registrations is occurring throughout Queensland** – There has been significant growth in boat ownership in Queensland and thus demand for marina berths. Currently, virtually all marinas throughout Queensland are fully occupied indicating a need for additional berthing throughout the state.
- ▶ **Increasing demand for boat repair facilities** – There is an increasing demand for boat repair facilities as a result of an increase in the number of recreational boats and the reduced effectiveness of anti-fouling paints. Only a limited number of boat repair facilities are being constructed, with at least one existing facility at Hope Harbour expected to be shut down.

Industry consultations previously undertaken by Economic Associates reveal a growing number of new boats purchased in the growth category of motor boats between five and eight metres are manufactured in, or for, the North American market. These boats are generally half cabin cruiser, and appeal to the recreational boating market. Their appeal is largely based on favourable exchange rates which have resulted in these North American market vessels being around 30% less expensive than Australian made boats.

The growing popularity of North American market half cabin cruisers has significant implications for boat storage. In Queensland, the maximum width of a trailerable boat is 2.5 metres, but cruisers designed for the North American market are frequently wider than 2.5 metres, particularly those cruisers over five metres. As a result, the most appropriate storage solution for these boats is dry storage at a major marina or boat harbour. It is anticipated that as the popularity of these boats grows, so too will demand for dry boat storage.

### 3.5 Characteristics of Recreational Boat Owners

Maritime Safety Queensland (2004) conducted a boating survey in 2003 to gain an insight into the range, location of and investment in, recreational boating activities on Queensland waters. There were 3,500 responses used in the survey analysis. The major findings of this analysis are as follows:

- ▶ The most common types of vessels operated by respondents were dinghies (45%) and speedboats (27%).
- ▶ The majority of respondents operated vessels with motors between 7 and 15 horsepower (20%), 16-50 horsepower (36%) or 51-100 horsepower (19%).
- ▶ Almost all respondents were male (95.5%) with 40% of all respondents being 55 years and over in age.
- ▶ The predominant boating activity is fishing (82.2% daytime, 24.9% overnight), with cruising also a popular recreational boat use (28.4%).
- ▶ The majority of boat owners launched their vessel either two to three times per month (40.5%) or every two to three months (31.5%).
- ▶ Estuaries, rivers and bays were nominated as the preferred location to operate their vessel.
- ▶ A significant share of respondents (16%) travel more than 50 kilometres from their residential address to their preferred boat ramp / mooring site.

## 4. Literature Review

The context for the *Cassowary Coast Maritime Facilities Demand Forecasting Study* is shaped by a number of previous plans, policies and guidelines, as follows:

| Type            | Documents Reviewed  |
|-----------------|---|
| <b>State</b>    | <ul style="list-style-type: none"> <li>Coastal Protection and Management Act 1995</li> <li>Sustainable Planning Act 2009</li> <li>Queensland Coastal Plan 2012</li> <li>Queensland Coastal Plan - Maritime Development Areas in Queensland</li> <li>Queensland Recreational Boating Facilities Demand Forecasting Study 2011</li> </ul> |
| <b>Regional</b> | <ul style="list-style-type: none"> <li>Far North Queensland Regional Plan 2009</li> <li>Tropical North Queensland Economic Plan 2011</li> <li>Tropical North Queensland Tourism Opportunity Plan 2010 - 2020</li> </ul>   |
| <b>Local</b>    | <ul style="list-style-type: none"> <li>Cassowary Coast Region Community Plan 2011-2021</li> <li>Tropical Futures 2016 – Pillars for a Sustainable Cassowary Coast</li> <li>Cardwell Shire Planning Scheme 2007</li> <li>Johnstone Shire Planning Scheme 2005</li> </ul>   |

These are summarised in the proceeding tables to identify implications for the demand, location and management of maritime infrastructure in the study area.

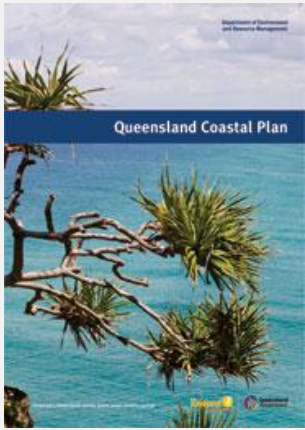
## 4.1 State

| Document  | Overview and Planning Implications  |
|---|---|
| <b>Coastal Protection and Management Act 1995</b> | <p>The objective of the <i>Coastal Protection and Management Act 1995</i> (Coastal Act) is to protect, conserve, rehabilitate and manage coastal resources and biodiversity. The CPMA is administered by DEHP (formerly DERM).</p> <p>The purpose of the Coastal Act is fulfilled by the QCP which identifies provisions for the management and protection of coastal land and resources within the Coastal Zone.</p> <p>The Coastal Act identifies coastal management districts for which are areas requiring vulnerable to erosion, coastal hazards and non coastal-dependent development. DEHP is given concurrence agency or assessment manager powers under the <i>Sustainable Planning Act 2009</i> (SPA) Integrated Development Assessment System (IDAS) for assessable development in the coastal management district that may affect coastal resources.</p> <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <ul style="list-style-type: none"> <li>Future maritime development must be undertaken in accordance with the provisions of the Coastal Act.</li> <li>The objectives of the Coastal Act are achieved through the provisions identified in the Queensland Coastal Plan and the State Planning Policy 3/11: Coastal Protection.</li> </ul> |
| <b>Sustainable Planning Act 2009</b>              | <p>The <i>Sustainable Planning Act 2009</i> (SPA) came into effect on 18 December 2009 as the legal framework for planning within Queensland.</p> <p>The SPA seeks to achieve sustainable planning outcomes through:</p> <ul style="list-style-type: none"> <li>Managing the process by which development takes place.</li> <li>Managing the effects of development on the environment.</li> <li>Continuing the coordination and integration of local, regional and state planning (DLGP, 2012).</li> </ul>   |



| Document | Overview and Planning Implications  |
|----------|---|
|          | <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <p>SPA's role in coastal development is as follows:</p> <ul style="list-style-type: none"><li>▶ SPA prescribes provision for making and amending local planning instruments for making or amending a planning scheme or planning scheme policy and making a temporary local planning instrument.</li><li>▶ The State Planning Policy 3/11: Coastal Protection shapes land-use planning, coastal activities and development assessment decisions within the coastal zone in accordance with SPA.</li><li>▶ DEHP is given concurrence agency or assessment manager powers under the SPA Integrated Development Assessment System (IDAS) for assessable development in the coastal management district that may affect coastal resources.</li></ul> |



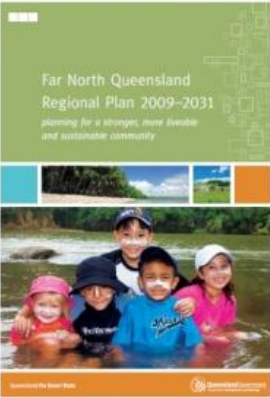
| Document   | Overview and Planning Implications  |
|--|---|
| <p><b>Queensland Coastal Plan 2012</b></p>  | <p>The Queensland Coastal Plan (QCP) addresses management of the coast and planning for future urban development in the coastal zone by incorporating the State Policy for Coastal Management and State Planning Policy for Coastal Protection. The QCP reduces overlap with other policy initiatives and consolidates planning and natural resource management policies with best practice guidelines (DERM, 2012).</p> <p>Regional Coastal Management Plan's (Regional CMP's) operate in conjunction with the QCP by supporting the policies and principles of the State Plan. The Regional CMP's identify specific geographic areas, and define the boundaries of areas such as control districts and key coastal sites (EPA, 2006).</p> <p><b>State Policy for Coastal Management</b></p> <p>The State Policy for Coastal Management is prepared under the <i>Coastal Protection and Management Act 1995</i> and provides direction and guidance about the management of coastal land in Queensland (DERM, 2012).</p> <p>The State Policy applies to all coastal land and coastal resources and details specific policy outcomes for the protection and management of coastal land along the Queensland Coast (DERM, 2012).</p> <p><b>State Planning Policy 3/11: Coastal Protection</b></p> <p>The QCP identifies three categories of maritime development:</p> <ul style="list-style-type: none"> <li>▶ Major ports</li> <li>▶ Mid to large scale maritime development areas (such as mixed use commercial or industrial marinas)</li> <li>▶ Small scale recreational or service infrastructure (boat ramps and jetties).</li> </ul> <p>The State Planning Policy 3/11: Coastal Protection (SPP) protects the coastal resources of the coastal zone by setting out criteria for land-use planning, coastal activities and development assessment, enabling Queensland to manage development within the coastal zone, including within coastal waters (DERM, 2012). The SPP is intended to shape land use planning, coastal activities and development assessment decisions within the coastal zone under the SPA.</p> <p>A specific policy outcome for the SPP relates to Coastal-dependent development and aims to protect and maintain opportunities for sustainable coastal-dependent development in a manner that minimises impacts on coastal resources (DERM, 2012).</p> <p>MDA's are designated in the QCP for medium to large-scale maritime infrastructure, often involving a mix of maritime and other uses.</p> <p>Proactively designating appropriate areas for this kind of development serves two purposes:</p> <ol style="list-style-type: none"> <li>1. Provides greater certainty for proponents and the community about the locations for maritime development; and</li> <li>2. Protects these areas from non-coastal-dependent development.</li> </ol> |

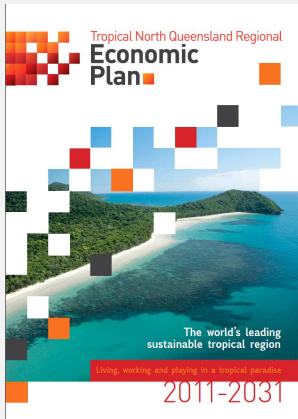


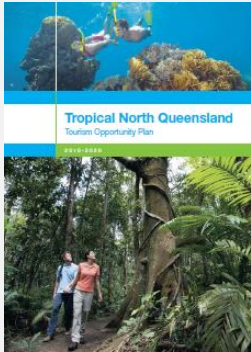
| Document  | Overview and Planning Implications   |
|---|--|
|   | <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <ul style="list-style-type: none"> <li>Future maritime development must be developed in accordance with the provisions of the Queensland Coastal Plan, in particular the specific policy outcomes of the SPP relating to Coastal-dependent development.</li> <li>Medium to large scale maritime infrastructure such as marinas, are to be developed in MDAs to minimise impacts on the coastal resources.</li> <li>Should there be a demand for maritime facilities in an areas that is currently not designated as a MDA, proponents can submit proposals to designate areas for maritime development in accordance with the Planning methodology for designating areas for maritime development (refer below).</li> </ul>   |
| <p><b>Queensland Coastal Plan – Maritime Development Areas in Queensland:</b></p> <p><i>A planning methodology for designating areas for maritime development</i></p> | <p>In accordance with policy 6.1.1 of the SPP for Coastal Protection, new maritime development areas are to be designated using the maritime development area methodology (DERM, 2012).</p> <p>The planning methodology for designating areas for maritime development aims to provide certainty for proponents by directing maritime development to appropriate sites and providing streamlined assessment under the coastal plan through the use of codes and best practice provisions (DERM, 2011).</p> <p>While application for mixed use commercial or industrial marinas may still be considered outside of MDAs, such development must not impact on areas of high ecological significance and proposals will be subject to rigorous impact assessment. It is intended that development within an MDA would only be subject to code assessment on the basis that planning for the site will have been completed and assessed through the designation process.</p> <p>The objectives of the methodology is to achieve the following:</p> <ul style="list-style-type: none"> <li>Ensure MDAs are located to maximise benefits and minimise costs to the study area from a financial, social and environmental perspective</li> <li>Ensure consistent and transparent assessment framework to determine and prioritise suitable location for designation as MDAs</li> <li>Specify the type and scale of maritime infrastructure considered suitable at identified sites (DERM, 2011).</li> </ul> <p>Once a new site is identified as being suitable for maritime development using this methodology, it would be mapped as a MDA and included under the coastal plan. This would require amendment to SPP 3/11 using the process outlined by the SPA, including the public consultation requirement.</p> |

| Document  | Overview and Planning Implications   |
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|   | <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <ul style="list-style-type: none"> <li>▶ The designation of new sites as MDAs will assist in providing proponents with a streamlined assessment under the Coastal Plan as development within the area would only be subject to code assessment.</li> <li>▶ Proposals for maritime development outside of MDAs will be subject to a rigorous impact assessment.</li> <li>▶ This study will assist in broad locations for the potential designation of an MDA in the Cassowary Coast LGA based on demand for maritime facilities.</li> </ul>  |
| <p><b>Queensland Recreational Boating Facilities Demand Forecasting Study – Northern Region</b></p> | <p>This Queensland Government study provides a strategic framework to guide planning for the development of existing and new recreational boating facilities across the State. Facility types included in the study were boat ramps, pontoons, floating walkways and jetties. Demand for marinas was not included in the scope of the study.</p> <p>Cassowary Coast was assessed as part of the Northern Region (defined as Cape York, Cairns, North-West Queensland and Townsville) and formed part of the Cairns Recreational Boating Catchment – RBC.</p> <p>The Study identified that recreational boating facilities contribute significantly to the area's tourism industry, whilst also meeting demands of the growing resident population. A number of other key trends were observed for the Northern Region:</p> <ul style="list-style-type: none"> <li>▶ Ongoing population growth driving boat ownership trends and facility demand.</li> <li>▶ Boat ownership is the most significant demand driver for maritime infrastructure, namely boat ramps, marina berths (both wet and dry), moorings and pontoons.</li> <li>▶ There are some significant environmental management constraints on the location of boating facilities and associated infrastructure under the State and Regional Coastal Management Plans and other State legislation relevant to the Northern Region.</li> <li>▶ Many boating facilities are heavily influenced by seasonal tourism activity, particularly during the wet season when some sites become inaccessible. During the dry 'tourist' season, many facilities are placed under pressure and capacity is an issue.</li> </ul> <p>Demand projections for recreational boating facilities in the Cairns RBC were identified as Low, with a surplus of boat ramp lanes identified in the RBC up until 2021.</p> <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <ul style="list-style-type: none"> <li>▶ Local stakeholders identified the need for more all-tide boat ramp facilities at Mission Beach but no sites were identified.</li> <li>▶ Upgrading of the existing Clump Point boat ramp is recommended as a priority for Northern Region.</li> <li>▶ Through the consultation process and the identification of priorities, consideration has also be given to the demands of the remainder of the fleet, in particular boats that are kept in the water and would use facilities such as landings and pontoon to access shore based facilities.</li> </ul> |

## 4.2 Regional

| Document   | Overview and Planning Implications  |
|--|---|
| <p><b>Far North Queensland Regional Plan 2009-2031</b></p>  | <p>The <i>Far North Queensland Regional Plan 2009-2031</i> was released in 2009, and is the regional blueprint for planning and development in FNQ over the next 20 years, coinciding with projected population growth by more than 100,000. It identifies enough developable land to accommodate future growth while protecting the region's environment, biodiversity and natural resources.</p> <p>The Regional Plan applies to Cairns, Tablelands and Cassowary Coast Regional Councils, together with the Yarrabah and Wujal Wujal Aboriginal Councils. It identifies the following priority actions for the Cassowary Coast Region:</p> <ul style="list-style-type: none"> <li>▶ Preparing transport network plans for Tablelands and Cassowary Coast Regional Councils</li> <li>▶ Investigating the potential for a transport hub to be located near Innisfail</li> <li>▶ Investigating opportunities for port activities at Mourilyan.</li> </ul> <p>In addition to these priority actions, the FNQ Regional Plan also identifies policies for coastal development:</p> <ul style="list-style-type: none"> <li>▶ Future development in Cardwell and Mission Beach is constrained to minimise future impacts on ecological values, coastal hazard risks and loss of the village character.</li> <li>▶ Adequate strategic port land at Cairns and Mourilyan is made available for coastal uses, such as commercial fishing, other land based marine activities and logistics (including bulk sugar terminal, live cattle or forestry cargo handling facilities).</li> <li>▶ Coastal development and maritime infrastructure are designed and located to minimise interactions with protected marine wildlife.</li> <li>▶ Development does not occur within an erosion-prone area that is also within a coastal management district; or within a storm tide inundation hazard area, except in accordance with relevant policies of the state and regional coastal management plans.</li> <li>▶ Development proposals must be consistent with the zoning plans and management plans of the Queensland Great Barrier Reef Coast Marine Park and the Commonwealth Great Barrier Reef Marine Park.</li> <li>▶ Development ensures there is no net loss of public access to the foreshore or use of coastal waters, and public access is designed and maintained to conserve coastal resources and maintain public safety.</li> </ul> |

| Document  | Overview and Planning Implications  |
|---|---|
| <p><b>Tropical North Queensland Economic Plan 2011</b></p>  | <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <ul style="list-style-type: none"> <li>▶ Future development in Cardwell and Mission Beach is constrained to minimise future impacts on ecological values, coastal hazard risks and loss of the village character. Development constraints in these towns may impact the demand for maritime facilities in area.</li> <li>▶ The Plan supports coastal uses and development at Mourilyan Harbour for coastal uses such as commercial fishing.</li> <li>▶ Potential future coastal development and maritime infrastructure is to be designed and located to minimise interactions with protected marine wildlife.</li> <li>▶ Future development must ensure there is no net loss of public access to the foreshore and that public access is designed and maintained to conserve coastal resources and maintain public safety.</li> </ul> <p>The Tropical North Queensland Regional Economic Plan (TNQ REP) outlines a twenty year economic vision based upon widespread consultation and research.</p> <p>The purpose of the TNQ REP is to provide:</p> <ol style="list-style-type: none"> <li>1. A high level blueprint that articulates a shared economic vision and identifies diverse strategies to achieve that vision.</li> <li>2. A tool for understanding the regional economy, attracting investment and with 'one voice' driving government policy.</li> <li>3. Clear roles and responsibilities for implementation.</li> </ol> <p>The TNQ REP is primarily focused on the four LGA's of Cairns Region, Cassowary Coast Region, Cook Shire and Tablelands Region, however it acknowledges and integrates the economic links that extend beyond these localities.</p> <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <p>Some key strategies identified in this TNQ REP in relation to opportunities for maritime development include:</p> <ul style="list-style-type: none"> <li>▶ Implement strategies to position the region as the super yacht hub for the South Pacific, thereby increasing the business opportunities to grow service based industries and enterprises.</li> <li>▶ Gather and share market intelligence of super yacht vessels.</li> <li>▶ Collaborate with other cluster groups within Queensland to advocate legislative changes to reduce visitation/charter barriers.</li> </ul> |

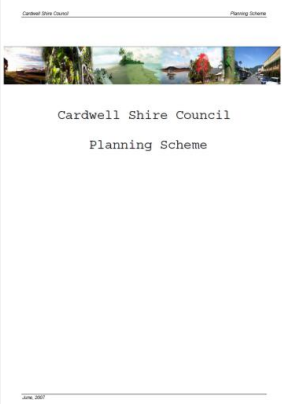
| Document   | Overview and Planning Implications   |
|--|--|
| <p><b>Tropical North Queensland Tourism Opportunity Plan 2010 – 2020</b></p>  | <p>The purpose of this Tourism Opportunity Plan (TOP) is to provide direction for the sustainable development of tourism in the Tropical North Queensland region. The TOP aims to:</p> <ul style="list-style-type: none"> <li>Identify new and upgraded tourism product that meets future visitor expectations and demands;</li> <li>Identify the need for new investment in infrastructure that supports the ongoing development of tourism;</li> <li>Provide relevant research based information on tourism supply and demand; and</li> <li>Provide an agreed focus and mechanisms for engagement with the tourism industry, infrastructure and private investors (Queensland Government &amp; Tourism Queensland, 2010).</li> </ul> <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <p>Some key strategies of the TNQ TOP (2010) of relevance to maritime development include:</p> <ul style="list-style-type: none"> <li>The development of a safe boat haven at Mission Beach as a catalyst project for the TNQ Region – the TOP identifies an opportunity to establish a safe boat mooring haven at Mission Beach, to encourage growth of recreational boating and tourism in the region. This will also provide a sound basis for attracting further commercial tourism development to the area, generating economic and social benefits for Mission Beach and the wider community.</li> <li>Recreational boating is a key experience of the region and commercial boating for fishing, island hopping, diving and snorkelling, and sightseeing are growth sectors of the industry.</li> <li>Development of a safe and environmentally sustainable marina/ boating haven facility represents an opportunity for sustainable growth of tourism within the region and is also critical in protecting the existing industry on the mainland and islands of the region.</li> </ul> |

### 4.3 Local

| Document   | Overview and Planning Implications  |
|--|---|
| <p><b>Cassowary Coast Community Plan 2011-2021</b></p>  | <p>The <i>Cassowary Coast Region Community Plan</i> provides a framework for Council to set future direction, guide strategic planning, and determine resource allocation priorities (CCRC, 2011).</p> <p>The Plan identifies the following key challenges facing the Cassowary Coast community:</p> <ul style="list-style-type: none"> <li>▸ Access to enhanced education and learning.</li> <li>▸ Affordable living choices.</li> <li>▸ Providing for infrastructure that meets current and future needs.</li> <li>▸ Diversifying our economy and providing increased employment opportunities.</li> <li>▸ Maintaining a healthy active lifestyle.</li> <li>▸ Improving transport options to meet industry and community needs.</li> <li>▸ Adopting sustainable technologies and ideas.</li> <li>▸ Maintaining community resilience in the face of natural disasters.</li> <li>▸ Continuing to protect our natural environment and natural resources.</li> <li>▸ Retaining our unique characteristics.</li> <li>▸ Developing an adaptive stance to the effects of climate change while protecting our waterways and coastlines.</li> </ul> <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <p>Strategic directions for the Community Plan include:</p> <ul style="list-style-type: none"> <li>▸ The effectiveness of major regional infrastructure such as the Port of Mourilyan is enhanced through the establishment of collaborative partnerships with public and private sector owners.</li> <li>▸ Existing regional infrastructure is modernised and expanded through the consolidation of complementary industries in suitable locations.</li> </ul> |



| Document   | Overview and Planning Implications  |
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| <b>Tropical Futures 2016 - Pillars for a Sustainable Cassowary Coast</b> | <p>The <i>Cassowary Coast Regional Council Economic Development Plan</i> will provide increased coherence and coordination with other Council plans delivering actions and outcomes that act on strategies defined in the five pillars as follows:</p> <ul style="list-style-type: none"><li>▶ Marketing the Cassowary Coast</li><li>▶ Building partnerships, fostering innovation</li><li>▶ Workforce development</li><li>▶ Enabling infrastructure</li><li>▶ Planning for the future.</li></ul>   |
|  | <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <p>A summary of key implications to consider for this Study include:</p> <ul style="list-style-type: none"><li>▶ Facilitating commercial partnerships between Council and business (Public Private Partnerships – PPP). The Plan identifies Metricon's Sea Haven development as an example of such a partnership and opportunities and benefits include:</li><li>▶ New and enhanced housing and facilities</li><li>▶ Potential for existing and new small business expansion and jobs generation within the Innisfail town centre.</li></ul> |

| Document  | Overview and Planning Implications  |
|---|---|
| <p><b>Cardwell Shire Planning Scheme 2007</b></p>  | <p>The <i>Cardwell Shire Planning Scheme</i> is a framework for managing development in a way that advances the purposes of SPA. The former Cardwell Shire included the localities of Tully, Cardwell and South Mission Beach.</p> <p>The effect of the Zones, Precincts, Overlays and assessment criteria (Specific Outcomes and Probable/Acceptable Solutions) of the Planning Scheme is summarized below:</p> <ul style="list-style-type: none"> <li>▶ The major focus for business and community activity in the former Shire area is Tully, which predominantly services the northern and central parts of the Shire.</li> <li>▶ Mission Beach provides for a growing residential population and tourism development which is low scale in character, whilst protecting the area's outstanding natural values and rare and threatened species, notably the southern cassowary.</li> <li>▶ The coastal township of Cardwell and the adjacent Port Hinchinbrook development, provide important economic and tourism service roles, tourist accommodation, and development opportunities.</li> <li>▶ Coastal areas will be managed to minimize the impacts of development on scenic amenity, Sensitive Environmental Areas and valuable agricultural and rural land and to reduce pressure to establish new urban nodes.</li> </ul> <p>Key Desired Environmental Outcomes for the Planning Scheme include:</p> <ul style="list-style-type: none"> <li>▶ A settlement pattern that avoids land use conflicts and provides for a coordinated sequencing of development and infrastructure by the consolidation and logical expansion of development within the existing Urban Areas of Tully, Cardwell, Mission Beach and Tully and Hull Heads.</li> <li>▶ The values of significant natural areas and features, including but not limited to the Declared Fish Habitat Areas and Marine Parks, are not compromised by development or the effects of development that may significantly reduce those values in terms of:             <ul style="list-style-type: none"> <li>○ Ecological function</li> <li>○ Continuity of habitat</li> <li>○ Habitat Corridors</li> <li>○ Water quality</li> <li>○ Visual and scenic amenity.</li> </ul> </li> </ul> |



| Document                                    | Overview and Planning Implications  |
|---|---|
| <b>Johnstone Shire Planning Scheme 2005</b> | <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <ul style="list-style-type: none"> <li>▶ The townships of Mission Beach and Cardwell provide important tourism service roles for the region.</li> <li>▶ Development in Mission Beach must be contained to protect natural values and threatened species.</li> <li>▶ Coastal area must be managed to minimise the impacts of development on scenic amenity.</li> <li>▶ Significant natural areas and features must not be compromised by future development.</li> </ul>   |
|   | <p>The <i>Johnstone Shire Planning Scheme</i> is a framework for managing development in a way that advances the purposes of SPA for the former Johnstone Shire. The former Johnstone Shire included the localities of Innisfail, Mission Beach and Silkwood.</p> <p>Key points of strategic direction are summarized below:</p> <ul style="list-style-type: none"> <li>▶ Develop tourism in a managed way, founded on the natural and cultural characteristics of the Shire, achieving a role which continues to the economy, but which has a low impact on the social and physical environment.</li> <li>▶ Preserve and enhance the character of urban, natural and rural areas, including the striking scenic landscape, the relaxed friendly lifestyle and the strong sense of community identity, which typifies the Shire.</li> </ul> |
|   | <p><b><i>Implications for Maritime Facilities in Cassowary Coast</i></b></p> <p>Key outcomes/provisions applicable to this Study include:</p> <ul style="list-style-type: none"> <li>▶ The economic base of the shire is expanded through developing a tourism industry which has a low impact on the social and physical environment</li> <li>▶ The natural resources including marine waters are protected, managed sustainably and used efficiently.</li> <li>▶ Land and infrastructure requirements for community needs and services such as recreational facilities are identified and protected from incompatible development.</li> </ul>   |

## 5. Current Supply of Maritime Infrastructure

### 5.1 Cassowary Coast

#### 5.1.1 Existing Facilities

This section briefly examines the current supply of maritime infrastructure in the Cassowary Coast Region, based on desktop research and discussions with marina operators/facility managers.

Under the *Queensland Coastal Plan* (2012), three Maritime Development Areas (MDA's) have been designated in the Cassowary Coast Region. These are:

- ▶ Johnstone River (MDA\_002\_009)
- ▶ Innisfail Port (MDA\_002\_010)
- ▶ Hinchinbrook Marina (MDA\_003-004)

Other maritime infrastructure located within the Region includes:

- ▶ Pile moorings at the Port of Mourilyan which cater for recreation, tourism and commercial vessels (managed by Ports North);
- ▶ Private moorings located on the northern side of the Johnstone River in Innisfail (managed by Council); and
- ▶ A small number of unregistered mooring facilities elsewhere in the Region.

At Port Hinchinbrook marina, all 202 wet berths were destroyed by Cyclone Yasi in February 2011. The Developer's plans for reconstruction of Port Hinchinbrook marina are unknown at the time of writing.

Existing supply by facility type and location are shown in the following tables and figures.

**Table 5.1 – Existing Facility Supply in Cassowary Coast Region**

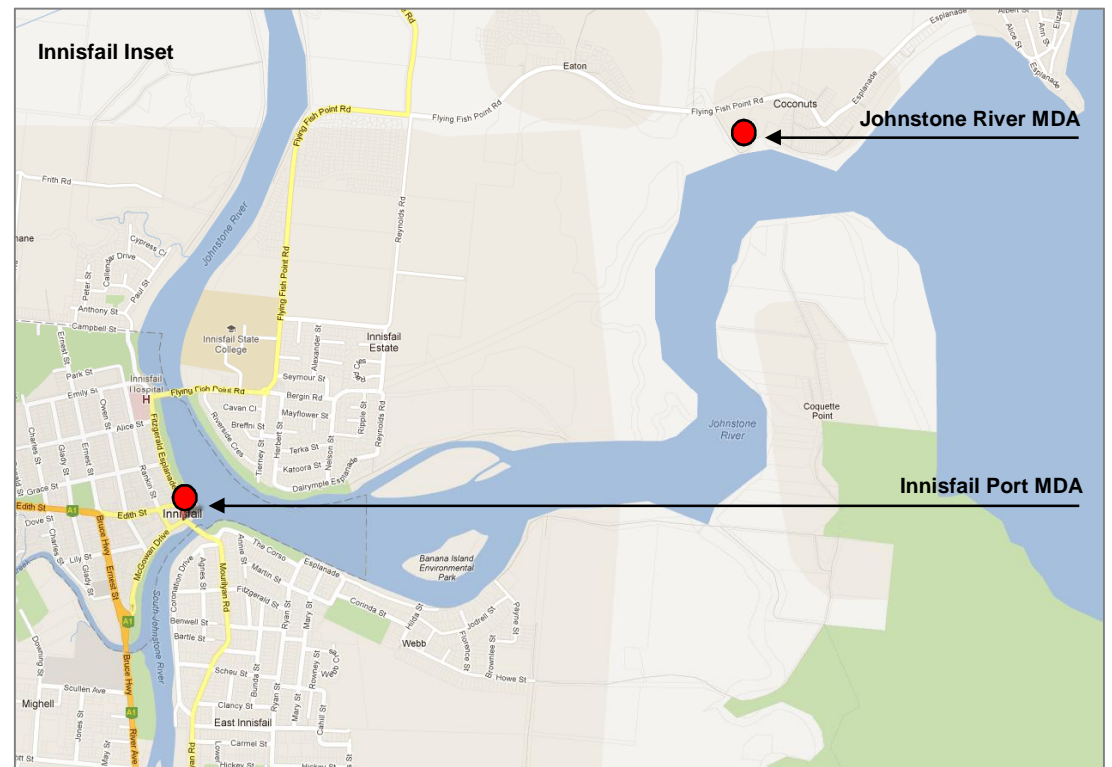
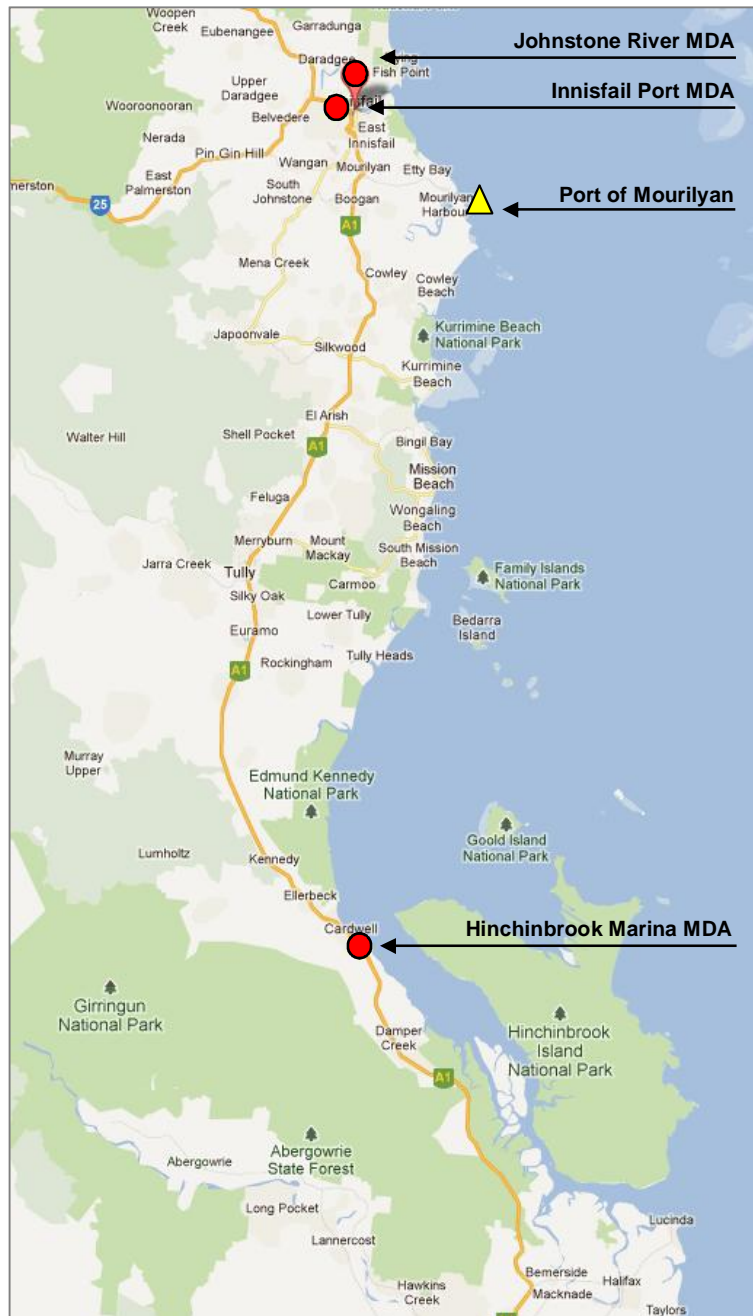
| Facility Name                    | Locality  | MDA  | Wet Berths | Dry Storage | Pile Moorings | Total Supply |
|----------------------------------|-----------|------|------------|-------------|---------------|--------------|
| Johnstone River Marine Precinct  | Coconuts  | Yes  | 0          | 0           | 2             | 2            |
| Innisfail Port                   | Innisfail | Yes  | 0          | 0           | 24            | 24           |
| Subloo's Innisfail Marina Berths | Innisfail | Yes* | 8          | 0           | 0             | 8            |
| Port Hinchinbrook Marina         | Cardwell  | Yes  | 0 (202) #  | 0           | 0             | 0            |
| Port of Mourilyan                | Mourilyan | No   | 0          | 0           | 16            | 16           |
| <b>Total</b>                     |           |      | <b>8</b>   | <b>0</b>    | <b>42</b>     | <b>50</b>    |

Source: Cassowary Coast Regional Council, Ports North and Subloo's Transport (April, 2012)

\* Privately managed marina berths located within Innisfail Port MDA.

# Facility supply prior to February 2011.

In terms of distribution, existing (operational) facilities are concentrated in the northern portion of the Region.







Source of Base Maps: Google 2012

**Figure 3 – Location of Existing Maritime Infrastructure in Cassowary Coast**

- Maritime Development Areas
- ▲ Other Maritime Infrastructure

**Table 5.2 – Johnstone River MDA**

| Location                      | Property Description                 | Area                                     | Maritime Facilities                       | Support Facilities                  | Aerial Photo  |
|-------------------------------|--------------------------------------|--|---|-------------------------------------|---|
| The Esplanade, Coconuts       | Lot 289 SP110841<br>Lot 290 SP110841 | 5776m <sup>2</sup><br>2979m <sup>2</sup> | ▶ Pile moorings - 2                       | ▶ Boat ramp<br>▶ Slipway<br>▶ Sheds | <div>Maritime Development Areas<br/>MDA_002_009 Johnstone River Marine Precinct</div>  <div>0 5 10 20<br/>Metres<br/>1:1,000</div> <div>Queensland<br/>Government</div> <div> Maritime Development Areas<br/> Cadastral Boundaries</div> |
| Ownership                     | Major Uses                           | Leasing                                  | Comments                                  |                                     |   |
| Syndicate Enterprises Pty Ltd | ▶ Marine industry – boat maintenance | NA                                       | ▶ No use by recreation or tourism vessels |                                     |   |

Source: DERM, 2012

Source: DERM, 2012



| Location  | Property Description   | Area  | Maritime Facilities   | Support Facilities   | Aerial Photo   |
|---|--|---|---|--|--|
| Fitzgerald Esplanade, Innisfail (Johnstone River)   | Reserve for Park and Recreation<br><ul style="list-style-type: none"> <li>Lot 269 CP846524</li> <li>Lot 268 SP146773</li> <li>Lot 271 SP167909</li> </ul> Business<br><ul style="list-style-type: none"> <li>Lot 218 CP898559</li> </ul> | 2.97 ha<br><br><br><br><br><br><br><br><br><br>574m <sup>2</sup>  | <ul style="list-style-type: none"> <li>Commercial wharf</li> <li>Public wharf – 24 pile moorings (various sizes)</li> <li>Private pontoon – 8 wet berths (12-20m)</li> </ul>  | <ul style="list-style-type: none"> <li>Jetty/wharf based support facilities</li> <li>Pontoons</li> <li>Refuelling</li> <li>Jack Fossey Park</li> <li>Amenities</li> <li>Boat ramp</li> <li>Car park</li> <li>Cafe</li> </ul> | <p><b>Maritime Development Areas</b><br/>MDA_002_010 Innisfail</p> <p>The aerial photograph shows the coastal area of Innisfail, Queensland. A yellow dashed line outlines the Maritime Development Area (MDA), which includes the waterfront from Fitzgerald Esplanade down to the Johnstone River. The area contains various buildings, parking lots, and recreational spaces like Jack Fossey Park. Several boats are visible in the water.</p> |
| Ownership   | Major Uses   | Leasing   | Comments  |  |  |
| Cassowary Coast Regional Council as trustee (Lots 268, 269, 271)<br><br>Subloo's Transport (Innisfail Marina Berths)<br><br>Sandhurst Trustees Ltd (Lot 218 – childcare facility) | <ul style="list-style-type: none"> <li>Commercial fishing industry</li> <li>Recreation</li> <li>Tourism</li> </ul>   | Public – long term leases (6 and 12 months)<br><br>Private – berths available for sale or lease inc. casual rates | <ul style="list-style-type: none"> <li>Located adjacent to Innisfail town centre.</li> <li>Public wharf infrastructure constructed between 1960's and 1985.</li> <li>Area has been used for shipping purposes since the establishment of Innisfail township.</li> <li>Council as trustee has been appointed to manage land on behalf of the State.</li> <li>Port reserve subject to Innisfail Boat Harbour Management Plan (CCRC, June 2009).</li> <li>Utilisation - Some long term leases and live-aboards. Council has waiting list for public moorings. No capacity to cater for demand from the itinerant market.</li> <li>Subloo's Innisfail Marina Berths – private marina berths available for sale.</li> <li>Childcare facility located within MDA boundary (Lot 218).</li> </ul> |  |  |

Source: DERM, 2012

## Innisfail Port MDA – Site Photographs



Public moorings in Johnstone River (Innisfail Port MDA)



Innisfail marina berths (private facility also within MDA boundary)



**Table 5.4 – Port Hinchinbrook Marina MDA**

| Location   | Property Description  | Area                | Maritime Facilities  | Support Facilities  | Aerial Photo   |
|--|---|---------------------|--|---|--|
| Keith Williams Esplanade, Cardwell                       | Refer below   |                     | Facilities not operational due to cyclone damage.<br><br>Pre-Yasi facilities: <ul style="list-style-type: none"><li>202 marina berths (10-45m)</li><li>Capacity for up to 250 marina berths</li></ul>                        | <ul style="list-style-type: none"><li>Major master planned resort community</li><li>Café and restaurant</li><li>Refuelling pontoon</li><li>Amenities</li><li>Boat maintenance services (Norship Marine)</li><li>Residential development</li></ul> | <div>Maritime Development Areas<br/>MDA_003_004 Port Hinchinbrook Marina</div> <div>0 40 80 160<br/>Metres<br/>1:5,000</div> <div>Queensland Government</div> <div>Maritime Development Areas<br/>Cadastral Boundaries</div> |
| Ownership  | Major Uses  | Leasing             | Comments   |   |  |
| Williams Corporation Pty Ltd<br><br>(primary landholder) | <ul style="list-style-type: none"><li>Tourism</li><li>Recreation</li><li>Boat maintenance</li></ul> | NA                  | <ul style="list-style-type: none"><li>Port Hinchinbrook Marina was closed in February 2011 due to Cyclone Yasi.</li><li>The Developer's plans for reconstruction of the marina are unknown at the time of writing.</li></ul> |   |  |
| Property Description                                     |   | Area                | Ownership  |   |  |
| Lot 58 SP116825 & Lot 99 SP190029                        |   | 9ha                 | Williams Corporation Pty Ltd   |   |  |
| Lot 54 SP115194  |   | 2.21ha              | Williams Corporation Pty Ltd   |   |  |
| Lot 24 SP139563 & Lot 1 SP144135                         |   | 6101m <sup>2</sup>  | Black Amber Projects Pty Ltd   |   |  |
| Lot 98 SP 221610   |   | 4.02ha              | Williams Corporation Pty Ltd   |   |  |
| Lot 2 SP105672   |   | 7100m <sup>2</sup>  | Cassowary Coast Regional Council   |   |  |
| Lot 1 SP221610   |   | 5157m <sup>2</sup>  | Margar Super Pty Ltd   |   |  |
| Lot 13 SP184322  |   | 538m <sup>2</sup>   | LA & MJ Edwards  |   |  |
| Lot 1 SP139537   |   | 2.71 ha             | Ray Fry Investments Pty Ltd  |   |  |
| Lot 24 SP 177389 (part only)                             |   | 16400m <sup>2</sup> | Williams Corporation Pty Ltd   |   |  |
| (Listing refers to major parcels)                        |   |                     |  |   |  |

Source: DERM, 2012

Source: DERM, 2012


Port Hinchinbrook Marina MDA – Site Photographs



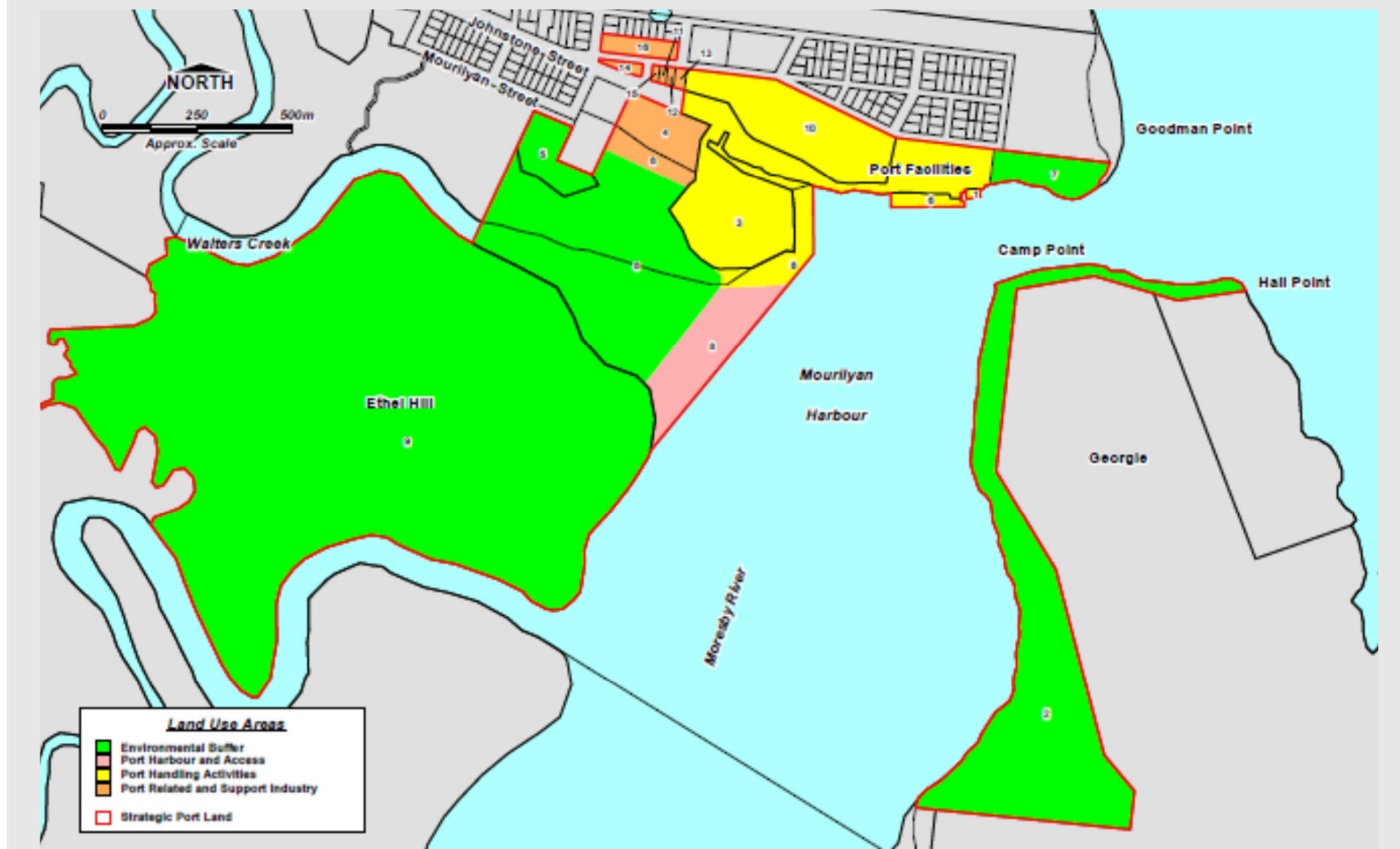
Damaged facilities at Port Hinchinbrook marina (April 2012)



**Table 5.5 – Port of Mourilyan**

| Location  | Property Description   | Area                                   | Maritime Facilities   | Support Facilities   |
|---|--|--|---|--|
| Mourilyan Harbour Road,<br>Mourilyan Harbour<br><br>(17km south east of<br>Innisfail on the Moresby<br>River)   | Refer to map overleaf of Strategic Port<br>Land  |  | <ul style="list-style-type: none"><li>Port infrastructure</li><li>16 pile moorings for public use</li></ul> | <ul style="list-style-type: none"><li>Pilot boat jetty</li><li>Coast guard jetty</li><li>Public jetty</li><li>Boat ramp</li><li>Car park</li></ul> |
| Ownership   | Major Uses   | Leasing                                | Aerial Photo  |  |
| Ports North   | <ul style="list-style-type: none"><li>Port used for export of raw sugar, molasses and livestock</li><li>Recreational vessels</li><li>Commercial trawlers</li><li>Coast guard</li></ul> | Annually<br>Monthly<br>Weekly<br>Daily |                          |  |
| Comments  |  |  |   |  |
| <ul style="list-style-type: none"><li>Site subject to "Port of Mourilyan Land Use Strategy" (April 2003) - provides overall framework for current and future development of Port in accordance with the corporation's economic and environmental responsibilities.</li><li>The port authority, Ports North, advise that a recent update to strategic plan will continue to provide for public access to undertake recreational sailing, fishing and mooring (plan update not in the public domain).</li><li>Recent research conducted by Ports North showed no increase in demand for recreation and tourism uses at the Port of Mourilyan.</li><li>Strategic Port Land is not subject to local government planning scheme.</li><li>Most recreational users and commercial trawlers seek long term lease. Private boat moorings include approximately five live-aboards.</li><li>Service catchment for public access - from local district and Tablelands Region.</li></ul> |  |  |   |  |

Map Source: Google, 2012



### 5.1.2 Proposed Facilities

Cassowary Coast Regional Council is aware of two proposals for maritime facilities in the Region:

#### Sea Haven Marina Concept

- Description – Proposal for a \$130 million marina village. Master plan included 56 berth marina with supporting facilities, commercial centre, dining and shopping precinct, apartments and 179 lot subdivision.
- Location – East of Innisfail adjacent to the Johnstone River, bounded by Ninds Creek to the east, Coquette Road to the south and River Road to the west. The proposed development comprises an area of 27ha for the land component and 15ha of waterways.
- Proponent – Metricon
- Current Status – This project was granted State Government approval in January 2008. Council advises that no development has occurred since 2008. Approvals are still current, however, Council is unaware if the Developer intends to proceed with the proposal.

#### Mission Beach Marina Concept

- Description – Concept for a Safe Boating Harbour at Boat Bay, Mission Beach. The marine portion of the proposal includes tour boat docks, commercial centre and coast guard, swimming centre, dry boat storage, marina berths. Marina amenities fuel dock and additional public boat ramp. The proposed marina is to be supported by residential precinct including 1-3 bedroom apartments.
- Location – Boat Bay (formerly known as Boat Shed Bay), at Mission Beach, adjacent to Clump Point.
- Proponent – Mission Beach Harbour Pty Ltd
- Current Status – A formal application for this proposed development has not been received by council or State Government.

## 5.2 Surrounding Region

Based on inventory data supplied by DSDIP, existing marinas in the broader region are located in the Cairns and Townsville local government areas, with a total provision of 774 and 595 facilities respectively.

**Table 5.6 – Existing Facility Supply in Surrounding Region**

| Facility Type                        | DRY     |      | WET     |      | Pile Moorings (Total) | Total Existing Supply | Berth Total (Current & Proposed) |
|--------------------------------------|---------|------|---------|------|-----------------------|-----------------------|----------------------------------|
| Locality                             | Current | Prop | Current | Prop |                       |                       |                                  |
| Cairns Region                        |         |      |         |      |                       |                       |                                  |
| Port Douglas                         | 0       | 0    | 152     | 0    | 0                     | 152                   | 152                              |
| Half Moon Bay Marina (Port of Cairns | 0       | 0    | 200     | 0    | 0                     | 200                   | 200                              |
| Bluewater Marina                     | 0       | 0    | 108     | 0    | 0                     | 108                   | 108                              |
| Port of Cairns                       | 0       | 0    | 241     | 0    | 73                    | 241                   | 314                              |
| Total (Cairns Region)                | 0       | 0    | 701     | 0    | 73                    | 774                   | 774                              |

| Facility Type                        | DRY     |      | WET     |      | Pile Moorings (Total) | Total Existing Supply | Berth Total (Current & Proposed) |
|--------------------------------------|---------|------|---------|------|-----------------------|-----------------------|----------------------------------|
| Locality                             | Current | Prop | Current | Prop |                       |                       |                                  |
| Townsville Region                    |         |      |         |      |                       |                       |                                  |
| Nelly Bay Marina                     | 0       | 0    | 106     | 0    | 0                     | 106                   | 106                              |
| Townsville Port                      | 0       | 0    | 0       | 0    | 0                     | 0                     | 0                                |
| Breakwater Marina                    | 0       | 0    | 280     | 0    | 0                     | 280                   | 280                              |
| Townsville Motor Boat & Yacht Marina | 0       | 0    | 165     | 0    | 0                     | 165                   | 165                              |
| Ross River Marina (Rosshaven Marina) | 0       | 0    | 44      | 0    | 0                     | 44                    | 44                               |
| Total (Townsville Region)            | 0       | 0    | 595     | 0    | 0                     | 595                   | 595                              |
| Hinchinbrook Shire                   |         |      |         |      |                       |                       |                                  |
| Port Lucinda                         | 0       | 0    | 0       | 0    | 0                     | 0                     | 0                                |
| Total (Hinchinbrook Shire)           | 0       | 0    | 0       | 0    | 0                     | 0                     | 0                                |

Source: DEEDI (2012)

As part of this study's consultation program, marina operators in Cairns and Townsville were contacted to discuss facility use – respondents have observed:

- ▶ Primary demand for marina berths is from their local catchments, followed by the domestic cruising market (notably South East Queensland, Sydney and Melbourne).
- ▶ Minimal demand from Cassowary Coast residents.
- ▶ No discernible increase in demand from the Cassowary Coast catchment, following the loss of marina facilities at Port Hinchinbrook in 2011.

## 6. Stakeholder Consultation

### 6.1 Consultation Approach

A stakeholder is defined as any individual, group of individuals, organisation or political entity with an interest in the outcome of a decision. They may be, or perceive that they may be, affected directly or indirectly by the outcome of a decision.<sup>3</sup>

Engagement and collaboration with key stakeholders was an important part of this study. Although a considerable amount of previous consultation has been done for maritime projects in the Cassowary Coast, it was important to understand and further refine the issues in the context of *future facility demand*.

Given the consultancy scope defined by DSDIP, a targeted consultation process was conducted to seek input from key stakeholders, including:

- Cassowary Coast Regional Council (CCRC)
- Elected Members
- Relevant State Government agencies, notably DEHP and DSDIP
- Commercial operators (e.g. marina managers)
- Local fishing and recreational boating groups
- Maritime Safety Queensland and volunteer marine rescue
- Regional tourism authority
- Other community interest groups (e.g. Chamber of Commerce)

A preliminary stakeholder scan was conducted through desk-based research and analysis of existing information materials. This list was refined with input from DSDIP and was updated as the study progressed.

The consultation process involved two phases as shown below.

**Table 6.1 – Targeted Consultation Program**

| Program        | Focus   | Key Stakeholders  | Timing             |
|----------------|---|---|--------------------|
| <b>Phase 1</b> | ▸ Context setting, facility supply and issues identification          | CCRC and marina operators   | March – April 2012 |
| <b>Phase 2</b> | ▸ Key Stakeholder Workshops<br>▸ Follow-up consultation (as required) | CCRC, State Government agencies, boating industry, commercial operators and community interest groups | Late April 2012    |

<sup>3</sup> International Association for Public Participation (IAP2)

Stakeholder discussions and meetings focussed on:

- Supply and use of existing maritime facilities in the study area.
- If and where demand exists for additional (future) wet berths and dry storage.
- Factors influencing vessel berthing choice e.g. travel distance, vessel size, access to open water, cost, proximity to popular destinations, disaster impacts on local facilities.
- Trends impacting on facility demand.
- Planned and potential growth in local tourism which may drive demand for maritime infrastructure.

## 6.2 Consultation (Phase 1) – Context Setting and Issues Identification

### 6.2.1 Activities and Participation

This section presents findings of preliminary consultation activities conducted in Phase 1 from March to April 2012, comprising:

- Project introduction letter circulated to key stakeholders.
- Telephone interviews with marina operators in the Cassowary Coast, Cairns and Townsville (mainland only) to ascertain existing facility supply, utilisation rates and local trends observed.
- Discussions with relevant officers from Cassowary Coast Regional Council with an interest in maritime facility management, maintenance and forward planning.

**Table 6.2 – Consultation Activities (Phase 1)**

| Activity                           | Key Stakeholders  | Participation <sup>4</sup>   |
|------------------------------------|---|--|
| <b>Project Introduction Letter</b> | ▸ Project introduction letter and workshop invitation sent to key stakeholders identified in conjunction with DSDIP.  | Distribution to approx. 35 people  |
| <b>Consultation with CCRC</b>      | <ul style="list-style-type: none"> <li>▸ Director of Planning and Environmental Services</li> <li>▸ Manager of Special Projects and Planning</li> <li>▸ Manager of Works</li> <li>▸ Economic Development Officer</li> </ul>   | <ul style="list-style-type: none"> <li>✓</li> <li>✓</li> <li>✓</li> <li>✗</li> </ul> |
| <b>Marina Operator Interviews</b>  | <ul style="list-style-type: none"> <li>▸ Cassowary Coast <ul style="list-style-type: none"> <li>○ Cassowary Coast Regional Council (Johnstone River Marine Precinct)</li> <li>○ Subloo Transport (Innisfail Marina Berths)</li> <li>○ Ports North (Mourilyan Harbour)</li> <li>○ Williams Corporation (Port Hinchinbrook Marina)</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>✓</li> <li>✗</li> <li>✓</li> <li>✗</li> </ul> |

<sup>4</sup> (✓) Stakeholder participated in Phase 1 consultation. (✗) Stakeholder declined to participate or could not be contacted in Phase 1.



| Activity | Key Stakeholders   | Participation <sup>4</sup>   |
|----------|--|--|
|          | <ul style="list-style-type: none"> <li>▶ Cairns <ul style="list-style-type: none"> <li>○ Bluewater Marina, Trinity Park</li> <li>○ Cairns Cruising Yacht Squadron, Cairns</li> <li>○ Cairns Marlin Marina, Cairns</li> <li>○ Half Moon Bay Marina, Yorkeys Knob</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>✓</li> <li>✗</li> <li>✓</li> <li>✓</li> </ul> |
|          | <ul style="list-style-type: none"> <li>▶ Townsville <ul style="list-style-type: none"> <li>○ Breakwater Marina</li> <li>○ Townsville Yacht Club Marina</li> </ul> </li> </ul>  | <ul style="list-style-type: none"> <li>✓</li> <li>✓</li> </ul>                       |

### 6.2.2 Phase 1 – Issues Identification

During Phase 1, participants identified a range of maritime infrastructure issues, opportunities and needs. Although feedback has differed between localities and stakeholders, a number of consistent issues emerged, as follows:

- ▶ Local boating activity and industry trends observed in the region
- ▶ Support for reconstruction of Port Hinchinbrook marina
- ▶ Support for future marina at Mission Beach
- ▶ Potential market for dry storage of boats
- ▶ Factors influencing vessel berthing choice
- ▶ Future industry growth

*Each issue is summarised below as expressed by stakeholders during consultation discussions. This summary is intended as a high-level snapshot of stakeholder perceptions, including feedback from facility operators in Cassowary Coast, Cairns and Townsville. Furthermore, the issues are not presented in any particular priority order or ranking.*

#### (a) Local Trends

Key stakeholders were asked to comment on trends observed in the last five years (since 2007). These were:

##### ***Increase in multi-hull vessels (catamarans and trimarans)***

- ▶ This has created growing demand for larger vessel berths at marinas in the region.
- ▶ Several marina operators commented that facilities had been reconfigured or constructed to meet demand.

##### ***Decline in boating activity and ownership***

- ▶ Attributed to global financial crisis (GFC) and natural disasters.
- ▶ Major declines observed in the super yacht and cruising markets.



***Impact of natural disasters***

- ▶ Stakeholders expressed concern that natural disasters have created bad publicity for boating in FNQ and impacted on its destination appeal.
- ▶ Many boaties have “avoided the region” (particularly during cyclone season).
- ▶ Demand for the casual berthing market has declined.

***More trailerable boats***

- ▶ Increase in smaller trailerable boats.
- ▶ Attributed to demand for vessels that are more cost effective and mobile.

***Older age groups***

- ▶ Growth in boating activity amongst grey nomads travelling up the coast.

***Long term berthing***

- ▶ Sustained demand for long term leasing of berths.
- ▶ More people making their boat/ marina their primary place of residence (known as “live-aboards”).

***Destinational facilities***

- ▶ The cruising market is creating a demand for destination facilities within and close to marinas.
- ▶ Marina operators commented that visitors are seeking a higher level of service in support facilities (e.g. refuelling facilities, amenities, shopping/supplies) and convenient access to local attractions (e.g. restaurants, tourist hotspots) which are within reasonable walking distance of their vessel mooring or located on-site within a marina precinct.

***Future outlook***

In respect to the future outlook, marina operators were generally optimistic that industry growth would recover (back to pre-GFC levels), creating increases in:

- ▶ Boating activity (both domestic and international markets);
- ▶ Larger vessels, including super yachts;
- ▶ Demand for additional berths with capacity for larger vessels; and
- ▶ Casual berthing to support the cruising market.

***(b) Port Hinchinbrook Marina***

Stakeholders expressed concerns about the damage to Port Hinchinbrook marina sustained by Cyclone Yasi in February 2011. The main points raised were:

- ▶ The Cardwell community has a strong and proud history underpinned by tourism, boating and fishing activities – the marina was “the lifeblood of the town”.
- ▶ Significant community and industry support exists for full reinstatement of marina facilities – a long term solution is required.
- ▶ Public concern exists regarding intentions of the private facility owner to reconstruct the marina and carry out associated dredging activities.

- ▶ Impacts on the local economy (tourism, business and employment) arising from loss of marina infrastructure and support services.
- ▶ Since Cyclone Yasi, many boat owners have not replaced damaged vessels which were moored at Port Hinchinbrook – this has impacted on local infrastructure demand.
- ▶ In addition to tourism and recreation, a marina is needed in Cardwell for public safety reasons to provide open water access for emergency services vessels.
- ▶ Cardwell has experienced recent population decline following the natural disasters, with a number of long term residents leaving town (approximately 400).

**(c) Support for Future Marina at Mission Beach**

During the preliminary consultation phase, some respondents identified the need for a future marina at Mission Beach. This matter was addressed in more detail as part of the Key Stakeholder Workshops in Phase 2 (refer to Section 6.3).

**(d) Potential Market for Dry Storage of Boats**

Currently, there are no dry storage facilities within the FNQ region. Preliminary feedback from marina operators suggests there is very limited potential for local growth in this market. Respondents agreed that:

- ▶ There is no demand for dry storage in the Cassowary Coast and FNQ region.
- ▶ Dry storage is more suitable in densely populated areas where spatial constraints exist e.g. Sydney, Gold Coast.
- ▶ In the Cassowary Coast Region, smaller trailerable boats are typically stored at home, in favour of fees associated for wet or dry storage.

In the words of one respondent “... *people just won't use it*”.

**(e) Vessel Berthing Choice**

Marina operators were asked to identify the key factors that influence vessel berthing choice. The primary reasons were:

**Price**

- ▶ A high level of price sensitivity exists within the market, particularly for recreational users requiring long term leases.
- ▶ The casual berthing market for larger cruising yachts is not so price-driven.

**Location**

Demand for marina facilities in close proximity to:

- ▶ Home – The local market demonstrates limited preparedness to travel. Marina facilities within a one hour drive from urban areas are desirable.
- ▶ Popular boating destinations – Marinas providing convenient access to popular boating and fishing areas, notably the Great Barrier Reef and islands (e.g. Hinchinbrook, Dunk, Magnetic, Lizard).

### **Cyclone Protection**

- Increasingly people are seeking cyclone-rated marina facilities (which can withstand cyclonic conditions) or proximity to protected areas (e.g. sheltered rivers and creeks).

### **Facility Standard**

- Some market sectors are seeking more contemporary marinas, well equipped with on-site support facilities.
- A number of marina operators have conducted recent facility upgrades.

## **6.3 Consultation (Phase 2) – Key Stakeholder Workshops**

This section presents the results of Key Stakeholder Workshops and follow-up consultation conducted in late April 2012. A variety of stakeholders participated to capture local knowledge and views on the demand for maritime facilities in the Cassowary Coast Region.

*As noted in Phase 1, this summary presents issues and ideas as expressed by stakeholders during the consultation workshops. The issues are not presented in any particular priority order or ranking.*

### **6.3.1 Activities and Participation**

As part of the Phase 2, three face-to-face workshops with key stakeholders were in:

- Innisfail;
- Mission Beach; and
- Cardwell.

The following table provides an overview participation in the Key Stakeholder Workshops. A full list of invitees is provided in Appendix A.

**Table 6.3 – Consultation Activities (Phase 2)**

| Activity                          | Key Stakeholder Groups Represented  | Workshop Participants <sup>5</sup> |
|-----------------------------------|---|------------------------------------|
| <b>Workshop 1 – Innisfail</b>     | <ul style="list-style-type: none"> <li>Maritime Safety Queensland</li> <li>Department of Environment and Resource Management</li> </ul>   | 5                                  |
| <b>Workshop 2 – Mission Beach</b> | <ul style="list-style-type: none"> <li>Mission Beach Safe Boating Committee</li> <li>Tourism Matters</li> <li>Mission Beach Harbour</li> <li>Mission Beach Community Association</li> <li>Mission Beach Water Taxi</li> <li>Transport and Main Roads</li> <li>Calypso Dive</li> </ul> | 18                                 |

<sup>5</sup> Workshop attendance figure includes GHD team members.

| Activity                     | Key Stakeholder Groups Represented  | Workshop Participants <sup>5</sup> |
|------------------------------|---|------------------------------------|
|                              | <ul style="list-style-type: none"> <li>▶ Dunk Island Sports fishing/commercial marine operators group</li> <li>▶ Commercial Boat Operators Group</li> <li>▶ Commercial Fisher/QSIA</li> </ul>         |                                    |
| <b>Workshop 3 – Cardwell</b> | <ul style="list-style-type: none"> <li>▶ Cardwell Chamber of Commerce</li> <li>▶ Cardwell Coastguard</li> <li>▶ Cardwell Tourism Information Centre</li> <li>▶ Cardwell Sport Fishing Club</li> </ul> | 7                                  |

### 6.3.2 Major Issues Raised by Stakeholders (Phase 2)

A synthesis of major issues raised during Phase 2 is summarised below:

#### ***Suitability of existing facilities***

- ▶ Innisfail – The existing maritime facilities (pile moorings) are well utilised but are tide restricted, which affects user activities, particularly for commercial fisherman.
- ▶ Mourilyan Harbour – The pile moorings are underutilised due to a lack of supporting land based facilities. The moorings predominantly service commercial fisherman who are unable to access facilities in the Johnstone River (due to tide restrictions at the river mouth).
- ▶ Port Hinchinbrook – Prior to Cyclone Yasi, the marina was well utilised, although lack of regular dredging of channel impacted on marina access for some vessels.
- ▶ Mission Beach and Cardwell – Stakeholders identified longstanding concerns in relation to the lack of sufficient maritime facilities servicing these areas.

#### ***Understanding of demand***

- ▶ According to stakeholders, there is demand for maritime facilities at Mission Beach and Cardwell.
- ▶ Stakeholders identified demand for a marina facility at Mission Beach to cater for the following:
  - Safe boat operations for commercial and recreational boats.
  - Market for larger boats (30ft +) within the local community.
  - “Build it and they will come” – latent demand exists within the community. Local people would purchase larger boats to support a new marina facility.
  - Niche market for reef/island tourism – Mission Beach is ideally placed between the Great Barrier Reef Marine Park and World Heritage areas. There is a need for a maritime facility to support tourism, particularly catering for cruising market with destination facilities.
  - Local commercial and tourism operators in Mission Beach have ceased operations – Stakeholders stated it is too difficult to operate boats off a mooring as it is costly and unsafe. A safe and protected berthing facility is required for commercial operators.

- A new marina at Mission Beach has potential to cater for a market extending beyond regional boundaries to Cairns, Atherton Tablelands, Townsville and the Burdekin. The cruising market will berth their boats at Mission Beach as it the central point between Townsville and Cairns.
- In Cardwell, there is a demand for the Port Hinchinbrook marina to be reinstated:
  - The facility had not reached its potential prior to Cyclone Yasi (additional capacity for expansion of berths).
  - It was a popular facility prior to the cyclone, despite a lack of regular channel dredging.
  - Cardwell needs the commercial activity generated from Port Hinchinbrook.
- According to stakeholders, it is viable to establish marina facilities at both Mission Beach and Port Hinchinbrook, by developing complementary facilities (rather than facility duplication):
  - Mission Beach - A facility catering for commercial operators to safely operate. Stakeholders also identified the need for facilities for local residents, tourists and the cruising market.
  - Port Hinchinbrook – Continued provision of slipways and maintenance facilities for vessels, and cater for super yachts and cruising market.

#### ***Suggested locations for new marina facilities***

- Boat Bay at Clump Point, Mission Beach.
- Lugger Bay at South Mission Beach.

#### ***Market for dry storage***

- Stakeholder expressed support for dry storage facilities in Mission Beach and Cardwell as a long term objective.
- Many people store their boats at home suggesting some demand for dry storage of smaller boats. Existing land storage facilities in Mission Beach (e.g. “Tin Shed”) are at capacity.
- In Cardwell, stakeholders highlighted the need for a dry storage facility to alleviate parking pressure at the boat ramp.
- Stakeholders recognised that cost and land availability would be the key drivers for the demand for dry storage, with a facility likely more suitable as part of the wet/dry facilities mix within an integrated marina precinct.

### **6.3.3 Outcomes of Workshop 1 – Innisfail**

A stakeholder workshop was held in Innisfail on Monday 23 April 2012. Three people attended the workshop with representatives from DERM and Maritime Safety Queensland.

Whilst the number of attendees at this workshop was limited, the discussion was robust and overall, provided a sound understanding of existing situation and potential future demand for the Innisfail catchment.

**Table 6.4 – Innisfail (Workshop 1): Stakeholder Feedback on the Existing Situation**

| Existing Situation  | Stakeholder Comments  |
|---|---|
| <b><i>Which vessel berthing facilities for people use now?</i></b>  |   |
| Innisfail (Esplanade and Coconuts)  | <ul style="list-style-type: none"> <li>There are existing pile moorings at Innisfail that are well utilised and can be leased for approximately \$1,800 per annum.</li> <li>Commercial fishermen operate out of the Johnstone River. However, at low tide, they have trouble navigating the river mouth. If they cannot get back into the Johnstone River, they will berth and unload their catch at Mourilyan Harbour.</li> <li>Shallowness of the Johnstone River mouth is an issue, as well as the distance upstream. At 6 knots (required for no wash), it takes approximately half an hour to travel from Innisfail to the mouth of river by boat – not really worth people's time.</li> <li>Johnstone River also includes areas designated as boat reserves. Boat reserves have management plans for dredging and maintenance which is undertaken by CCRC.</li> <li>There is a Innisfail Boat Harbour Management Plan developed by CCRC, this could provide useful information regarding the use and management of berthing areas.</li> <li>The Coconuts area (off Flying Fish Point Road) has a slipway for maintenance of vessels.</li> </ul> |
| Mourilyan Harbour   | <ul style="list-style-type: none"> <li>There are approximately 12 pile moorings at Mourilyan Harbour.</li> <li>The pile moorings are underutilised due to a lack of supporting land-based facilities at Mourilyan.</li> <li>Potential for demand for additional facilities, specifically to cater to the casual/cruising market at Mourilyan is low due to the lack of supporting land based facilities. A vehicle is needed to travel anywhere to get supplies, etc.</li> <li>Commercial fisherman are casual users of the pile moorings at Mourilyan. They can unload their catch and re-fuel etc.</li> </ul>   |
| Port Hinchinbrook   | <ul style="list-style-type: none"> <li>Strong support for the marina reconstruction after dredging of the channel is complete.</li> <li>There is no approved dredge spoil ground adjacent to Port Hinchinbrook.</li> <li>Developers at Hinchinbrook are responsible for funding the dredging.</li> </ul>  |
| Marlin Marina (Cairns)  | <ul style="list-style-type: none"> <li>With the lack of facilities in Cassowary Coast, it is considered that persons may moor their boats at Marlin Marina in Cairns.</li> <li>Marlin Marina is at capacity with 70% long term leased berths and 30% reserved for cruising fleet.</li> <li>An additional 44 berths recently constructed at Marlin Marina – including berths for multi hull vessels (wider berths). There are now a total of 262 berths and no room for further expansion.</li> <li>The cost to lease berths at Marlin Marina is \$10,000 per annum for a 12 metre berth. Approximately 11 long term leases will end in 2016 then all berths will be on short-term lease arrangements, which is preferred.</li> <li>Many boats moor/anchor in the river and use tenders to access land based facilities. There is a free tender landing area near the end of "E" finger.</li> </ul>  |
| <b><i>Most popular destinations/areas for boating in the Region?</i></b>  |   |
| <ul style="list-style-type: none"> <li>Great Barrier Reef</li> <li>Fishing spots – within estuaries, river mouths, just outside river mouths, further offshore</li> </ul> |   |

| Existing Situation  | Stakeholder Comments   |
|---|--|
| <b><i>Suitability of existing vessel berthing facilities?</i></b> |  |
| Mourilyan Harbour   | <ul style="list-style-type: none"> <li>Moorings are suitable for use by commercial fisherman however they are not attractive for the cruising market as there are no nearby land based supporting facilities. Fuel is available, but not much more.</li> <li>The harbour is a deep water harbour and not tide restricted like other facilities.</li> </ul> |

**Table 6.5 – Innisfail (Workshop 1): Stakeholder Feedback on Future Demand**

| Future Demand  | Stakeholder Comments  |
|--|---|
| <b><i>Is there demand for a new marina in the CC Region?</i></b>   |   |
| Innisfail  | <ul style="list-style-type: none"> <li>Greater demand for mooring piles as opposed to marinas. Mooring piles are cheaper. So long as they are in the right location (i.e. close to land based facilities and accessible across most tides) they would be well utilised.</li> </ul>                              |
| <b><i>Is there a future market for dry storage facilities?</i></b>   |   |
| Cassowary Coast  | <ul style="list-style-type: none"> <li>A dry storage facility was built in Cairns, but there was never a boat in it. It's now being dismantled, as it wasn't viable.</li> <li>Stakeholders don't see a demand for dry storage in Cassowary Coast region as it is expensive and not really necessary.</li> </ul> |
| <b><i>Other comments</i></b>   |   |
| <ul style="list-style-type: none"> <li>Stakeholders identified that there are many people within the community with a "build it and they will come" mentality.</li> <li>Commercial fishing is on the decline.</li> <li>Effects of the GFC – A lot of marina developers are in trouble because there is limited demand due to factors such as affordability and the purchase of smaller vessels.</li> <li>Whilst demand for marinas is limited, it is envisaged that people will want more MDAs to allow for potential maritime development.</li> </ul> |   |

#### **6.3.4 Outcomes of Workshop 2 – Mission Beach**

The Mission Beach workshop was held on Monday 23 April 2012 and a total 16 people attended including representatives from Transport and Main Roads (TMR), commercial operators, user groups, tourism and special interest groups.

Workshop discussion focused on the local demand for a safe boat harbour to cater for the commercial and recreational vessels.



**Table 6.6 – Mission Beach (Workshop 2): Stakeholder Feedback on the Existing Situation**

| Existing Situation   | Stakeholder Comments   |
|--|--|
| <b><i>Which vessel berthing facilities do people use now?</i></b>        |  |
| Mourilyan Harbour  | <ul style="list-style-type: none"> <li>▶ Pile moorings are underutilised due to limited supporting land based facilities.</li> <li>▶ Mourilyan Harbour is too far from key centres and the facilities are not attractive due to distance to local support facilities, supplies and services.</li> <li>▶ Pile moorings at Mourilyan do not support the tourism market due to transit times and costs to berth at facilities. It makes no sense to transport people north to Mourilyan to then bring them back by boat to destinations such as Dunk and Bedarra Island (among others)</li> </ul> |
| Port Hinchinbrook  | <ul style="list-style-type: none"> <li>▶ Stakeholders expressed frustration that damage to the marina and dredging have not been rectified following Cyclone Yasi. There are thought to be no berths available at present.</li> <li>▶ Tidal issues at this facility. Regular dredging is required.</li> <li>▶ Dry berthing exists for maintenance services provided by Norship. This facility is currently operating.</li> </ul>   |
| Cairns and Townsville  | <ul style="list-style-type: none"> <li>▶ The existing facilities at Innisfail and Port Hinchinbrook are considered inadequate as they are tide restricted so people in Cassowary Coast Region use marinas in Townsville and Cairns.</li> <li>▶ Due to the lack of local facilities at Mission Beach, commercial operators from the local area have relocated to Cairns and Port Douglas .</li> </ul>   |
| <b><i>Most popular destinations/areas for boating in the Region?</i></b> |  |
| Great Barrier Reef   | <ul style="list-style-type: none"> <li>▶ Diving, snorkelling, day tours, sand cays, skydiving, fishing etc</li> </ul>  |
| Dunk Island  | <ul style="list-style-type: none"> <li>▶ Water sports, bushwalking, fishing, camping, kayaking, sailing, skydiving, horse riding, snorkelling and scuba diving, anticipate backpacker through to six star accommodation in the future. Adventure race annually.</li> </ul>   |
| Hinchinbrook Island  | <ul style="list-style-type: none"> <li>▶ Resort, bushwalking, camping, fishing, crabbing, kayaking, hire boats, snorkelling, diving, site-seeing.</li> </ul>   |
| 'Family Group' islands and Barnards Island                               | <ul style="list-style-type: none"> <li>▶ Similar to Dunk Island (no accommodation but there are toilets on Wheeler and Coombe Islands).</li> </ul>   |
| Gould and Garden Islands   | <ul style="list-style-type: none"> <li>▶ Camping, fishing, barbequing, picnicking, and bushwalking.</li> </ul>   |
| Bedarra Island   | <ul style="list-style-type: none"> <li>▶ Water sports, bushwalking, fishing, camping, kayaking, sailing, skydiving, horse riding, snorkelling and scuba diving.</li> </ul>   |
| Mission Beach  | <ul style="list-style-type: none"> <li>▶ Has destination appeal (particularly cruising market. However, no maritime facilities to support the area.</li> <li>▶ Mission Beach is well located, in close proximity to the reef for fishing, diving, snorkelling, etc.</li> </ul>   |
| <b><i>Suitability of existing vessel berthing facilities?</i></b>        |  |
| Innisfail (esplanade)  | <ul style="list-style-type: none"> <li>▶ Poor location/tidal restrictions – too far upstream.</li> </ul>   |

| Existing Situation                                 | Stakeholder Comments  |
|--|---|
|  | <ul style="list-style-type: none"> <li>Not attractive to the cruising market due to distance upstream and tidal access constraints.</li> <li>Used predominantly by commercial fisherman.</li> </ul>   |
| Johnstone River (Coconuts)                         | <ul style="list-style-type: none"> <li>Poor location/tide restrictions.</li> <li>Not attractive to the cruising market due to tidal access constraints and distance to local support facilities, supplies and services.</li> </ul>  |
| Mourilyan Harbour                                  | <ul style="list-style-type: none"> <li>Poor location (limited supporting facilities).</li> </ul>  |
| Port Hinchinbrook<br>(conditions prior to cyclone) | <ul style="list-style-type: none"> <li>Port Hinchinbrook required a lot of dredging.</li> <li>Need to be dredged before berths can be reinstated.</li> <li>Previous owners did not undertake regular dredging so the marina had access issues for some vessels prior to the cyclone.</li> </ul> |

**Table 6.7 – Mission Beach (Workshop 2): Stakeholder Feedback on Future Demand**

| Future Demand  | Stakeholder Comments  |
|--|---|
| <b><i>Is there demand for a new marina in the CC Region?</i></b> |   |
| Mission Beach  | <ul style="list-style-type: none"> <li>Stakeholders agreed there is high local demand for a new marina in Mission Beach.</li> <li>A lot of local people would buy 30ft + boats and berth them here - Build it and they will come.</li> <li>Investors that have land along Mission Beach with large 30ft boats are refusing to develop here due to the lack of maritime facilities.</li> <li>Current residents who berth their boats elsewhere would bring their boats back if there was a facility in Mission Beach.</li> <li>Numbers of commercial operators has diminished because there are no safe and adequate mooring facilities.</li> <li>2001/02, 60,000 people went over to the Great Barrier Reef, now there are virtually no commercial operators taking people out to the Great Barrier Reef from Mission Beach.</li> <li>Mission Beach can tap into a niche market for reef/island tourism. All operators have ceased operations - it's too hard to operate a boat off a mooring (very costly).</li> <li>There are currently only two commercial vessels operating out of Mission Beach – Calypso Dive and Mission Beach Water Taxi.</li> <li>Clump Point Jetty – Environmental issues and safety issues associated with mooring off the jetty. A marina is needed to provide safe boat operations for commercial and recreational boaties.</li> <li>Maritime safety – coast guard can't always operate out of Port Hinchinbrook due to tidal restrictions. If there was a major disaster out sea, existing facilities may not be able to adequately respond. Need a facility at Mission Beach for coast guard to operate out of.</li> <li>It is viable to have a facility at Mission Beach and Port Hinchinbrook. A facility at Mission Beach will provide infrastructure for commercial operators to safely operate. Also need facilities for local residents, tourists and the cruising market. Port Hinchinbrook will continue to provide slip ways and maintenance facilities for vessels,</li> </ul> |

| Future Demand  | Stakeholder Comments   |
|--|--|
|  | and cater for super yachts and cruising market.  |
| <b>Where should a new marina be and why?</b>   |  |
| Boat Bay Harbour Reserve - Clump Point, Mission Beach<br><i>(formerly known as Boat Shed Bay)</i>  | <ul style="list-style-type: none"> <li>Boat Bay is a natural harbour.</li> <li>The market for a facility at Mission Beach is immense. There was consensus amongst the stakeholders that the priority for Mission Beach is to develop a facility for commercial operators. Stakeholders believe that if a safe and adequate berthing facility is built, commercial operators will bring their business back to Mission Beach.</li> <li>Mission Beach is ideally placed between the Great Barrier Reef Marine Park and World Heritage areas. The town is based on a tourism economy, if there are no tourism operations, the economy of the town will suffer (and is suffering now).</li> <li>Demand is not just local – people will travel from a wide catchment area including Cairns, Atherton Tablelands, Townsville, Burdekin, etc and the cruising market will berth their boats at Mission Beach.</li> <li>Restriction on future land development in Mission Beach is a positive – residents do not want the area to become another Cairns/Port Douglas. While there is a restriction, there is still a lot of undeveloped land.</li> <li>Mission Beach has been established as a tourist hub. There is existing supporting infrastructure, services and attractions.</li> <li>Natural prevailing conditions would keep the Boat Bay Harbour free from siltation issues.</li> </ul> |
| <b>Is there a future market for dry storage facilities?</b>  |  |
| Mission Beach  | <ul style="list-style-type: none"> <li>Stakeholders identified potential for dry storage facilities in the future as part of a wet berth facility. Cost/land would determine demand for dry storage.</li> <li>A lot of people in Mission Beach can't store their boats so there may be a demand for dry storage for smaller boats. Existing land storage facilities like the "Tin Shed" are full already.</li> </ul>   |
| <b>Other comments</b>  |  |
| <ul style="list-style-type: none"> <li>Boat Bay cannot be progressed until Council the trustee, does a management plan for Boat Bay. It has been agreed that State Government do the management plan.</li> <li>Stakeholders commented that Boat Bay was to be designated as an MDA, but did not receive designation in the final Coastal Plan. There was no consultation on the matter. The community was up in arms in regard to the lack of designation as was promised.</li> <li>There are currently no marine destination facilities at Mission Beach. The market is there, there are just no facilities at the moment.</li> <li>Early 1990's there was capacity for a marine structure here and in Cardwell – there is real potential for Cassowary Coast to support facilities at both locations.</li> </ul> |  |

### 6.3.5 Outcomes of Workshop 3 – Cardwell

The Cardwell workshop was held on Tuesday 24 April 2012 and a total five people attended including representatives from the Chamber of Commerce, coast guard, fishing groups and tourism and special interest groups.

The discussion at this workshop focused on the demand for the reconstruction of Port Hinchinbrook marina to assist in re-establishing the tourism economy in Cardwell, following the effects of Cyclone Yasi.

**Table 6.8 – Cardwell (Workshop 3): Stakeholder Feedback on the Existing Situation**

| Existing Situation   | Stakeholder Comments  |
|--|---|
| <b><i>Which vessel berthing facilities for people use now?</i></b>       |   |
| Port Hinchinbrook (prior to Cyclone Yasi)                                | <ul style="list-style-type: none"> <li>Easy access, facilities – fuel, food, maintenance, safe harbour, shelter, communication systems.</li> <li>Used as a stopover and a destination.</li> <li>Variety of nearby fishing grounds accessible in all weather, etc.</li> <li>Some people lived on-board their boats permanently.</li> <li>Port Hinchinbrook is close to facilities in Cardwell including doctors, chemist, pathology, supermarket, sporting facilities (golf, bowls, etc) etc.</li> <li>Norship boatyard – large maintenance facility that is underutilised as dredging needs to be done and maintained to allow vessels access. It is operating, but likely in a restricted manner.</li> <li>People from Cairns, Townsville, Atherton Tablelands and Burdekin, as well as interstate have berthed their vessels at Port Hinchinbrook.</li> </ul> |
| <b><i>Most popular destinations/areas for boating in the Region?</i></b> |   |
| Cardwell   | <ul style="list-style-type: none"> <li>Fishing, bush walking, camping, holidaying, gateway to the reef, gateway to the rainforest, accessibility to tablelands – gateway to the gulf (Kirrrama Road). Access to facilities such as doctors, pharmacy, supermarket, marine maintenance, etc.</li> <li>Small population, friendly community, great fishing, lots of options for marine activities regardless of the weather.</li> </ul>   |
| Hinchinbrook Island  | <ul style="list-style-type: none"> <li>Bushwalking, camping, fishing, snorkelling, and scuba diving.</li> <li>Thorsborne Trail – recognised by Lonely Planet as one of the 10 best treks in the world.</li> </ul>   |
| Hinchinbrook channel   | <ul style="list-style-type: none"> <li>Fishing, crabbing, scenic cruising, spear fishing.</li> <li>People come from all over the world to catch Permit fish – a type of dart fish which is not found in many places.</li> </ul>   |
| Great Barrier Reef   | <ul style="list-style-type: none"> <li>Sightseeing, snorkelling, scuba diving, fishing, free diving, spear fishing.</li> </ul>  |
| <b><i>Suitability of existing vessel berthing facilities?</i></b>        |   |
| Port Hinchinbrook  | <ul style="list-style-type: none"> <li>Berths that could be leased long or short term – up to 99 year leases.</li> <li>Good maintenance facilities – Norship, they have a travel-lift.</li> <li>Safe, easy access to other attractions like Hinchinbrook Island, channel, reef, etc.</li> <li>General tourism accommodation and activities.</li> </ul>  |

| Existing Situation | Stakeholder Comments  |
|--------------------|---|
|                    | <ul style="list-style-type: none"> <li>Access to world heritage sites, state forest, etc. All easily accessible.</li> <li>Good land based facilities – parking, dining, refuelling, etc</li> <li>The piles in the marina are considered too short, another metre in height would have likely prevented much of the damage during the cyclone. Need to reassess minimum heights – need to be higher.</li> <li>Most of the pontoons are sunk in the marina and a significant hazard to future dredging activities to get the marina operational again.</li> <li>Marina's need to be a minimum size and have good supporting land based facilities to be economically viable.</li> </ul> |

**Table 6.9 – Cardwell (Workshop 3): Stakeholder Feedback on Future Demand**

| Future Demand  | Stakeholder Comments   |
|--|--|
| <b><i>Is there demand for a new marina in the CC Region?</i></b>   |  |
| Port Hinchinbrook  | <ul style="list-style-type: none"> <li>Demand for Port Hinchinbrook marina to be reinstated.</li> <li>Existing facility with good natural shelter. Already an MDA.</li> <li>Stakeholders identified the dredging and reinstatement of a new facility and services (including land based facilities) at Port Hinchinbrook as a top priority CC region.</li> <li>Stakeholders also identified the potential provision of facilities at the Port to service cruise ship tender. Cruise ships can anchor offshore and ferry passengers to and from the marina.</li> </ul>  |
| <b><i>Where should a new marina be and why?</i></b>  |  |
| Port Hinchinbrook  | <ul style="list-style-type: none"> <li>There is no need for a new facility but for the existing Port Hinchinbrook facility to be reinstated. This facility had not reached its potential prior to Cyclone Yasi. It was a popular facility prior to the cyclone, despite a lack of regular dredging maintenance. With adequate dredging maintenance it would be at full capacity.</li> <li>Cardwell needs the commercial activity generated from Port Hinchinbrook.</li> </ul>  |
| <b><i>Is there a future market for dry storage facilities?</i></b>   |  |
| Cardwell   | <ul style="list-style-type: none"> <li>Stakeholders identified demand for a dry storage facility in Cardwell to cater for tourists and local residents. Cardwell is within 3 hours drive of approximately 500,000 people (or more – Cairns, Tablelands, Townsville, Burdekin). A lot of people have holiday homes here and a lot of the holiday accommodation does not cater for boat parking.</li> <li>A dry storage facility would ease pressure on street parking as well as parking at the existing boat ramp (more secure). People (both residents and tourists) can permanently store boats. There is a block of land near the existing ramp within Port Hinchinbrook that may be suitable for a dry storage facility to alleviate parking pressure at the boat ramp.</li> </ul> |
| <b><i>Other comments</i></b>   |  |
| <ul style="list-style-type: none"> <li>At Port Hinchinbrook dredging is a high priority for local residents and businesses due to safety concerns. State government have agreed to do it at present (just a 20m wide channel). It is a requirement on the developers/owners, however they have not undertaken the regular dredging they should have State Government put the weight on the developers but they don't want to fund it. There is community support for State Government to accelerate the timing of the reconstruction of the marina.</li> </ul> |  |

| Future Demand | Stakeholder Comments  |
|---------------|---|
|               | <ul style="list-style-type: none"> <li>▶ Siltation is a major problem. They can't get the dredger into the marina at the moment as the concrete pontoons are stuck in the mud. The channel needs to be shored up so they can drain the marina, get an excavator in to remove everything and clean it up again. Then a regular dredging regime needs to be undertaken. Add additional height onto existing piles to safeguard against potential future events to ensure pontoons remain secure.</li> <li>▶ 200,000 cubic metres of mud needs to be extracted. State government has done a seismic scan of the marina to find where the concrete debris is and how much there it. Estimate it will cost approximately 2.5 million to clean it up.</li> <li>▶ There are approved dredge spoil ponds on land. However, the ponds need to be redesigned so they will dry out and can be re-used during regular maintenance. There is the ability to increase the height of the pond walls to allow for more capacity.</li> <li>▶ Safety is an issue; the coast guard currently has nowhere to berth. Coast guard is using the boat ramp facility.</li> </ul> |

## 7. Maritime Infrastructure Catchments

### 7.1 Catchment Definition

Seven maritime infrastructure Catchments were defined for the study area, based on a number of factors, including:

- ▶ Road transport infrastructure to existing facilities;
- ▶ Natural and man-made barriers;
- ▶ The location and scale of existing facilities in the area; and
- ▶ Psychological barriers, such as driving time and perceptions of distance.

Consultation with BIAQ, marina operators and yacht clubs consistently indicates that the main catchment for major pieces of maritime infrastructure generally corresponds with a one hour driving time from the infrastructure. This is supported by the survey results from MSQ (2004) which indicates a significant share of boat owners travel over 50 km to their preferred boat ramp or mooring. This is not to say that boat owners will not travel for more than an hour to access popular locations. However, these would represent exceptions to normal practice and would include special events, trips and boating holidays.

The Catchments were defined in conjunction with DSDIP, based on suburb boundaries. Suburb boundaries represent the smallest geographical region for which boat registration data is available.

The Catchments represent the geographic areas which would consider utilising wet and dry berth infrastructure within Cassowary Coast Region, and as such, extend beyond LGA boundaries to the north (into Cairns Region) and south (into Hinchinbrook Shire).

Forward demand projections for marina infrastructure by those persons owning boats are generated for each of the sub-catchments. However, only a proportion of that demand is allocated to potential facility locations. This recognises the presence of alternative berthing opportunities outside the Cassowary Coast Region that may continue to appeal to catchment area boat owners. The Catchments are described below and depicted in Figure 4.

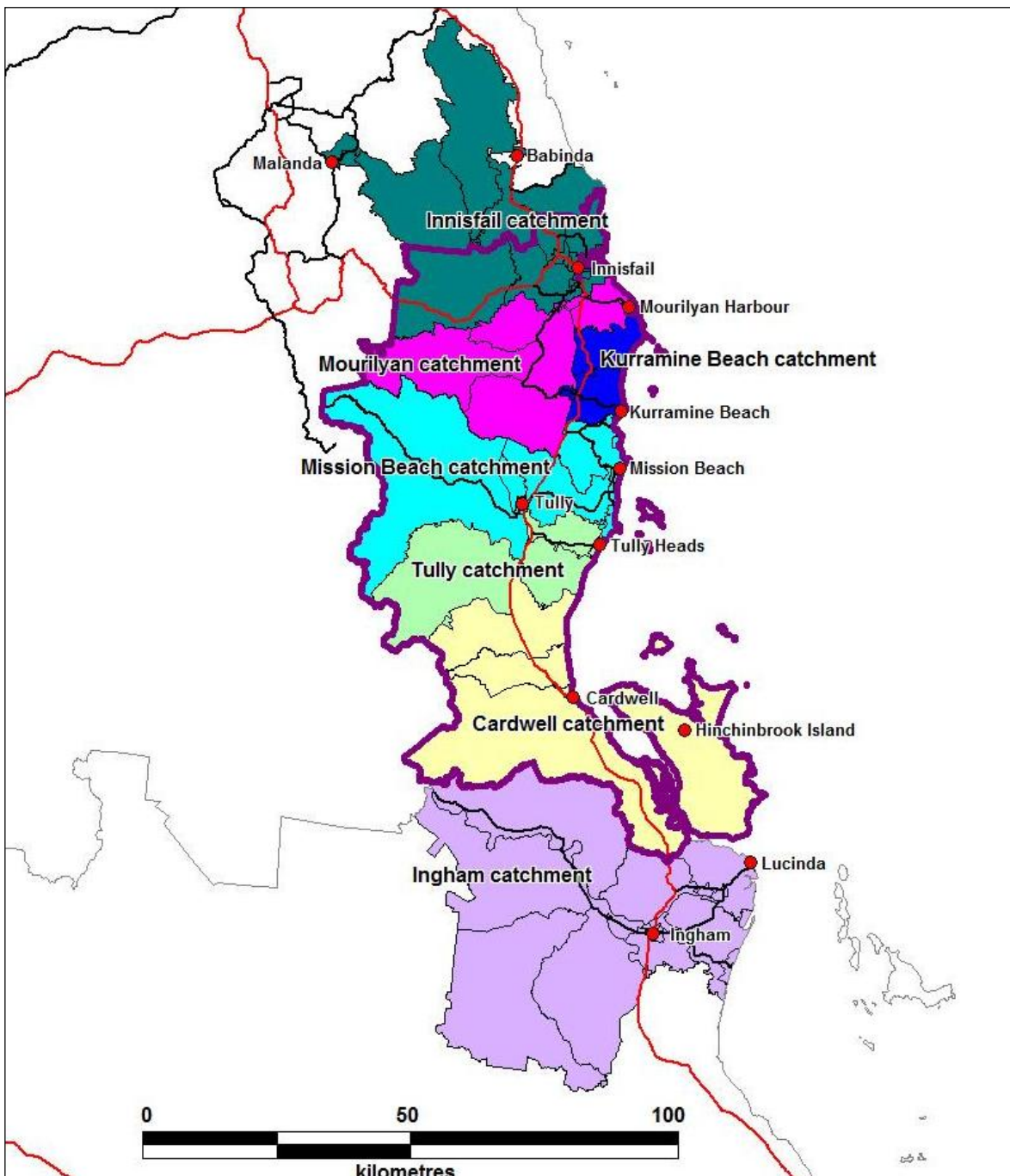
**Table 7.1 – Maritime Infrastructure Catchments**

| Catchment Name                      | Description  |
|-------------------------------------|--|
| 1. <b>Ingham Catchment</b>          | Ingham Catchment incorporates the geographic area to the south in Hinchinbrook Shire, which would consider utilising wet and dry berthing opportunities within Cassowary Coast Region. This catchment includes a number of suburbs within the postal boundary of 4850. |
| 2. <b>Cardwell Catchment</b>        | Cardwell Catchment includes the key localities of Cardwell and Hinchinbrook. This Catchment also contains the Port Hinchinbrook marina (Maritime Development Area).  |
| 3. <b>Tully Catchment</b>           | Tully Catchment contains the localities of Tully and Lower Tully and incorporates suburbs within the postcodes of 4852 and 4854.   |
| 4. <b>Mission Beach Catchment</b>   | Mission Beach Catchment incorporates suburbs within the postcodes of 4852, 4854 and 4816.  |
| 5. <b>Kurramine Beach Catchment</b> | This Catchment represents the immediate area surrounding Kurramine Beach and includes suburbs within the postcodes of 4856, 4858 and 4871.   |
| 6. <b>Mourilyan Catchment</b>       | Mourilyan Catchment represents suburbs within the postcodes of 4856, 4858 and 4871 and incorporates Mourilyan Harbour.   |



| Catchment Name                | Description  |
|-------------------------------|--|
| 7. <b>Innisfail Catchment</b> | Innisfail Catchment incorporates the northern part of Cassowary Coast Region and southern parts of Cairns Region and includes suburbs within 4858, 4860, 4861, 4871 and 4885. This catchment also includes the Johnstone River MDA and Innisfail Port MDA. |

**Figure 4 – Location of Maritime Infrastructure Catchments**



Note: The purple boundary represents the Cassowary Coast Regional Council boundary

## 7.2 Socio-Economic Overview of Catchments

Based on the 2006 ABS Census, there were:

- ▶ 11,032 persons living in Ingham Catchment with an average age of 42.4 years;
- ▶ 1,965 persons living in Cardwell Catchment with an average age of 43.0 years;
- ▶ 1,087 persons living in Tully Catchment with an average age of 38.6 years;
- ▶ 7,737 persons living in Mission Beach Catchment with an average age of 37.6 years;
- ▶ 1,493 persons living in Kurramine Beach Catchment with an average age of 43.2 years;
- ▶ 3,260 persons living in Mourilyan Catchment with an average age of 38.6 years; and
- ▶ 15,959 persons living in Innisfail Catchment with an average age of 39.8 years.

In 2006, the Ingham, Cardwell, Tully, Kurramine Beach and Innisfail Catchments all recorded more than 15% of the population aged 65 years and over, compared with 14.6% of residents in Cassowary Coast Region, 10.3% of residents in Far North Statistical Division (SD) and 12.4% of residents in Queensland.

This suggests that these catchments have a higher incidence of retirees, potentially suggesting a higher incidence of boat usage in these catchments.

**Table 7.2 – Age Profile by Catchment Area (2006 Census)**

| Age Group                | Ingham Catchment | Cardwell Catchment | Tully Catchment | Mission Beach Catchment | Kurramine Beach Catchment | Mourilyan Catchment | Innisfail Catchment | Cassowary Coast (LGA) | Far North SD   | QLD              |
|--------------------------|------------------|--------------------|-----------------|-------------------------|---------------------------|---------------------|---------------------|-----------------------|----------------|------------------|
| <b>Total Pop'n</b>       | <b>11,032</b>    | <b>1,965</b>       | <b>1,087</b>    | <b>7,737</b>            | <b>1,493</b>              | <b>3,260</b>        | <b>15,959</b>       | <b>27,786</b>         | <b>108,318</b> | <b>3,904,534</b> |
| 0-14                     | 20.0%            | 18.1%              | 22.4%           | 22.1%                   | 17.3%                     | 21.6%               | 21.5%               | 21.4%                 | 23.2%          | 20.7%            |
| 15-24                    | 10.1%            | 8.8%               | 7.2%            | 10.8%                   | 8.7%                      | 11.1%               | 11.5%               | 11.1%                 | 11.5%          | 13.8%            |
| 25-34                    | 7.9%             | 8.5%               | 12.8%           | 11.1%                   | 7.2%                      | 9.5%                | 9.8%                | 10.3%                 | 11.6%          | 13.4%            |
| 35-44                    | 13.3%            | 13.1%              | 13.3%           | 15.5%                   | 14.7%                     | 15.0%               | 14.1%               | 14.4%                 | 14.6%          | 14.7%            |
| 45-54                    | 13.8%            | 16.7%              | 17.5%           | 16.4%                   | 16.7%                     | 17.6%               | 15.0%               | 15.8%                 | 14.8%          | 13.8%            |
| 55-64                    | 13.7%            | 16.7%              | 15.6%           | 11.9%                   | 16.9%                     | 11.6%               | 11.8%               | 12.3%                 | 12.1%          | 11.2%            |
| 65+                      | 21.2%            | 18.0%              | 11.1%           | 12.2%                   | 18.4%                     | 13.6%               | 16.2%               | 14.6%                 | 12.1%          | 12.4%            |
| <b>Average age (yrs)</b> | <b>42.4</b>      | <b>43.0</b>        | <b>38.6</b>     | <b>37.6</b>             | <b>43.2</b>               | <b>38.6</b>         | <b>39.8</b>         | <b>39.0</b>           | <b>37.1</b>    | <b>37.2</b>      |

Source: ABS (2007)

SD – Statistical Division

### 7.3 Average Household Income

The average household income ranged from \$830 per week (Cardwell Catchment) to \$1,043 per week (Mission Beach Catchment), but was lower in all areas than in Far North SD (\$1,103 per week) and Queensland (\$1,202 per week).

**Table 7.3 – Average Household Income by Catchment (2006)**

| Locality                  | Average Household Income |
|---------------------------|--------------------------|
| Ingham Catchment          | \$937                    |
| Cardwell Catchment        | \$830                    |
| Tully Catchment           | \$987                    |
| Mission Beach Catchment   | \$1,043                  |
| Kurramine Beach Catchment | \$962                    |
| Mourilyan Catchment       | \$995                    |
| Innisfail Catchment       | \$973                    |
| Cassowary Coast Region    | \$992                    |
| Far North SD              | \$994                    |
| Queensland                | \$1,202                  |

Source: ABS (2007)

### 7.4 Population Projections

By 2031, the population of each Catchment is projected to increase to:

- ▶ 12,530 persons in Ingham Catchment;
- ▶ 2,560 persons in Cardwell Catchment;
- ▶ 1,475 persons in Tully Catchment;
- ▶ 10,066 persons in Mission Beach Catchment;
- ▶ 1,959 persons in Kurramine Beach Catchment;
- ▶ 4,217 persons in Mourilyan Catchment; and
- ▶ 20,148 persons in Innisfail Catchment.

Population growth and household formation is anticipated to be lower in the Catchments than in Far North SD and Queensland between 2011 and 2031. Within the study area, household formation is anticipated to be highest in Mourilyan Catchment (1.2% per annum).

**Table 7.4 - Population Projections by Catchment (2011-2031)**

| Locality                  | 2011      | 2016      | 2021      | 2026      | 2031      | Ave. Ann. Growth (2011-31) |
|---------------------------|-----------|-----------|-----------|-----------|-----------|----------------------------|
| Ingham Catchment          | 11,825    | 11,996    | 12,174    | 12,357    | 12,530    | 0.3%                       |
| Cardwell Catchment        | 2,362     | 2,426     | 2,477     | 2,524     | 2,560     | 0.4%                       |
| Tully Catchment           | 1,367     | 1,403     | 1,431     | 1,456     | 1,475     | 0.4%                       |
| Mission Beach Catchment   | 8,951     | 9,268     | 9,553     | 9,824     | 10,066    | 0.6%                       |
| Kurramine Beach Catchment | 1,696     | 1,761     | 1,827     | 1,893     | 1,959     | 0.7%                       |
| Mourilyan Catchment       | 3,692     | 3,822     | 3,955     | 4,086     | 4,217     | 0.7%                       |
| Innisfail Catchment       | 17,962    | 18,501    | 19,009    | 19,549    | 20,148    | 0.6%                       |
| Cassowary Coast Region    | 31,371    | 32,307    | 33,198    | 34,046    | 34,841    | 0.5%                       |
| Far North SD              | 280,952   | 304,713   | 327,315   | 349,607   | 372,559   | 1.4%                       |
| Queensland                | 4,611,491 | 5,092,858 | 5,588,617 | 6,090,548 | 6,592,857 | 1.8%                       |

Source: OESR (2008), OESR (2011)

## 7.5 Tourism Overview

### 7.5.1 Visitor Profile

Cassowary Coast Region is contained within the following tourism regions:

- ▶ Tropical North Queensland Tourism Region: former Johnstone and Cardwell Shires; and
- ▶ Northern Tourism Region: former Hinchinbrook Shire.

The Tropical North Queensland Tourism Region incorporates the Far North Queensland statistical division plus the local government areas of Burke, Carpentaria, Doomadgee and Mornington. The Northern Tourism Region boundary matches perfectly with the Northern statistical division boundary.

In 2010-11, there were an estimated 3.8 million visitors to the Tropical North Queensland Tourism Region, comprising 1.9 million domestic day visitors, 1.3 million domestic overnight visitors and 0.6 million international visitors.

On average, domestic overnight visitors stayed six days in the Tropical North Queensland Tourism Region, compared to an average length of stay of nine days for international visitors. The average nightly expenditure per visitor was \$190 for domestic overnight visitors and \$133 for international visitors to the Tropical North Queensland Tourism Region,

In the Northern Tourism Region, domestic overnight visitors stayed an average of four days, compared to an average stay of eleven days by international visitors. The average nightly expenditure per visitors was \$159 for domestic overnight visitors and \$62 for international visitors for the Northern Tourism Region.

Table 7.5 below provides visitor profile summary for the Tropical North Queensland Tourism Region and the Northern Tourism Region for 2010-11.

**Table 7.5 - Visitor Profile, Tropical North Queensland and Northern Tourism Regions (2010-11)**

|                    | Tropical North Queensland Tourism Region |                       |                              |                                      | Northern Tourism Region |                       |                              |                                      |
|--------------------|--|-----------------------|------------------------------|--------------------------------------|-------------------------|-----------------------|------------------------------|--------------------------------------|
| Visitor Type       | Visitors ('000)                          | Visitor Nights ('000) | Ave. Length of Stay (nights) | Ave. nightly expenditure per visitor | Visitors ('000)         | Visitor Nights ('000) | Ave. Length of Stay (nights) | Ave. nightly expenditure per visitor |
| Domestic day       | 1,888                                    | -                     | -                            | -                                    | 1,571                   | -                     | -                            | -                                    |
| Domestic overnight | 1,269                                    | 7,569                 | 6                            | \$190                                | 716                     | 2,677                 | 4                            | \$159                                |
| International      | 649                                      | 5,723                 | 9                            | \$133                                | 120                     | 1,306                 | 11                           | \$62                                 |

Source: Tourism Research Australia (2012)

Data from the Australian Bureau of Statistics (ABS, various years) highlighted that in 2010-11, an average of:

- ▶ 3.5% of visitor nights in the Tropical North Queensland tourism region in hotels, motels and serviced apartments were spent in the former Cardwell and Johnstone Shire; and
- ▶ 4.5% of visitor nights in the Northern Tourism region in hotels, motels and serviced apartments were spent in the former Hinchinbrook Shire.

Based on these proportions, total visitor nights in 2010-11 in hotels, motels and serviced apartments are estimated at:

- ▶ 262,845 visitor nights in the former Cardwell and Johnstone Shires; and
- ▶ 121,627 visitor nights in the former Hinchinbrook Shire.

The Tourism Research Australia data highlights that a significant proportion of domestic overnight visitors stay in accommodation other than hotels, motels and serviced apartments, as outlined in Table 7.6 below.

**Table 7.6 - Proportion of Visitor Nights in Hotels, Motels and Serviced Apartments**

|                              | Total Visitor Nights | Visitor Nights in Hotels, Motels & Serviced Apartments | % of Visitor Nights in Hotels, Motels & Serviced Apartments |
|------------------------------|----------------------|--|---|
| Tropical North Queensland TR | 7,569                | 3,070  | 41%   |
| Northern TR                  | 2,677                | 816  | 30%   |

Source: Tourism Research Australia (2012)

Assuming the proportion of visitor nights in hotels, motels and serviced apartments in the Cassowary Coast is consistent with the tourism region averages; this translates to estimated visitors nights in 2010-11 of:

- ▶ 648,037 visitor nights in the former Cardwell and Johnstone Shires; and
- ▶ 399,015 visitor nights in the former Hinchinbrook Shire.

This translates to average daily visitation of 2,869 persons in the Cassowary Coast Regional Council. In 2011, the total population of Cassowary Coast Regional Council was 31,371 persons, indicating that at

any one time, 8.4% of all persons within Cassowary Coast Regional Council are visitors. It is suggested that an allowance of up to an additional 8.4% berths is made to account for visitor berthing within the region.

## 7.6 Historical Fleet Size

Boat ownership is the principal demand driver for recreational boating infrastructure. The composition of a region's boating fleet will determine the quantity and type of recreational boating infrastructure demanded.

TMR maintains detailed monthly statistics on boat registrations by postcode, including a breakdown by suburb. Boat registrations data is collected for various vessel types and length. Within the boat registration data sets, the various boat categories include:

- ▶ Sail boats;
- ▶ Boats without sails, including:
  - Motor boats without sails;
  - Speed boats; and
  - Jet Skis (or personal recreation vehicles).

The scope for towing boats is an important defining factor in terms of the nature of recreational boating infrastructure required. Industry consultations revealed that the suitability for towing varies between boat types (i.e. boats with sails and boats without sails). For example, sail boats with keels become difficult to tow, especially if they do not have a retractable keel, at around five metres in length, whereas motorboats can generally be towed up to around eight metres. The *Perth Recreational Boating Facilities Study* (2008) identifies that at about 7.5 metres in length there is a transition from storage of boats on trailers to water-based pens or moorings.

Similarly, the suitability of vessels for dry storage depends on type and length of vessel. Dry storage is most suitable for vessels with shallow drafts. Therefore, dry storage is most suitable for smaller sail boats (i.e. sail boats up to eight metres) and boats without sails up to around ten metres.

Wet berthing a boat represents a much greater expense than trailing or dry berthing. Therefore, wet berths are generally used only by larger vessels, i.e. as sail boats over five metres and boats without sails over eight metres.

For the purposes of this study, a five year time series by boat length and type for each of the seven Catchments has been analysed. This section of the report provides an overview of the growth in the total recreational boat fleet and the estimated size of the recreational boat fleet between 2007 and 2011.

More detailed estimates, including the distribution of the size of registered boats by type in each Catchment, have been provided in Appendix B.

### 7.6.1 Recreational Boat Registrations by Catchment

#### Total Boat Registrations

Between 2007 and 2011, there has been growth in the size of the recreational boating fleet across all Catchments, with total registrations increasing from 3,485 registrations in 2007 to 4,138 registrations in 2011. Ingham Catchment accounts for just over half of all boat registrations study area and recorded



growth of 23.7% between 2007 and 2011. Tully and Mourilyan Catchments recorded the highest growth rates in total boat registrations.

Boats without sail accounted for the majority of registrations within all Catchments.

While the number of boats with sail in the Catchments remained relatively flat between 2009 and 2011, there was continued growth in the number of boats without sail in the Catchments.

Interestingly, the growth rate in registrations for boats with sail exceeded boats without sail for the majority of Catchments. Cardwell Catchment recorded a decline in boats with sail registrations between 2007 and 2011.

**Table 7.7 - Historical Recreational Boat Registrations by Catchment (2007-2011)**

| Type                             | Year | 2007         | 2008         | 2009         | 2010         | 2011         | Growth<br>(2007-11) |
|----------------------------------|------|--------------|--------------|--------------|--------------|--------------|---------------------|
| <b><u>Boats With Sail</u></b>    |      |              |              |              |              |              |                     |
| Ingham Catchment                 |      | 12           | 14           | 18           | 20           | 17           | 41.7%               |
| Cardwell Catchment               |      | 24           | 26           | 23           | 21           | 17           | -29.2%              |
| Tully Catchment                  |      | 2            | 3            | 3            | 2            | 3            | 50.0%               |
| Mission Beach Catchment          |      | 9            | 10           | 13           | 12           | 11           | 22.2%               |
| Kurramine Beach Catchment        |      | 0            | 1            | 3            | 3            | 5            | n.a.                |
| Mourilyan Catchment              |      | 2            | 2            | 2            | 2            | 3            | 50.0%               |
| Innisfail Catchment              |      | 7            | 8            | 8            | 9            | 9            | 28.6%               |
| <b>Total</b>                     |      | <b>56</b>    | <b>64</b>    | <b>70</b>    | <b>69</b>    | <b>65</b>    | <b>16.1%</b>        |
| <b><u>Boats Without Sail</u></b> |      |              |              |              |              |              |                     |
| Ingham Catchment                 |      | 1,686        | 1,756        | 2,010        | 2,023        | 2,083        | 23.5%               |
| Cardwell Catchment               |      | 460          | 476          | 497          | 510          | 526          | 14.3%               |
| Tully Catchment                  |      | 147          | 178          | 180          | 199          | 208          | 41.5%               |
| Mission Beach Catchment          |      | 379          | 379          | 380          | 401          | 413          | 9.0%                |
| Kurramine Beach Catchment        |      | 262          | 280          | 286          | 295          | 306          | 16.8%               |
| Mourilyan Catchment              |      | 45           | 49           | 51           | 52           | 64           | 42.2%               |
| Innisfail Catchment              |      | 450          | 452          | 464          | 486          | 473          | 5.1%                |
| <b>Total</b>                     |      | <b>3,429</b> | <b>3,570</b> | <b>3,868</b> | <b>3,966</b> | <b>4,073</b> | <b>18.8%</b>        |
| <b><u>All Boats</u></b>          |      |              |              |              |              |              |                     |
| Ingham Catchment                 |      | 1,698        | 1,770        | 2,028        | 2,043        | 2,100        | 23.7%               |
| Cardwell Catchment               |      | 484          | 502          | 520          | 531          | 543          | 12.2%               |
| Tully Catchment                  |      | 149          | 181          | 183          | 201          | 211          | 41.6%               |
| Mission Beach Catchment          |      | 388          | 389          | 393          | 413          | 424          | 9.3%                |

| Type                      | Year | 2007         | 2008         | 2009         | 2010         | 2011         | Growth<br>(2007-11) |
|---------------------------|------|--------------|--------------|--------------|--------------|--------------|---------------------|
| Kurramine Beach Catchment |      | 262          | 281          | 289          | 298          | 311          | 18.7%               |
| Mourilyan Catchment       |      | 47           | 51           | 53           | 54           | 67           | 42.6%               |
| Innisfail Catchment       |      | 457          | 460          | 472          | 495          | 482          | 5.5%                |
| <b>Total</b>              |      | <b>3,485</b> | <b>3,634</b> | <b>3,938</b> | <b>4,035</b> | <b>4,138</b> | <b>18.7%</b>        |

Source: Maritime Safety Queensland (various years (a))

### Registrations by Length

Registrations by length have been provided for the combined catchments (Total Catchment). Historical registrations by length data for each individual Catchment are shown in Appendix B.

In the Total Catchment, boats with sail were most commonly 3-5 metres, 5-8 metres or 10-12 metres in length. The number of boats with sail in the 10-12 metre category has declined since peaking in 2009 at 22 registrations. The growth rate in boats with sail registrations was highest in the 3-5 metre category, increasing 183.3% between 2007 and 2011 (or by 11 boats).

The majority of boats without sail in the Total Catchment were either 3-5 metres or 5-8 metres in length. The growth rate in boats without sail registrations was highest for the 5-8 metre (41.8%) and 15-25 metre (42.9%) categories.

**Table 7.8 - Historical Boat Registrations by Length, Total Catchment (2007-2011)**

| Type                             | Year | 2007      | 2008      | 2009      | 2010      | 2011      | Growth<br>(2007-11) |
|----------------------------------|------|-----------|-----------|-----------|-----------|-----------|---------------------|
| <b><u>Boats With Sail</u></b>    |      |           |           |           |           |           |                     |
| <3m                              |      | 0         | 0         | 1         | 1         | 1         | n.a.                |
| 3-5m                             |      | 6         | 6         | 9         | 11        | 17        | 183.3%              |
| 5-8m                             |      | 17        | 17        | 16        | 19        | 17        | 0.0%                |
| 8-10m                            |      | 5         | 12        | 11        | 9         | 8         | 60.0%               |
| 10-12m                           |      | 21        | 18        | 22        | 20        | 14        | -33.3%              |
| 12-15m                           |      | 5         | 9         | 10        | 9         | 7         | 40.0%               |
| 15-25m                           |      | 2         | 2         | 1         | 0         | 1         | -50.0%              |
| 25m+                             |      | 0         | 0         | 0         | 0         | 0         | n.a.                |
| <b>Total</b>                     |      | <b>56</b> | <b>64</b> | <b>70</b> | <b>69</b> | <b>65</b> | <b>16.1%</b>        |
| <b><u>Boats Without Sail</u></b> |      |           |           |           |           |           |                     |
| <3m                              |      | 75        | 77        | 75        | 68        | 65        | -13.3%              |
| 3-5m                             |      | 2,617     | 2,677     | 2,899     | 2,934     | 2,984     | 14.0%               |

| Type             | Year | 2007         | 2008         | 2009         | 2010         | 2011         | Growth<br>(2007-11) |
|------------------|------|--------------|--------------|--------------|--------------|--------------|---------------------|
| 5-8m             |      | 667          | 751          | 818          | 884          | 946          | 41.8%               |
| 8-10m            |      | 37           | 32           | 37           | 35           | 35           | -5.4%               |
| 10-12m           |      | 17           | 18           | 17           | 22           | 22           | 29.4%               |
| 12-15m           |      | 9            | 11           | 13           | 13           | 10           | 11.1%               |
| 15-25m           |      | 7            | 4            | 7            | 9            | 10           | 42.9%               |
| 25m+             |      | 0            | 0            | 2            | 1            | 1            | n.a.                |
| <b>Total</b>     |      | <b>3,429</b> | <b>3,570</b> | <b>3,868</b> | <b>3,966</b> | <b>4,073</b> | <b>18.8%</b>        |
| <b>All Boats</b> |      |              |              |              |              |              |                     |
| <3m              |      | 75           | 77           | 76           | 69           | 66           | -12.0%              |
| 3-5m             |      | 2,623        | 2,683        | 2,908        | 2,945        | 3,001        | 14.4%               |
| 5-8m             |      | 684          | 768          | 834          | 903          | 963          | 40.8%               |
| 8-10m            |      | 42           | 44           | 48           | 44           | 43           | 2.4%                |
| 10-12m           |      | 38           | 36           | 39           | 42           | 36           | -5.3%               |
| 12-15m           |      | 14           | 20           | 23           | 22           | 17           | 21.4%               |
| 15-25m           |      | 9            | 6            | 8            | 9            | 11           | 22.2%               |
| 25m+             |      | 0            | 0            | 2            | 1            | 1            | n.a.                |
| <b>Total</b>     |      | <b>3,485</b> | <b>3,634</b> | <b>3,938</b> | <b>4,035</b> | <b>4,138</b> | <b>18.7%</b>        |

Source: Maritime Safety Queensland (various years (a))

### Estimated Registrations by Type

For the recreational boat owner, there are three methods of boat storage, these being:

1. **Trailerable:** The boat is stored at the owner's place of residence and trailered to a boat ramp when in use;
2. **Wet berth:** The boat is stored in a wet marina berth; and
3. **Dry berth:** The boat is stored in dry storage, and is placed into the water only when used.

The purpose of this assessment is to estimate the demand for wet and dry berth storage, and excludes trailerable boat demand.

To estimate the size of the boat fleet by storage type, assumptions have been made in regard to the proportion of boats stored in wet and dry storage by type and length:

- It has been assumed that no boat over 10 metres in length is trailerable and requires storage at a marina.
- For wet berthing and dry berthing at marinas, it has been assumed that no boat over 10 metres in length is dry berthed.

Stakeholder feedback for this study has indicated that the acceptability of dry berthing as an alternative to wet berths is low in the Cassowary Coast Region relative to SEQ averages. This is reflected in the assumed storage of boats without sail in the 5-8 metre and 8-10 metre categories.

Table 7.9 below provides assumptions of the estimated proportion of vessels by length that could be wet berthed or dry berthed within the region. Tables 7.10 and 7.11 outline the modelled number of wet berthed and dry berthed boats within the Total Catchment based on the proportions outlined in Table 7.9.

In calculating these figures, it is noted that:

- ▶ The estimated number of boats currently stored in wet berths is based on 2011 supply levels prior to Cyclone Yasi.
- ▶ Estimates make provision for some vessels which are still registered but may have been destroyed by the cyclone.
- ▶ These figures do not represent the number of wet and dry berthed boats within the catchments, but represent the number of wet and dry berthed boats owned by catchment residents which are berthed either within or outside the catchments.
- ▶ It is assumed that some of the demand within the Cassowary Coast is currently being met outside the catchments by facilities located in surrounding areas, such as Cairns and Townsville.
- ▶ These calculations also take into account latent demand within the Cassowary Coast Region.

The figures in Tables 7.10 and 7.11 do not necessarily represent the actual number of wet and dry berths available in the catchments, but represent the number of vessels owned by catchment residents and berthed (wet and/or dry) either within or outside of the Total Catchment.

Table 7.10 states that the predicted demand in 2011 was for approximately 295 wet berths. At the beginning of 2011, the overall supply of wet berths in the region was 252 berths (including Port Hinchinbrook). If it is assumed that Port Hinchinbrook was 80 % utilised then there would have been approximately 211 boats berthed in wet berths in the Cassowary Coast Region.

Therefore, there is a difference of approximately 100 between the actual supply and the estimated demand. This figure is made up of natural leakage (i.e. vessels that are berthed outside of the region regardless of the available facilities in the region) and the latent demand or the amount of vessels that would berth in the region if a suitable facility was available.

**Table 7.9 - Proportion of Boats by Storage Type (2007-2011)**

| Boat Type/Length              | Total Catchment<br>(Cassowary Coast) |            | SEQ Average |            |
|-------------------------------|--------------------------------------|------------|-------------|------------|
|                               | Wet Berths                           | Dry Berths | Wet Berths  | Dry Berths |
| <b><u>Boats With Sail</u></b> |                                      |            |             |            |
| <3 metres                     | 0.0%                                 | 5.0%       | 0.0%        | 5.0%       |
| 3-5 metres                    | 10.0%                                | 2.5%       | 10.0%       | 2.5%       |
| 5-8 metres                    | 50.0%                                | 1.0%       | 50.0%       | 1.0%       |
| 8-10 metres                   | 75.0%                                | 0.0%       | 75.0%       | 0.0%       |

| Boat Type/Length                 | Total Catchment<br>(Cassowary Coast) |            | SEQ Average |            |
|----------------------------------|--------------------------------------|------------|-------------|------------|
|                                  | Wet Berths                           | Dry Berths | Wet Berths  | Dry Berths |
| 10-12 metres                     | 100.0%                               | 0.0%       | 100.0%      | 0.0%       |
| 12-15 metres                     | 100.0%                               | 0.0%       | 100.0%      | 0.0%       |
| 15-25 metres                     | 100.0%                               | 0.0%       | 100.0%      | 0.0%       |
| >25 metres                       | 100.0%                               | 0.0%       | 100.0%      | 0.0%       |
| <b><u>Boats Without Sail</u></b> |                                      |            |             |            |
| <3 metres                        | 0.0%                                 | 0.0%       | 0.0%        | 0.0%       |
| 3-5 metres                       | 0.0%                                 | 1.0%       | 0.0%        | 2.5%       |
| 5-8 metres                       | 20.0%                                | 2.5%       | 15.0%       | 20.0%      |
| 8-10 metres                      | 70.0%                                | 2.5%       | 50.0%       | 25.0%      |
| 10-12 metres                     | 100.0%                               | 0.0%       | 100.0%      | 0.0%       |
| 12-15 metres                     | 100.0%                               | 0.0%       | 100.0%      | 0.0%       |
| 15-25 metres                     | 100.0%                               | 0.0%       | 100.0%      | 0.0%       |
| >25 metres                       | 100.0%                               | 0.0%       | 100.0%      | 0.0%       |

Source: Economic Associates estimates

**Table 7.10 - Estimated Number of Boats Stored in Wet Berths, Total Catchment (2007-2011)**

| Type                             | Year      |           |           |           |           |
|----------------------------------|-----------|-----------|-----------|-----------|-----------|
|                                  | 2007      | 2008      | 2009      | 2010      | 2011      |
| <b><u>Boats With Sail</u></b>    |           |           |           |           |           |
| <3 metres                        | 0         | 0         | 0         | 0         | 0         |
| 3-5 metres                       | 1         | 1         | 1         | 1         | 2         |
| 5-8 metres                       | 9         | 9         | 8         | 10        | 9         |
| 8-10 metres                      | 4         | 9         | 8         | 7         | 6         |
| 10-12 metres                     | 21        | 18        | 22        | 20        | 14        |
| 12-15 metres                     | 5         | 9         | 10        | 9         | 7         |
| 15-25 metres                     | 2         | 2         | 1         | 0         | 1         |
| >25 metres                       | 0         | 0         | 0         | 0         | 0         |
| <b>Total</b>                     | <b>41</b> | <b>47</b> | <b>50</b> | <b>46</b> | <b>38</b> |
| <b><u>Boats Without Sail</u></b> |           |           |           |           |           |
| <3 metres                        | 0         | 0         | 0         | 0         | 0         |

| Type         | Year | 2007       | 2008       | 2009       | 2010       | 2011       |
|--------------|------|------------|------------|------------|------------|------------|
| 3-5 metres   |      | 0          | 0          | 0          | 0          | 0          |
| 5-8 metres   |      | 133        | 150        | 164        | 177        | 189        |
| 8-10 metres  |      | 26         | 22         | 26         | 25         | 25         |
| 10-12 metres |      | 17         | 18         | 17         | 22         | 22         |
| 12-15 metres |      | 9          | 11         | 13         | 13         | 10         |
| 15-25 metres |      | 7          | 4          | 7          | 9          | 10         |
| >25 metres   |      | 0          | 0          | 2          | 1          | 1          |
| <b>Total</b> |      | <b>192</b> | <b>206</b> | <b>229</b> | <b>246</b> | <b>257</b> |

Note: Some totals may not add due to rounding.

Source: Economic Associates estimates

**Table 7.11 - Estimated Number of Boats Stored in Dry Berths, Total Catchment (2007-2011)**

| Type                             | Year | 2007     | 2008     | 2009     | 2010     | 2011     |
|----------------------------------|------|----------|----------|----------|----------|----------|
| <b><u>Boats With Sail</u></b>    |      |          |          |          |          |          |
| <3 metres                        |      | 0        | 0        | 0        | 0        | 0        |
| 3-5 metres                       |      | 0        | 0        | 0        | 0        | 0        |
| 5-8 metres                       |      | 0        | 0        | 0        | 0        | 0        |
| 8-10 metres                      |      | 0        | 0        | 0        | 0        | 0        |
| 10-12 metres                     |      | 0        | 0        | 0        | 0        | 0        |
| 12-15 metres                     |      | 0        | 0        | 0        | 0        | 0        |
| 15-25 metres                     |      | 0        | 0        | 0        | 0        | 0        |
| >25 metres                       |      | 0        | 0        | 0        | 0        | 0        |
| <b>Total</b>                     |      | <b>0</b> | <b>0</b> | <b>0</b> | <b>1</b> | <b>1</b> |
| <b><u>Boats Without Sail</u></b> |      |          |          |          |          |          |
| <3 metres                        |      | 0        | 0        | 0        | 0        | 0        |
| 3-5 metres                       |      | 26       | 27       | 29       | 29       | 30       |
| 5-8 metres                       |      | 17       | 19       | 20       | 22       | 24       |
| 8-10 metres                      |      | 1        | 1        | 1        | 1        | 1        |
| 10-12 metres                     |      | 0        | 0        | 0        | 0        | 0        |
| 12-15 metres                     |      | 0        | 0        | 0        | 0        | 0        |



| Type         | Year | 2007      | 2008      | 2009      | 2010      | 2011      |
|--------------|------|-----------|-----------|-----------|-----------|-----------|
| 15-25 metres |      | 0         | 0         | 0         | 0         | 0         |
| >25 metres   |      | 0         | 0         | 0         | 0         | 0         |
| <b>Total</b> |      | <b>44</b> | <b>46</b> | <b>50</b> | <b>52</b> | <b>54</b> |

Note: Some totals may not add due to rounding.

Source: Economic Associates estimates

### 7.6.2 Commercial Boat Registrations by Catchment

Commercial boat registrations are collated for ten maritime areas in Queensland, these being:

- Brisbane Region;
- Cairns/Cooktown Region;
- Central Queensland Region;
- Gold Coast Region;
- Gulf Region;
- Mackay Whitsunday Region;
- Sunshine Coast Region;
- Torres Strait/Cape Region;
- Townsville/Hinchinbrook Region; and
- Wide Bay Burnett Region.

Existing facilities within the Cassowary Coast fall within the following maritime areas:

- Cairns/Cooktown Region:
  - Johnstone Marine River Precinct;
  - Innisfail;
  - Port of Mourilyan;
- Townsville/Hinchinbrook Region:
  - Port Hinchinbrook.

DEEDI (now DSDIP) (2010) reports data at a broader regional level than the identified study area.

As such, a brief analysis of commercial boat registrations at the broader Cairns/Cooktown Region and the Townsville/Hinchinbrook Region has been provided to give an overview of the size of the commercial boat market within these regions relative to Queensland.

In the 2008 to 2010 period, Cairns/Cooktown accounted for 19.7% - 19.9% of commercial boat registrations and Townsville/Hinchinbrook accounted for 8.8% - 9.0% of commercial boat registrations.

Between 2008 and 2010, commercial boat registrations have fallen in all areas, with the most significant fall in Townsville/Hinchinbrook (down 2.8%).

**Table 7.12 - Number of Commercial Boat Registrations by Qld Maritime Catchments (2008-2010)**

| Commercial Boating Region | Number          |                         |            | % of Queensland |                         |            |
|---------------------------|-----------------|-------------------------|------------|-----------------|-------------------------|------------|
|                           | Cairns/Cooktown | Townsville/Hinchinbrook | Queensland | Cairns/Cooktown | Townsville/Hinchinbrook | Queensland |
| <b>2008</b>               | 1,133           | 504                     | 5,684      | 19.9%           | 8.9%                    | 100.0%     |
| <b>2009</b>               | 1,119           | 510                     | 5,671      | 19.7%           | 9.0%                    | 100.0%     |
| <b>2010</b>               | 1,115           | 490                     | 5,591      | 19.9%           | 8.8%                    | 100.0%     |
| <b>Change (2008-10)</b>   | -1.6%           | -2.8%                   | -1.6%      | 0.0%            | -0.1%                   | 0.0%       |

Source: Maritime Safety Queensland (various years (b))

The number of commercial boat registrations per 1,000 persons in the Cairns/Cooktown Region ranged between 4.4 and 4.7 in the 2008 to 2010 period, almost double that in the Townsville/Hinchinbrook Region.

Table 7.13 summarises the number of commercial boat registrations per 1,000 people in the Cairns/Cooktown and Townsville/Hinchinbrook regions between 2008 and 2010.

**Table 7.13: Commercial Boat Registrations per 1,000 Persons, 2008-2010**

| Commercial Boating Region | Number          |                         |            | % of Queensland |                         |            |
|---------------------------|-----------------|-------------------------|------------|-----------------|-------------------------|------------|
|                           | Cairns/Cooktown | Townsville/Hinchinbrook | Queensland | Cairns/Cooktown | Townsville/Hinchinbrook | Queensland |
| <b>2008</b>               | 1,133           | 504                     | 5,684      | 19.9%           | 8.9%                    | 100.0%     |
| <b>2009</b>               | 1,119           | 510                     | 5,671      | 19.7%           | 9.0%                    | 100.0%     |
| <b>2010</b>               | 1,115           | 490                     | 5,591      | 19.9%           | 8.8%                    | 100.0%     |
| <b>Change, 2008-10</b>    | -1.6%           | -2.8%                   | -1.6%      | 0.0%            | -0.1%                   | 0.0%       |

Source: Maritime Safety Queensland (various years (b)), ABS (2011)

Assuming that the number of commercial boat registrations per 1,000 persons in Cardwell/Johnstone is consistent with the Cairns/Cooktown Region and the number of commercial boat registrations per 1,000 persons in Hinchinbrook is consistent with the Townsville/Hinchinbrook average, there were an estimated 163 commercial boats registered in Cassowary Coast Region in 2010.

Consultation findings confirm that the majority of commercial boats registered within the Cassowary Coast region are being stored elsewhere (i.e. Cairns or Townsville), due to the lack of safe berthing facilities in the Cassowary Coast, particularly in Mission Beach.

**Table 7.14: Estimated Commercial Boats Registered in Cassowary Coast Region (2008-2010)**

| Commercial Boating Region | Population       |                          | Commercial Boat Registrations |                          | Commercial Boat Registrations / 1,000 Persons |                          |
|---------------------------|------------------|--------------------------|-------------------------------|--------------------------|---|--------------------------|
|                           | Cairns/ Cooktown | Townsville/ Hinchinbrook | Cairns/ Cooktown              | Townsville/ Hinchinbrook | Cairns/ Cooktown                              | Townsville/ Hinchinbrook |
| <b>2008</b>               | 242,206          | 221,395                  | 1,133                         | 504                      | 4.7   | 2.3                      |
| <b>2009</b>               | 248,928          | 227,336                  | 1,119                         | 510                      | 4.5   | 2.2                      |
| <b>2010</b>               | 253,324          | 231,194                  | 1,115                         | 490                      | 4.4   | 2.1                      |

Source: Economic Associates estimates based on Maritime Safety Queensland (various years (b)), ABS (2011)

A breakdown of registrations as of March 2007 indicates that Cairns/Cooktown had a higher incidence of working vessels, dinghys, fishing fleet and tourism fishing fleet than Queensland.

Townsville/Hinchinbrook was characterised by a higher incidence of transport vessel, fishing fleet and tourism fishing fleet than Queensland.

**Table 7.15 - Commercial Boat Registrations by Type (March 2007)**

| Commercial Boating Region | Number                    |                   |              | % of Queensland           |                   |               |
|---------------------------|---------------------------|-------------------|--------------|---------------------------|-------------------|---------------|
|                           | Townsville / Hinchinbrook | Cairns / Cooktown | Queensland   | Townsville / Hinchinbrook | Cairns / Cooktown | Queensland    |
| <b>Vessel Type</b>        |                           |                   |              |                           |                   |               |
| Dinghy                    | 245                       | 120               | 1,278        | 22.2%                     | 23.9%             | 22.9%         |
| Fishing Fleet             | 196                       | 87                | 682          | 17.7%                     | 17.3%             | 12.2%         |
| House Boat                | 7                         | 12                | 118          | 0.6%                      | 2.4%              | 2.1%          |
| Inflatable Craft          | 22                        | 25                | 332          | 2.0%                      | 5.0%              | 5.9%          |
| Tourism Vessels           | 85                        | 40                | 691          | 7.7%                      | 8.0%              | 12.4%         |
| Tourism Fishing Fleet     | 82                        | 38                | 253          | 7.4%                      | 7.6%              | 4.5%          |
| Transport Vessels         | 252                       | 57                | 990          | 22.8%                     | 11.3%             | 17.7%         |
| Working Vessel            | 189                       | 112               | 1,047        | 17.1%                     | 22.3%             | 18.8%         |
| Other Vessels             | 28                        | 12                | 192          | 2.5%                      | 2.4%              | 3.4%          |
| <b>Total</b>              | <b>1,106</b>              | <b>503</b>        | <b>5,583</b> | <b>100.0%</b>             | <b>100.0%</b>     | <b>100.0%</b> |

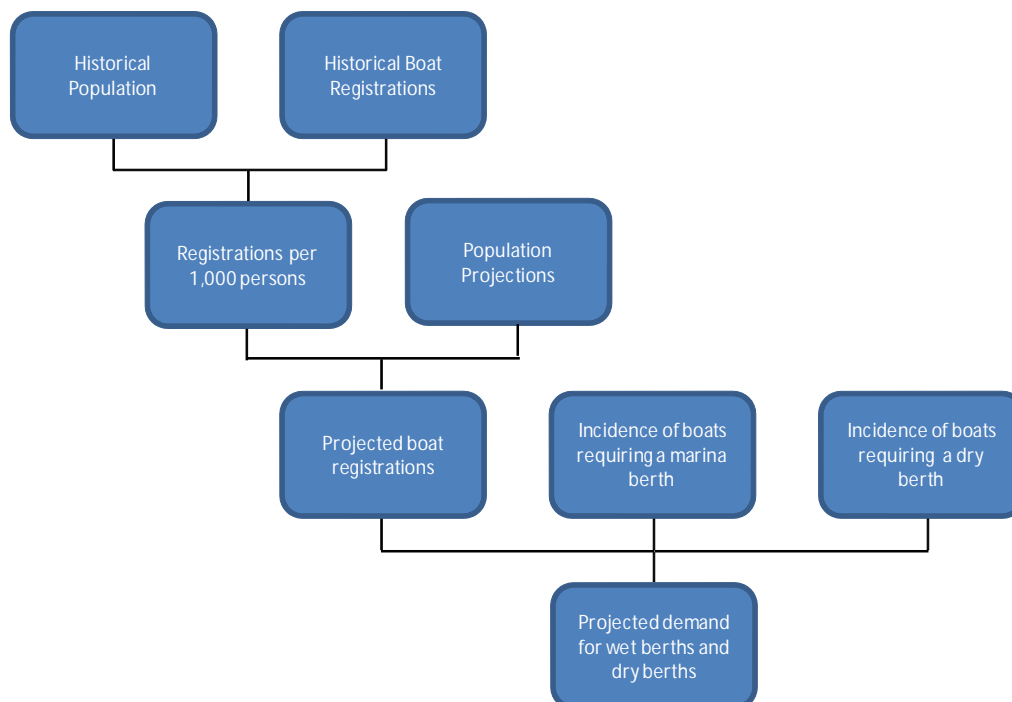
Source: DEEDI (2008)

## 8. Projected Recreational Boating Fleet

### 8.1 Methodology

Figure 5 depicts the methodology used to forecast wet and dry berth demand within the Cassowary Coast and its Catchment areas.

**Figure 5 – Methodology for Projections of Boating Fleet and Berth Demand (Wet and Dry)**



The body of the report provides summary tables regarding the projected size of the recreational boating fleet. More detailed tables which include a breakdown of projected fleet size for each Catchment by length can be found in Appendix C.

### 8.2 Historical Population and Boat Registrations

Analysis of the Catchment's estimated resident population (ERP) and boat registrations between 2007 and 2011 indicates a clear relationship between the two variables.

Boat ownership was particularly high in the following Catchments:

- Ingham Catchment – average of 164.48 registrations per 1,000 persons;
- Cardwell Catchment – average of 222.68 registrations per 1,000 persons;
- Tully Catchment – average of 137.68 registrations per 1,000 persons; and
- Kurramine Beach Catchment – average of 173.17 registrations per 1,000 persons.

The incidence of motor boat ownership was significantly higher than sail boat ownership in all catchments.

**Table 8.1 - Registrations per 1,000 Persons by Catchment (2007-2011)**

| Locality                         | 2007         | 2008         | 2009         | 2010         | 2011         | Average      |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b><u>Boats With Sail</u></b>    |              |              |              |              |              |              |
| Ingham Catchment                 | 1.03         | 1.20         | 1.54         | 1.71         | 1.44         | 1.38         |
| Cardwell Catchment               | 10.66        | 11.39        | 9.86         | 8.92         | 7.20         | 9.61         |
| Tully Catchment                  | 1.53         | 2.27         | 2.22         | 1.47         | 2.19         | 1.94         |
| Mission Beach Catchment          | 1.06         | 1.16         | 1.48         | 1.35         | 1.23         | 1.25         |
| Kurramine Beach Catchment        | 0.00         | 0.61         | 1.80         | 1.78         | 2.95         | 1.43         |
| Mourilyan Catchment              | 0.57         | 0.56         | 0.55         | 0.54         | 0.81         | 0.61         |
| Innisfail Catchment              | 0.41         | 0.46         | 0.45         | 0.50         | 0.50         | 0.46         |
| <b>Total</b>                     | <b>1.22</b>  | <b>1.37</b>  | <b>1.48</b>  | <b>1.45</b>  | <b>1.36</b>  | <b>1.38</b>  |
| <b><u>Boats Without Sail</u></b> |              |              |              |              |              |              |
| Ingham Catchment                 | 144.48       | 150.30       | 171.62       | 172.95       | 176.15       | 163.10       |
| Cardwell Catchment               | 204.40       | 208.59       | 213.15       | 216.51       | 222.69       | 213.07       |
| Tully Catchment                  | 112.73       | 134.65       | 133.29       | 145.91       | 152.12       | 135.74       |
| Mission Beach Catchment          | 44.65        | 43.95        | 43.12        | 44.99        | 46.14        | 44.57        |
| Kurramine Beach Catchment        | 162.11       | 170.34       | 171.14       | 174.65       | 180.47       | 171.74       |
| Mourilyan Catchment              | 12.76        | 13.67        | 14.00        | 14.13        | 17.34        | 14.38        |
| Innisfail Catchment              | 26.14        | 25.84        | 26.10        | 27.15        | 26.33        | 26.31        |
| <b>Total</b>                     | <b>74.43</b> | <b>76.56</b> | <b>81.79</b> | <b>83.32</b> | <b>85.11</b> | <b>80.24</b> |
| <b><u>All Boats</u></b>          |              |              |              |              |              |              |
| Ingham Catchment                 | 145.50       | 151.50       | 173.15       | 174.66       | 177.59       | 164.48       |
| Cardwell Catchment               | 215.06       | 219.98       | 223.01       | 225.43       | 229.89       | 222.68       |
| Tully Catchment                  | 114.26       | 136.92       | 135.52       | 147.38       | 154.32       | 137.68       |
| Mission Beach Catchment          | 45.71        | 45.11        | 44.60        | 46.33        | 47.37        | 45.82        |
| Kurramine Beach Catchment        | 162.11       | 170.95       | 172.94       | 176.42       | 183.42       | 173.17       |
| Mourilyan Catchment              | 13.33        | 14.23        | 14.55        | 14.68        | 18.15        | 14.99        |
| Innisfail Catchment              | 26.54        | 26.30        | 26.55        | 27.65        | 26.83        | 26.78        |
| <b>Total</b>                     | <b>75.64</b> | <b>77.94</b> | <b>83.27</b> | <b>84.77</b> | <b>86.47</b> | <b>81.62</b> |

Source: Source: Maritime Safety Queensland (various years (a)), OESR (2008), Economic Associates estimates

An analysis of boat registrations per 1,000 persons specifically for boats eight or more metres in length has also been undertaken. Boats that are eight or more metres in length are considered to be the key group demanding wet or dry berthing for boats.

The incidence of boat registrations per 1,000 persons was highest in Cardwell Catchment, averaging 21.53 registrations / 1,000 persons over the past five years, significantly above the Total Catchment average (2.36 registrations / 1,000 persons). The higher incidence of boat ownership per 1,000 persons in the Cardwell Catchment can be attributed to the development of the Port Hinchinbrook master planned community.

A review of the Port Hinchinbrook master plan highlights that upon completion, the development was anticipated to offer approximately 400 residential allotments, a 250 berth marina, apartments, a motel, a hotel with approximately 160 rooms and a range of community facilities including a marina shopping precinct, swimming pool, tennis court and golf course. It would be expected that the Port Hinchinbrook development would be particularly appealing to persons owning a boat that required wet berthing, hence resulting in a significantly higher incidence of boats that required wet berthing in the Cardwell Catchment.

The data for the Cardwell catchment tends to suggest that the provision of high quality marina infrastructure (in the form of Port Hinchinbrook) has facilitated ownership of larger vessels than might have occurred in the absence of such infrastructure. Based on this, a high series demand projection has been prepared later in this report to estimate the potential impact of similar supply led demand in other catchments.

Interestingly, the incidence of registrations per 1,000 people for boats eight or more metres in length in the Kurramine Beach Catchment was lower than the Total Catchment average, highlighting that the majority of boat registrations in this catchment were for boats less than eight metres in length (which are typically trailerable boats).

**Table 8.2 - Registrations per 1,000 Persons by Catchment – Boats 8m+ in Length (2007-2011)**

| Locality                         | 2007        | 2008        | 2009        | 2010        | 2011        | Average     |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b><u>Boats With Sail</u></b>    |             |             |             |             |             |             |
| Ingham Catchment                 | 0.51        | 0.77        | 0.94        | 0.94        | 0.76        | 0.79        |
| Cardwell Catchment               | 8.89        | 9.64        | 9.01        | 7.22        | 5.50        | 8.05        |
| Tully Catchment                  | 0.00        | 0.00        | 0.74        | 0.73        | 1.46        | 0.59        |
| Mission Beach Catchment          | 0.35        | 0.46        | 0.57        | 0.45        | 0.22        | 0.41        |
| Kurramine Beach Catchment        | 0.00        | 0.00        | 0.60        | 0.00        | 0.00        | 0.12        |
| Mourilyan Catchment              | 0.00        | 0.00        | 0.00        | 0.00        | 0.27        | 0.05        |
| Innisfail Catchment              | 0.23        | 0.34        | 0.28        | 0.28        | 0.17        | 0.26        |
| <b>Total</b>                     | <b>0.72</b> | <b>0.88</b> | <b>0.93</b> | <b>0.80</b> | <b>0.63</b> | <b>0.79</b> |
| <b><u>Boats Without Sail</u></b> |             |             |             |             |             |             |
| Ingham Catchment                 | 1.97        | 1.88        | 2.82        | 2.56        | 2.71        | 2.39        |
| Cardwell Catchment               | 13.33       | 14.46       | 13.72       | 13.59       | 12.28       | 13.48       |



| Locality                  | 2007        | 2008        | 2009        | 2010        | 2011        | Average     |
|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tully Catchment           | 3.07        | 0.76        | 0.74        | 2.20        | 2.93        | 1.94        |
| Mission Beach Catchment   | 0.82        | 0.70        | 0.79        | 0.67        | 0.67        | 0.73        |
| Kurramine Beach Catchment | 0.00        | 0.00        | 0.00        | 0.59        | 0.59        | 0.24        |
| Mourilyan Catchment       | 0.57        | 0.56        | 0.55        | 0.82        | 0.54        | 0.61        |
| Innisfail Catchment       | 0.23        | 0.06        | 0.06        | 0.28        | 0.22        | 0.17        |
| <b>Total</b>              | <b>1.52</b> | <b>1.39</b> | <b>1.61</b> | <b>1.68</b> | <b>1.63</b> | <b>1.57</b> |
| <b>All Boats</b>          |             |             |             |             |             |             |
| Ingham Catchment          | 2.49        | 2.65        | 3.76        | 3.51        | 3.47        | 3.17        |
| Cardwell Catchment        | 22.22       | 24.10       | 22.73       | 20.80       | 17.78       | 21.53       |
| Tully Catchment           | 3.07        | 0.76        | 1.48        | 2.93        | 4.39        | 2.53        |
| Mission Beach Catchment   | 1.18        | 1.16        | 1.36        | 1.12        | 0.89        | 1.14        |
| Kurramine Beach Catchment | 0.00        | 0.00        | 0.60        | 0.59        | 0.59        | 0.36        |
| Mourilyan Catchment       | 0.57        | 0.56        | 0.55        | 0.82        | 0.81        | 0.66        |
| Innisfail Catchment       | 0.46        | 0.40        | 0.34        | 0.56        | 0.39        | 0.43        |
| <b>Total</b>              | <b>2.24</b> | <b>2.27</b> | <b>2.54</b> | <b>2.48</b> | <b>2.26</b> | <b>2.36</b> |

Source: Source: Maritime Safety Queensland (various years (a)), OESR (2008), Economic Associates estimates

The Total Catchment has a relatively low incidence of boats with sail registrations compared to regional averages and state averages over the past five years.

On the other hand, boats without sail registrations in the total catchment have been consistently higher than in Cairns Region, Townsville Region, Gold Coast City and Queensland. However, boats without sail registrations per 1,000 persons in Whitsunday Region have on average been 1.7 times higher than in the Total Catchment.

**Table 8.3 - Registrations per 1,000 People – All Boats, Regional Comparison (2007-11)**

| Locality               | 2007  | 2008  | 2009  | 2010  | 2011 | Average<br>(2007-11) |
|------------------------|-------|-------|-------|-------|------|----------------------|
| <b>Boats with Sail</b> |       |       |       |       |      |                      |
| Total Catchment        | 1.22  | 1.37  | 1.48  | 1.45  | 1.36 | 1.38                 |
| Cairns Region          | 2.44  | 2.49  | 2.51  | 2.37  | 2.37 | 2.43                 |
| Townsville Region      | 2.14  | 2.00  | 1.87  | 1.91  | 1.76 | 1.94                 |
| Whitsunday Region      | 11.73 | 11.67 | 11.64 | 10.82 | 9.90 | 11.15                |
| Gold Coast City        | 1.52  | 1.50  | 1.44  | 1.30  | 1.24 | 1.40                 |
| Queensland             | 1.65  | 1.67  | 1.63  | 1.58  | 1.55 | 1.62                 |

| Locality                         | 2007   | 2008   | 2009   | 2010   | 2011   | Average<br>(2007-11) |
|----------------------------------|--------|--------|--------|--------|--------|----------------------|
| <b><u>Boats without Sail</u></b> |        |        |        |        |        |                      |
| Total Catchment                  | 74.43  | 76.56  | 81.79  | 83.32  | 85.11  | 80.24                |
| Cairns Region                    | 62.55  | 61.69  | 61.90  | 61.17  | 60.33  | 61.53                |
| Townsville Region                | 60.94  | 62.32  | 62.70  | 62.80  | 62.67  | 62.28                |
| Whitsunday Region                | 135.52 | 138.52 | 139.35 | 139.57 | 137.82 | 138.15               |
| Gold Coast City                  | 52.68  | 50.33  | 49.90  | 49.36  | 48.21  | 50.09                |
| Queensland                       | 49.00  | 49.94  | 50.09  | 50.16  | 49.86  | 49.81                |
| <b><u>All Boats</u></b>          |        |        |        |        |        |                      |
| Total Catchment                  | 75.64  | 77.94  | 83.27  | 84.77  | 86.47  | 81.62                |
| Cairns Region                    | 64.98  | 64.18  | 64.41  | 63.54  | 62.70  | 63.96                |
| Townsville Region                | 63.08  | 64.32  | 64.57  | 64.70  | 64.43  | 64.22                |
| Whitsunday Region                | 147.25 | 150.19 | 150.99 | 150.38 | 147.72 | 149.31               |
| Gold Coast City                  | 54.20  | 51.83  | 51.33  | 50.66  | 49.45  | 51.49                |
| Queensland                       | 50.65  | 51.61  | 51.72  | 51.74  | 51.41  | 51.43                |

Source: Maritime Safety Queensland (various years (a)), ABS (2011), PIFU (2008), PIFU (2011), Economic Associates estimates

However, an analysis of registrations per 1,000 people for the main marina berth / dry berthing market (boats eight or more metres in length), shows that the rate of total registrations has been similar to the Townsville Region average, and lower than in Cairns Region, Whitsunday Region, Gold Coast City and Queensland. However, as noted above the incidence of vessels longer than eight metres within the Cardwell sub-catchment is significantly higher than that for the Total Catchment. This indicates that the incidence of ownership of vessels longer than eight metres within the Total Catchment is being driven by the Cardwell sub-catchment.

This highlights that demand within the Catchments is particularly strong for boats less than eight metres in length, suggesting a relatively lower demand for wet and dry berthing.

**Table 8.4 - Registrations per 1,000 People – Boats 8m+ in Length, Regional Comparison (2007-11)**

| Locality                      | 2007 | 2008 | 2009 | 2010 | 2011 | Average,<br>2007-11 |
|-------------------------------|------|------|------|------|------|---------------------|
| <b><u>Boats with Sail</u></b> |      |      |      |      |      |                     |
| Total Catchment               | 0.72 | 0.88 | 0.93 | 0.80 | 0.63 | 0.79                |
| Cairns Region                 | 1.68 | 1.82 | 1.87 | 1.77 | 1.77 | 1.78                |
| Townsville Region             | 1.42 | 1.37 | 1.27 | 1.25 | 1.22 | 1.31                |

| Locality                         | 2007  | 2008  | 2009  | 2010  | 2011  | Average, 2007-11 |
|----------------------------------|-------|-------|-------|-------|-------|------------------|
| Whitsunday Region                | 9.28  | 9.06  | 9.21  | 8.34  | 7.78  | 8.73             |
| Gold Coast City                  | 0.94  | 0.91  | 0.91  | 0.81  | 0.80  | 0.87             |
| Queensland                       | 1.05  | 1.06  | 1.06  | 1.03  | 1.01  | 1.04             |
| <b><u>Boats without Sail</u></b> |       |       |       |       |       |                  |
| Total Catchment                  | 1.52  | 1.39  | 1.61  | 1.68  | 1.63  | 1.57             |
| Cairns Region                    | 1.43  | 1.51  | 1.62  | 1.67  | 1.69  | 1.58             |
| Townsville Region                | 1.16  | 1.20  | 1.18  | 1.25  | 1.25  | 1.21             |
| Whitsunday Region                | 7.50  | 7.94  | 7.72  | 7.10  | 6.55  | 7.36             |
| Gold Coast City                  | 4.47  | 4.47  | 4.34  | 4.17  | 4.06  | 4.30             |
| Queensland                       | 1.70  | 1.76  | 1.75  | 1.71  | 1.69  | 1.73             |
| <b><u>All Boats</u></b>          |       |       |       |       |       |                  |
| Total Catchment                  | 2.24  | 2.27  | 2.54  | 2.48  | 2.26  | 2.36             |
| Cairns Region                    | 3.12  | 3.32  | 3.49  | 3.44  | 3.46  | 3.36             |
| Townsville Region                | 2.58  | 2.57  | 2.45  | 2.54  | 2.46  | 2.52             |
| Whitsunday Region                | 16.78 | 17.00 | 16.93 | 15.45 | 14.32 | 16.10            |
| Gold Coast City                  | 5.40  | 5.38  | 5.26  | 4.99  | 4.86  | 5.18             |
| Queensland                       | 2.75  | 2.83  | 2.81  | 2.74  | 2.70  | 2.77             |

Source: Maritime Safety Queensland (various years (a)), ABS (2011), OESR (2008), OESR (2011), Economic Associates estimates

### 8.3 Projected Size of Recreational Boat Fleet

In projecting the size of the recreational boat fleet, three scenarios were considered:

- **Base Case Scenario:** Incidence of boat ownership remains at the 2007-2011 average to 2031;
- **Medium Growth Scenario:** Incidence of boat ownership continues to grow at the historic rate (2007-2011 rate) to 2021, rate of growth halves between 2021 and 2031; and
- **High Growth Scenario:** Incidence of boat ownership continues to grow at the historic rate (2007-2011 rate) to 2031 and the distribution of boat ownership by length converges to the Cardwell average (2007-2011) by 2031

For conciseness, the outcomes for the Medium Growth Scenario are presented in detail in the body of the report, with comment also made on the outcomes of Base Case and High Growth Scenario.

Detailed tables for all scenarios are contained within Appendix C.

#### 8.3.1 Population Projections by Catchment

Population projections by catchment have been derived based on the PIFU medium series forecasts at the SLA level.

Over the next twenty years to 2031, population growth within the Cassowary Coast Regional Council is projected to occur at an average annual rate of 0.5%, lower than in Far North Queensland and Queensland.

Within the study area, population growth is anticipated to be highest in the Kurramine Beach Catchment and Mourilyan Catchment, both recording an average annual growth rate of 0.7% per annum over the next 20 years.

**Table 8.5 - Projected Population by Catchment (2011-2031)**

| Locality                  | 2011      | 2016      | 2021      | 2026      | 2031      | Ave. Ann. Growth, 2011-31 |
|---------------------------|-----------|-----------|-----------|-----------|-----------|---------------------------|
| Ingham Catchment          | 11,825    | 11,996    | 12,174    | 12,357    | 12,530    | 0.3%                      |
| Cardwell Catchment        | 2,362     | 2,426     | 2,477     | 2,524     | 2,560     | 0.4%                      |
| Tully Catchment           | 1,367     | 1,403     | 1,431     | 1,456     | 1,475     | 0.4%                      |
| Mission Beach Catchment   | 8,951     | 9,268     | 9,553     | 9,824     | 10,066    | 0.6%                      |
| Kurramine Beach Catchment | 1,696     | 1,761     | 1,827     | 1,893     | 1,959     | 0.7%                      |
| Mourilyan Catchment       | 3,692     | 3,822     | 3,955     | 4,086     | 4,217     | 0.7%                      |
| Innisfail Catchment       | 17,962    | 18,501    | 19,009    | 19,549    | 20,148    | 0.6%                      |
| Cassowary Coast Region    | 31,371    | 32,307    | 33,198    | 34,046    | 34,841    | 0.5%                      |
| Far North Queensland      | 280,952   | 304,713   | 327,315   | 349,607   | 372,559   | 1.4%                      |
| Queensland                | 4,611,491 | 5,092,858 | 5,588,617 | 6,090,548 | 6,592,857 | 1.8%                      |

Source: OESR (2008), Economic Associates estimates

### 8.3.2 Projected Size of Recreational Boat Fleet

The projected fleet size in each Catchment is estimated by applying the projected boat ownership ratio to the projected increase in population for the catchment area and then adding the projected growth in boat registrations to 2011 boat registrations.

Table 8.6 provides an outline of the projected size of the recreational boat fleet under Medium Growth Scenario.

Under all scenarios, the majority of boat registrations are projected to be for motor boats, increasing from 4,073 registrations in 2011 to 4,476 (Base Case Scenario) to 4,792 (High Growth Scenario) registrations in 2031.

Ingham Catchment is projected to remain the main catchment for boat registrations, with 2,216 (Base Case Scenario) to 2,440 (High Growth Scenario) registrations by 2031.

**Table 8.6 - Projected Size of Recreational Boat Fleet by Catchment – Medium Growth Scenario, (2011-2031)**

| Locality                         | 2011         | 2016         | 2021         | 2026         | 2031         |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|
| <b><u>Boats With Sail</u></b>    |              |              |              |              |              |
| Ingham Catchment                 | 17           | 17           | 18           | 19           | 21           |
| Cardwell Catchment               | 17           | 17           | 17           | 17           | 17           |
| Tully Catchment                  | 3            | 3            | 3            | 4            | 4            |
| Mission Beach Catchment          | 11           | 11           | 12           | 13           | 13           |
| Kurramine Beach Catchment        | 5            | 5            | 6            | 6            | 6            |
| Mourilyan Catchment              | 3            | 3            | 4            | 4            | 5            |
| Innisfail Catchment              | 9            | 9            | 10           | 11           | 11           |
| <b>Total</b>                     | <b>65</b>    | <b>67</b>    | <b>70</b>    | <b>73</b>    | <b>78</b>    |
| <b><u>Boats Without Sail</u></b> |              |              |              |              |              |
| Ingham Catchment                 | 2,083        | 2,122        | 2,184        | 2,257        | 2,345        |
| Cardwell Catchment               | 526          | 542          | 558          | 573          | 587          |
| Tully Catchment                  | 208          | 216          | 228          | 242          | 259          |
| Mission Beach Catchment          | 413          | 428          | 443          | 458          | 471          |
| Kurramine Beach Catchment        | 306          | 319          | 337          | 356          | 377          |
| Mourilyan Catchment              | 64           | 67           | 74           | 82           | 93           |
| Innisfail Catchment              | 473          | 487          | 501          | 516          | 532          |
| <b>Total</b>                     | <b>4,073</b> | <b>4,182</b> | <b>4,325</b> | <b>4,484</b> | <b>4,664</b> |
| <b><u>All Boats</u></b>          |              |              |              |              |              |
| Ingham Catchment                 | 2,100        | 2,139        | 2,202        | 2,277        | 2,366        |
| Cardwell Catchment               | 543          | 559          | 575          | 591          | 604          |
| Tully Catchment                  | 211          | 219          | 232          | 246          | 262          |
| Mission Beach Catchment          | 424          | 440          | 455          | 470          | 485          |
| Kurramine Beach Catchment        | 311          | 325          | 343          | 362          | 383          |
| Mourilyan Catchment              | 67           | 70           | 77           | 86           | 98           |
| Innisfail Catchment              | 482          | 497          | 511          | 526          | 544          |
| <b>Total</b>                     | <b>4,138</b> | <b>4,249</b> | <b>4,395</b> | <b>4,557</b> | <b>4,741</b> |

Note: Some totals may not add due to rounding.

Source: Economic Associates estimates

Within the Total Catchment, the majority of growth in the recreational boat fleet is projected to occur in boats without sail that are 3-5 metres or 5-8 metres in length.

**Table 8.7 - Projected Recreational Boat Fleet in Total Catchment – Medium Growth Scenario (2011-2031)**

| Locality                         | 2011         | 2016         | 2021         | 2026         | 2031         |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|
| <b><u>Boats With Sail</u></b>    |              |              |              |              |              |
| <3 metres                        | 1            | 1            | 1            | 1            | 1            |
| 3-5 metres                       | 17           | 18           | 18           | 19           | 20           |
| 5-8 metres                       | 17           | 18           | 18           | 20           | 21           |
| 8-10 metres                      | 8            | 8            | 9            | 9            | 10           |
| 10-12 metres                     | 14           | 14           | 15           | 15           | 16           |
| 12-15 metres                     | 7            | 7            | 7            | 8            | 8            |
| 15-25 metres                     | 1            | 1            | 1            | 1            | 1            |
| >25 metres                       | 0            | 0            | 0            | 0            | 0            |
| <b>Total</b>                     | <b>65</b>    | <b>67</b>    | <b>70</b>    | <b>73</b>    | <b>78</b>    |
| <b><u>Boats Without Sail</u></b> |              |              |              |              |              |
| <3 metres                        | 65           | 67           | 70           | 73           | 76           |
| 3-5 metres                       | 2,984        | 3,064        | 3,170        | 3,289        | 3,423        |
| 5-8 metres                       | 946          | 970          | 1,002        | 1,037        | 1,075        |
| 8-10 metres                      | 35           | 36           | 37           | 39           | 40           |
| 10-12 metres                     | 22           | 23           | 23           | 24           | 25           |
| 12-15 metres                     | 10           | 10           | 11           | 11           | 12           |
| 15-25 metres                     | 10           | 10           | 11           | 11           | 11           |
| >25 metres                       | 1            | 1            | 1            | 1            | 1            |
| <b>Total</b>                     | <b>4,073</b> | <b>4,182</b> | <b>4,325</b> | <b>4,484</b> | <b>4,664</b> |
| <b><u>All Boats</u></b>          |              |              |              |              |              |
| <3 metres                        | 66           | 68           | 71           | 74           | 78           |
| 3-5 metres                       | 3,001        | 3,081        | 3,189        | 3,308        | 3,443        |
| 5-8 metres                       | 963          | 988          | 1,021        | 1,056        | 1,096        |
| 8-10 metres                      | 43           | 44           | 46           | 48           | 50           |
| 10-12 metres                     | 36           | 37           | 38           | 39           | 41           |
| 12-15 metres                     | 17           | 18           | 18           | 19           | 20           |
| 15-25 metres                     | 11           | 11           | 12           | 12           | 12           |



| Locality     | 2011         | 2016         | 2021         | 2026         | 2031         |
|--------------|--------------|--------------|--------------|--------------|--------------|
| >25 metres   | 1            | 1            | 1            | 1            | 1            |
| <b>Total</b> | <b>4,138</b> | <b>4,249</b> | <b>4,395</b> | <b>4,557</b> | <b>4,741</b> |

Note: Some totals may not add due to rounding.

Source: Economic Associates estimates

### 8.3.3 Projected Demand for Marina Berths

In translating total projected boat registrations to marina berth demand, the initial proportions of boats requiring wet and dry berths are outlined in Table 8.8. These ratios are consistent with those outlined in Table 7.10 for the Cassowary Coast Region, as it has been assumed that perceptions regarding dry storage in the region will not converge to SEQ averages by 2031.

**Table 8.8 - Proportion of Boats by Storage Type (2011-2031)**

| Boat Type/Length                 | Wet Berths | Dry Berths |
|----------------------------------|------------|------------|
| <b><u>Boats With Sail</u></b>    |            |            |
| <3 metres                        | 0.0%       | 5.0%       |
| 3-5 metres                       | 10.0%      | 2.5%       |
| 5-8 metres                       | 50.0%      | 1.0%       |
| 8-10 metres                      | 75.0%      | 0.0%       |
| 10-12 metres                     | 100.0%     | 0.0%       |
| 12-15 metres                     | 100.0%     | 0.0%       |
| 15-25 metres                     | 100.0%     | 0.0%       |
| >25 metres                       | 100.0%     | 0.0%       |
| <b><u>Boats Without Sail</u></b> |            |            |
| <3 metres                        | 0.0%       | 0.0%       |
| 3-5 metres                       | 0.0%       | 1.0%       |
| 5-8 metres                       | 20.0%      | 2.5%       |
| 8-10 metres                      | 70.0%      | 2.5%       |
| 10-12 metres                     | 100.0%     | 0.0%       |
| 12-15 metres                     | 100.0%     | 0.0%       |
| 15-25 metres                     | 100.0%     | 0.0%       |
| >25 metres                       | 100.0%     | 0.0%       |

Source: Economic Associates estimates

The projected demand for wet berths in the total catchment is projected to increase from 295 berths in 2011 to 319 berths (Base Case Scenario) to 588 berths (High Growth Scenario) in 2031, or by 24 to 93 berths. On the other hand, demand for dry berths is projected to increase from 55 berths in 2011 to 59 berths (Base Case Scenario) to 65 berths (High Growth Scenario) in 2031, or by 4 to 10 berths.

The majority of demand increase is driven by growth in boats without sail registrations.

**Table 8.9 - Projected Demand for Wet and Dry Berths by Length – Medium Growth Scenario, Total Catchment (2011-2031)**

|                           | Wet Berths |            |            |            |            | Dry Berths |           |           |           |           |
|---------------------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|
|                           | 2011       | 2016       | 2021       | 2026       | 2031       | 2011       | 2016      | 2021      | 2026      | 2031      |
| <b>Boats With Sail</b>    |            |            |            |            |            |            |           |           |           |           |
| <3m                       | 0          | 0          | 0          | 0          | 0          | 0          | 0         | 0         | 0         | 0         |
| 3-5m                      | 2          | 2          | 2          | 2          | 2          | 0          | 0         | 0         | 0         | 1         |
| 5-8m                      | 9          | 9          | 9          | 10         | 10         | 0          | 0         | 0         | 0         | 0         |
| 8-10m                     | 6          | 6          | 6          | 7          | 7          | 0          | 0         | 0         | 0         | 0         |
| 10-12m                    | 14         | 14         | 15         | 15         | 16         | 0          | 0         | 0         | 0         | 0         |
| 12-15m                    | 7          | 7          | 7          | 8          | 8          | 0          | 0         | 0         | 0         | 0         |
| 15-25m                    | 1          | 1          | 1          | 1          | 1          | 0          | 0         | 0         | 0         | 0         |
| 25m+                      | 0          | 0          | 0          | 0          | 0          | 0          | 0         | 0         | 0         | 0         |
| <b>Total</b>              | <b>38</b>  | <b>39</b>  | <b>41</b>  | <b>43</b>  | <b>45</b>  | <b>1</b>   | <b>1</b>  | <b>1</b>  | <b>1</b>  | <b>1</b>  |
| <b>Boats Without Sail</b> |            |            |            |            |            |            |           |           |           |           |
| <3m                       | 0          | 0          | 0          | 0          | 0          | 0          | 0         | 0         | 0         | 0         |
| 3-5m                      | 0          | 0          | 0          | 0          | 0          | 30         | 31        | 32        | 33        | 34        |
| 5-8m                      | 189        | 194        | 200        | 207        | 215        | 24         | 24        | 25        | 26        | 27        |
| 8-10m                     | 25         | 25         | 26         | 27         | 28         | 1          | 1         | 1         | 1         | 1         |
| 10-12m                    | 22         | 23         | 23         | 24         | 25         | 0          | 0         | 0         | 0         | 0         |
| 12-15m                    | 10         | 10         | 11         | 11         | 12         | 0          | 0         | 0         | 0         | 0         |
| 15-25m                    | 10         | 10         | 11         | 11         | 11         | 0          | 0         | 0         | 0         | 0         |
| 25m+                      | 1          | 1          | 1          | 1          | 1          | 0          | 0         | 0         | 0         | 0         |
| <b>Total</b>              | <b>257</b> | <b>263</b> | <b>272</b> | <b>282</b> | <b>292</b> | <b>54</b>  | <b>56</b> | <b>58</b> | <b>60</b> | <b>62</b> |
| <b>All Boats</b>          |            |            |            |            |            |            |           |           |           |           |
| <3m                       | 0          | 0          | 0          | 0          | 0          | 0          | 0         | 0         | 0         | 0         |
| 3-5m                      | 2          | 2          | 2          | 2          | 2          | 30         | 31        | 32        | 33        | 35        |
| 5-8m                      | 198        | 203        | 210        | 217        | 226        | 24         | 24        | 25        | 26        | 27        |
| 8-10m                     | 31         | 31         | 33         | 34         | 35         | 1          | 1         | 1         | 1         | 1         |

|              | Wet Berths |            |            |            |            | Dry Berths |           |           |           |           |
|--------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|
|              | 2011       | 2016       | 2021       | 2026       | 2031       | 2011       | 2016      | 2021      | 2026      | 2031      |
| 10-12m       | 36         | 37         | 38         | 39         | 41         | 0          | 0         | 0         | 0         | 0         |
| 12-15m       | 17         | 18         | 18         | 19         | 20         | 0          | 0         | 0         | 0         | 0         |
| 15-25m       | 11         | 11         | 12         | 12         | 12         | 0          | 0         | 0         | 0         | 0         |
| 25m+         | 1          | 1          | 1          | 1          | 1          | 0          | 0         | 0         | 0         | 0         |
| <b>Total</b> | <b>295</b> | <b>303</b> | <b>313</b> | <b>324</b> | <b>337</b> | <b>55</b>  | <b>56</b> | <b>58</b> | <b>61</b> | <b>63</b> |

Note: Some totals may not add due to rounding.

Source: Economic Associates estimates

Of the seven defined catchments, the Ingham and Cardwell Catchments are projected to record the largest increases in demand for wet and dry berths.

**Table 8.10 - Projected Demand for Marina Berths by Catchment – Medium Scenario (2011-2031)**

| Locality                         | Wet Berths |            |            |            |            | Dry Berths |           |           |           |           |
|----------------------------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|
|                                  | 2011       | 2016       | 2021       | 2026       | 2031       | 2011       | 2016      | 2021      | 2026      | 2031      |
| <b><u>Sail Boats</u></b>         |            |            |            |            |            |            |           |           |           |           |
| Ingham Catchment                 | 10         | 10         | 11         | 12         | 13         | 0          | 0         | 0         | 0         | 0         |
| Cardwell Catchment               | 14         | 15         | 15         | 15         | 15         | 0          | 0         | 0         | 0         | 0         |
| Tully Catchment                  | 2          | 2          | 2          | 2          | 2          | 0          | 0         | 0         | 0         | 0         |
| Mission Beach Catchment          | 5          | 5          | 5          | 6          | 6          | 0          | 0         | 0         | 0         | 0         |
| Kurramine Beach Catchment        | 1          | 1          | 1          | 1          | 1          | 0          | 0         | 0         | 0         | 0         |
| Mourilyan Catchment              | 2          | 2          | 2          | 2          | 2          | 0          | 0         | 0         | 0         | 0         |
| Innisfail Catchment              | 4          | 5          | 5          | 5          | 6          | 0          | 0         | 0         | 0         | 0         |
| <b>Total</b>                     | <b>38</b>  | <b>39</b>  | <b>41</b>  | <b>43</b>  | <b>45</b>  | <b>1</b>   | <b>1</b>  | <b>1</b>  | <b>1</b>  | <b>1</b>  |
| <b><u>Boats Without Sail</u></b> |            |            |            |            |            |            |           |           |           |           |
| Ingham Catchment                 | 112        | 114        | 117        | 120        | 125        | 27         | 28        | 28        | 29        | 30        |
| Cardwell Catchment               | 55         | 57         | 58         | 60         | 61         | 7          | 7         | 8         | 8         | 8         |
| Tully Catchment                  | 16         | 16         | 17         | 18         | 19         | 3          | 3         | 3         | 3         | 4         |
| Mission Beach Catchment          | 31         | 32         | 33         | 34         | 35         | 6          | 6         | 7         | 7         | 7         |
| Kurramine Beach Catchment        | 16         | 16         | 17         | 18         | 19         | 4          | 4         | 5         | 5         | 5         |
| Mourilyan Catchment              | 5          | 5          | 5          | 6          | 7          | 1          | 1         | 1         | 1         | 1         |
| Innisfail Catchment              | 23         | 24         | 24         | 25         | 26         | 6          | 6         | 6         | 7         | 7         |
| <b>Total</b>                     | <b>257</b> | <b>263</b> | <b>272</b> | <b>282</b> | <b>292</b> | <b>54</b>  | <b>56</b> | <b>58</b> | <b>60</b> | <b>62</b> |

| Locality                  | Wet Berths |            |            |            |            | Dry Berths |           |           |           |           |
|---------------------------|------------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|
|                           | 2011       | 2016       | 2021       | 2026       | 2031       | 2011       | 2016      | 2021      | 2026      | 2031      |
| <b>All Boats</b>          |            |            |            |            |            |            |           |           |           |           |
| Ingham Catchment          | 122        | 124        | 128        | 132        | 137        | 27         | 28        | 28        | 29        | 31        |
| Cardwell Catchment        | 69         | 71         | 73         | 75         | 76         | 7          | 8         | 8         | 8         | 8         |
| Tully Catchment           | 18         | 18         | 19         | 20         | 21         | 3          | 3         | 3         | 3         | 4         |
| Mission Beach Catchment   | 36         | 37         | 38         | 40         | 41         | 6          | 6         | 7         | 7         | 7         |
| Kurramine Beach Catchment | 17         | 17         | 18         | 19         | 21         | 4          | 4         | 5         | 5         | 5         |
| Mourilyan Catchment       | 6          | 6          | 7          | 8          | 9          | 1          | 1         | 1         | 1         | 1         |
| Innisfail Catchment       | 28         | 29         | 30         | 31         | 32         | 6          | 6         | 7         | 7         | 7         |
| <b>Total</b>              | <b>295</b> | <b>303</b> | <b>313</b> | <b>324</b> | <b>337</b> | <b>55</b>  | <b>56</b> | <b>58</b> | <b>61</b> | <b>63</b> |

Note: Some totals may not add due to rounding.

Source: Economic Associates estimates

## 9. Future Demand for Boating Facilities within the Cassowary Coast Region

### 9.1 Recreational Boating Needs

Section 8 estimated the future demand generated by residents within the catchments of Ingham, Cardwell, Tully, Mission Beach, Kurramine Beach, Mourilyan and Innisfail. Consultation identified two potential areas for future marina berth facilities within the Cassowary Coast Region:

- ▶ Mission Beach; and
- ▶ Port Hinchinbrook.

Stakeholders also identified some local demand for additional pile moorings in the Johnstone River at Innisfail, however this was regarded of secondary priority to coastal hotspots.

The analysis below assesses demand generation assuming facilities are provided at the three locations nominated above. The ultimate location of berthing will be determined by how future demand is met. This analysis does not seek to replicate what facilities have been traditionally provided within the Cassowary Coast Region.

Table 9.1 provides a breakdown of the proportions of demand likely to be met through the provision of future marina berth facilities at the Mission Beach, Port Hinchinbrook and Innisfail/Mourilyan. These proportions (or market shares) have been based on professional judgement and a series of assumptions, including:

- ▶ Recreational boat owners would typically be more attracted to berthing their vessels closer to, rather than further from their place of residence;
- ▶ A proportion of vessels would continue to be berthed outside the region despite the above, recognising the significant attraction of regional scale facilities in either Cairns or Townsville;
- ▶ The relative attractiveness of recreational boating opportunities around Mission Beach and Port Hinchinbrook, as opposed to Innisfail/Mourilyan;
- ▶ Historical connections between certain communities prior to local government amalgamations (e.g. relationship of Tully to Mission Beach); and
- ▶ Other outcomes of the consultation program.

**Table 9.1 Potential Market Shares of Potential Areas**

| Potential Areas for Future Marina Facilities | Proportion of Future Demand |           |                 |               |       |          |        |
|--|-----------------------------|-----------|-----------------|---------------|-------|----------|--------|
|  | Innisfail                   | Mourilyan | Kurramine Beach | Mission Beach | Tully | Cardwell | Ingham |
| Mission Beach                                | 20%                         | 20%       | 60%             | 60%           | 50%   | 10%      | 0%     |
| Port Hinchinbrook                            | 0%                          | 0%        | 10%             | 30%           | 40%   | 80%      | 40%    |
| Innisfail/Mourilyan                          | 60%                         | 60%       | 20%             | 0%            | 0%    | 0%       | 0%     |

Based on these market shares, the local demand for wet and dry berths in the Cassowary Coast is summarised for the three growth scenarios in Table 9.2 between 2011 and 2031. The make-up of the individual numbers is shown in the Appendix. Notably, the High Growth Scenario, which assumes a level of supply led demand such that the composition of the recreational boat fleet across the sub-catchments converges to that currently experienced in the Cardwell catchment, is significantly higher than the Medium Growth Scenario.

Despite the Medium Growth Scenario assuming that the incidence of boat ownership increases consistent with historical growth, this assumption tends to have little impact on the demand for marina berths. It is likely then that the introduction of additional marina infrastructure within the catchments would facilitate a change in the fleet composition. Hence, it is likely that a more realistic demand scenario would be somewhere between the Medium Growth Scenario and High Growth Scenario.

**Table 9.1 - Projected Demand for Recreational Boating Facilities – Local Demand (2011-2031)**

|                              | Wet Berths |      |      |      |      | Dry Berths |      |      |      |      |
|------------------------------|------------|------|------|------|------|------------|------|------|------|------|
|                              | 2011       | 2016 | 2021 | 2026 | 2031 | 2011       | 2016 | 2021 | 2026 | 2031 |
| <b>Mission Beach</b>         |            |      |      |      |      |            |      |      |      |      |
| Base Case Scenario           | 54         | 56   | 57   | 59   | 60   | 10         | 10   | 10   | 11   | 11   |
| Medium Growth Scenario       | 54         | 56   | 58   | 61   | 63   | 10         | 10   | 11   | 11   | 12   |
| High Growth Scenario         | 54         | 66   | 78   | 92   | 108  | 10         | 10   | 11   | 11   | 12   |
| <b>Port Hinchinbrook</b>     |            |      |      |      |      |            |      |      |      |      |
| Base Case Scenario           | 123        | 126  | 129  | 131  | 133  | 20         | 21   | 21   | 21   | 22   |
| Medium Growth Scenario       | 123        | 127  | 130  | 134  | 139  | 20         | 21   | 21   | 22   | 23   |
| High Growth Scenario         | 123        | 142  | 161  | 184  | 211  | 20         | 21   | 22   | 23   | 24   |
| <b>Innisfail / Mourilyan</b> |            |      |      |      |      |            |      |      |      |      |
| Base Case Scenario           | 24         | 24   | 25   | 26   | 26   | 5          | 5    | 5    | 6    | 6    |
| Medium Growth Scenario       | 24         | 24   | 26   | 27   | 29   | 5          | 5    | 5    | 6    | 6    |
| High Growth Scenario         | 24         | 31   | 39   | 49   | 60   | 5          | 5    | 6    | 6    | 6    |

Source: Economic Associates estimates

Based on these market shares, there is local demand for the following by 2031:

- ▶ 60-108 wet berths and 11-12 dry berths at Mission Beach;
- ▶ 133-211 wet berths and 22-24 dry berths at Port Hinchinbrook; and
- ▶ 26-60 wet berths and six dry berths at Innisfail / Mourilyan.

In addition to local demand, it is suggested that an additional 8.4% allowance is made to cater for visitor recreational vessels to the Cassowary Coast Region at Mission Beach and Port Hinchinbrook, that is:



- ▶ Allowance of five to nine wet berths at Mission Beach; and
- ▶ Allowance of 11-18 wet berths at Port Hinchinbrook.

## 9.2 Commercial Boating Needs

Between 2008 and 2010, the relationship between commercial boat registrations and population was as follows:

- ▶ Cairns / Cooktown region<sup>6</sup>: 4.4-4.7 commercial boat registrations / 1,000 persons (average of 4.5 commercial boat registrations / 1,000 persons); and
- ▶ Townsville / Hinchinbrook region: 2.1-2.3 commercial boat registrations / 1,000 persons (average of 2.2 commercial boat registrations / 1,000 persons).

If it is assumed that the average rate of commercial boat registrations continues throughout the projection period to 2031, the number of commercial boats registered within the Cassowary Coast Region is projected to increase from 169 boats to 187 boats.

**Table 9.3 - Projected Commercial Boat Registrations, Cassowary Coast Region (2011-2031)**

|   | 2011   | 2016   | 2021   | 2026   | 2031   |
|---|--------|--------|--------|--------|--------|
| <b>Projected Population</b>               |        |        |        |        |        |
| Cardwell / Johnstone                      | 31,371 | 32,308 | 33,198 | 34,046 | 34,841 |
| Hinchinbrook                              | 12,409 | 12,608 | 12,815 | 13,028 | 13,231 |
| Cassowary Coast Region                    | 43,780 | 44,916 | 46,013 | 47,074 | 48,072 |
| <b>Projected Commercial Registrations</b> |        |        |        |        |        |
| Cardwell / Johnstone                      | 142    | 146    | 150    | 154    | 158    |
| Hinchinbrook                              | 27     | 28     | 28     | 29     | 29     |
| Cassowary Coast Region                    | 169    | 174    | 179    | 183    | 187    |

Source: Economic Associates estimates

Ultimately, what will be moored in the Cassowary Coast Region will depend on the provision of suitable mooring facilities for these vessels.

<sup>6</sup> Refers to commercial boat registration regions (Section 7.6.2).

## 10. Summary and Conclusions

### 10.1 Population and Facility Supply Assessments

Major findings of the population snapshot were:

- ▶ About 31,263 people currently live in the Cassowary Coast Region. Future projections suggest the Region will reach 34,841 by the year 2031 (i.e. an increase of 3,500) at a growth rate slower than the Queensland average.
- ▶ The Region has an ageing population profile with almost 45% of residents aged 45 years or more. The proportion of older persons (of or nearing retirement age) is set to increase in future which will impact on local leisure participation and facility needs, including boating and other water-based recreation.
- ▶ Some pockets of social disadvantage are evident in the Region, which may have implications for price sensitivity when developing new user-pay facilities.

Assessments of existing maritime facility supply show that:

- ▶ There are three existing MDA's in the Cassowary Coast Region at Johnstone River (Coconuts), Innisfail Port and Port Hinchinbrook, providing a total supply of 50 wet berths. There are no dry storage facilities.
- ▶ Prior to 2011, there were an additional 202 wet berths at Port Hinchinbrook, however these were destroyed by Cyclone Yasi and have not been reinstated.
- ▶ Other existing facilities within the declared MDA's are well utilised and have some, albeit limited, capacity for future expansion.
- ▶ A small number of other low key mooring facilities are located elsewhere in the Region, primarily at Port of Mourilyan.
- ▶ There are two proposals for new maritime facilities in the Region at Innisfail (Sea Haven Marina Project) and Mission Beach. However Council officers advise that these are longstanding proposals and it has not had any recent communication with proponents.
- ▶ At present, local demand for boat storage is:
  - Partly absorbed by marina facilities in Cairns and Townsville, however, these numbers are reportedly low.
  - Offset by the high incidence of trailerable vessels being stored at residents' homes.

### 10.2 Boat Ownership and Activity

#### 10.2.1 Recreational Boating

Major findings of recreational boating assessments were:

- ▶ Cassowary Coast Region is popular with recreational boat users and has one of the highest levels of boat without sails registrations per capita in Queensland. On the other hand, the boat with sail registrations records the lowest level per capita in the state.

- ▶ The incidence of boat registrations per 1,000 persons was highest in the Cardwell Catchment, averaging 21.53 registrations / 1,000 persons over the past five years, significantly above the Total Catchment average (2.36 registrations / 1,000 persons).
- ▶ The higher incidence of boat ownership per 1,000 persons in the Cardwell Catchment can be attributed to the development of the Port Hinchinbrook master planned community.
- ▶ In 2011, there were 4,138 vessels registered in the Total Catchment of which 2,984 (72%) were boats without sail in the 3-5 m range and 946 (23%) were boats without sail in the 5-8 m range. This is the range of vessels that can be trailered and therefore do not have to be stored in a marina (wet or dry berth).
- ▶ As noted above, there is a limited supply of vessel storage in the Total Catchment and with only 50 wet berths. However there was an additional 202 berths available at Port Hinchinbrook prior to February 2011.
- ▶ The Global Financial Crisis (GFC) has had a bearing on registration numbers for new boats since 2009 and it is noted that the number of boats with sail registrations has decreased by 5 from 70 to 65. Registrations of boats with sail have increased from 3,868 to 4,073 since 2009 which is an increase of 2.6% per year. Prior to the GFC, the number of boats without sail increased between 2007 and 2009 by 439 boats or 6.4% per year.

#### **10.2.2 Commercial Boating**

Assessments of commercial boating activity found that:

- ▶ Stakeholders advised that commercial vessels primarily use facilities at Cairns and Townsville, however, some local operators also work out of Innisfail and Mission Beach.
- ▶ Stakeholders commented that commercial boating activity, particularly in Mission Beach, has declined in the last five years due to a lack of safe mooring facilities.
- ▶ Based on anecdotal evidence, tour boat patronage to the Great Barrier Reef from Mission Beach has declined significantly since 2001/02 (in the order of 60,000 visitors).
- ▶ A number of reef trips were previously operated from Mission Beach, as it is considerably closer to the reef than both Cairns and Port Douglas (Probe, 2008).
- ▶ Usage of the water taxi from Mission Beach to Dunk Island has declined, with a number of visitors flying direct to Dunk Island from Cairns Airport (Probe, 2008).
- ▶ Progressively, vessels have tried to operate out of Mission Beach, but it has proven too difficult so they have left, leaving only two commercial operators in the Mission Beach area (Probe, 2008).
- ▶ Probe (2008) also highlighted that game fishers would be interested in operating from Mission Beach if appropriate mooring facilities were provided.

Therefore, it is concluded that if suitable facilities for commercial operators were to be constructed in the Cassowary Coast Region, they would be utilised by locally registered vessels and commercial operators in other regions (e.g. Cairns) may be more inclined to relocate their operations to the Cassowary Coast Region.

### 10.3 Stakeholder Consultation

Key issues raised during the consultation program were:

- ▶ Strong community support exists for the concept of a future maritime facility at Mission Beach.
- ▶ Reconstruction of marina facilities at Port Hinchinbrook is a short term priority (supported by dredging of the access channel to improve utilisation).
- ▶ There is a general consensus that marinas would be utilised and would provide a useful stimulus to the local economy.
- ▶ The stakeholders in Innisfail suggested that pile moorings would be sufficient to meet local needs.
- ▶ In other parts of the Region, there was some evidence of a “build it and they will come” theory. This was particularly evident in Mission Beach with strong support for a local marina facility being expressed by a range of stakeholder groups.
- ▶ Stakeholders consulted expressed some support for the development of marina facilities in Port Hinchinbrook and Mission Beach – respondents noted that the risk of facility duplication would be minimal given the different boating markets served.
- ▶ Further to the above point:
  - Mission Beach respondents stated that a marina would cater for both local commercial and recreational needs, together with other community uses e.g. coast guard; and
  - Port Hinchinbrook would cater for primarily for a higher level recreational market (from a wider catchment including larger cruising vessels).
- ▶ No support was expressed for additional facilities at the Port of Mourilyan. However, respondents support the ongoing provision for recreational vessels as part of future strategic planning of port lands. Furthermore, it was felt that Mourilyan was in the “shadow” of major marinas in Cairns, and therefore, would result in facility duplication.
- ▶ The potential for a dry berthing market in the Cassowary Coast Region appears to be limited, based on the low level of support expressed by key stakeholders.

### 10.4 Latent Demand and Natural leakage

Latent demand refers to the demand that exists but is not satisfied because there are insufficient facilities. Natural leakage refers to those boat owners that will store their vessels outside of the local catchment regardless of the facilities in that catchment.

#### 10.4.1 Latent Demand

The consultation process uncovered a high latent demand for maritime facilities in the certain areas in the Cassowary Coast region particularly Port Hinchinbrook and Mission Beach.

There also appears to be a latent commercial market which could be regenerated if suitable facilities were provided.

#### 10.4.2 Natural Leakage

It is concluded in Section 9.1 that:

- Approximately 80% of vessels that would potentially be stored in a wet / dry berth from the Innisfail and Mourilyan catchments, would actually use a local maritime facility indicating that there would be a natural leakage of 20%.
- Approximately 90% of vessels that would potentially be stored in a wet / dry berth from the Kurrimine Beach, Mission Beach, Tully and Cardwell catchments, would actually use a local maritime facility indicating that there would be a natural leakage of 10%.
- Approximately 40% of vessels that would potentially be stored in a wet / dry berth from the Ingham catchment, would actually use a local maritime facility, indicating that there would be a natural leakage of 60%.

## 10.5 Recommendations

In conclusion:

- It is necessary to identify additional maritime facilities to address existing and projected shortfalls in the Cassowary Coast Region up to 2031.
- The development of two large scale marina facilities at Port Hinchinbrook and Mission Beach are likely to exceed the population's long term needs.
- Reinstatement of Port Hinchinbrook marina is appropriate to address existing recreation/ cruising demands within and outside the catchment.
- The boating community may require a more modest/ smaller scale facility at Mission Beach to address local demand for commercial vessels, and to a lesser extent recreational use.
- There is an existing MDA at Innisfail and it is recommended that further work be carried out to consider expanding this area to allow for the potential of adding additional pile moorings in the future.

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Appendix A

## Key Stakeholders for Targeted Consultation



**Table A.1 – List of Key Stakeholders (as at March 2012)**

| Category   | Stakeholder  |
|--|--|
| <b>Local Government</b>                          | Cassowary Coast Regional Council                                     |
| <b>State Government</b>                          | Department of State Development, Infrastructure and Planning (DSDIP) |
|  | Department of Transport & Main Roads (TMR) - Regional Representation |
|  | TMR – Marine Safety Queensland                                       |
|  | Cairns Regional Harbourmaster  |
|  | Department of Environment & Resource Management (DERM)               |
| <b>Elected Representatives</b>                   | Federal Members:   |
|  | ▶ Bob Katter, Member for Kennedy                                     |
|  | ▶ Peter Lindsay, Member for Herbert                                  |
|  | State Member:  |
|  | ▶ Andrew Cripps, Member for Hinchinbrook                             |
| <b>Community Fishing &amp; Recreation Groups</b> | Tully & District Sport Fishing Club                                  |
|  | Innisfail Game Fishing Club  |
|  | Hinchinbrook Sport Fishing Club                                      |
|  | Mission Beach Sailing Club   |
|  | Tableland Fish Stocking Society Inc.                                 |
|  | Johnstone Shire Fish Stocking Association                            |
|  | Cardwell Sport Fishing Club  |
|  | Cardwell Shire Fish Stocking Society                                 |
|  | Mission Beach Game Fishing Club                                      |
| <b>Commercial Operators</b>                      | Calypso Dive (Mission Beach)   |
|  | Mission Beach - Dunk Island Water Taxi                               |
|  | Dunk Island Sports Fishing/Commercial Marine Operators Group         |
|  | Chair of Commercial Boat Operators Group                             |
| <b>Special Interest and Advocacy Groups</b>      | Mission Beach Visual Amenity Advisory Group                          |
|  | Mission Beach Community Association                                  |
|  | Mission Beach Safe Boat Harbour Committee (Castaways)                |
|  | Mission Beach Boat Harbour Pty Ltd                                   |
|  | Mission Beach Commercial Boat Operators Group                        |
|  | Cardwell Chamber of Commerce   |
|  | Cardwell Coast Guard   |
|  | Commercial Fishers/ QSIA (Qld Seafood Industry Association)          |



| Category   | Stakeholder  |
|--|--|
|  | Regional Tourism Organisation - Tourism Tropical North Queensland  |
|  | Tourism Matters  |
|  | Cardwell Tourist Information Centre                                |
| <b>Marina Operators/ Facility Managers</b><br><b>(Regional Supply)</b> | Cassowary Coast Regional Council (Johnstone River Marine Precinct) |
|  | Subloo Transport (Innisfail Marina Berths)                         |
|  | Ports North (Mourilyan Harbour)                                    |
|  | Williams Corporation (Port Hinchinbrook Marina)                    |
|  | Bluewater Marina, Trinity Park                                     |
|  | Cairns Cruising Yacht Squadron, Cairns                             |
|  | Cairns Marlin Marina, Cairns                                       |
|  | Half Moon Bay Marina, Yorkeys Knob                                 |
|  | Breakwater Marina, Townsville                                      |
|  | Townsville Yacht Club Marina                                       |



## Appendix B

# Historical Boat Registrations by Length



Table B.1: Historical Boat Registrations by Length – Ingham Catchment

|                           | 2007  | 2008  | 2009  | 2010  | 2011  | Growth,<br>2007-11 |
|---------------------------|-------|-------|-------|-------|-------|--------------------|
| <b>Boats With Sail</b>    |       |       |       |       |       |                    |
| <3m                       | 0     | 0     | 0     | 0     | 0     | n.a.               |
| 3-5m                      | 2     | 1     | 2     | 1     | 4     | 100.0%             |
| 5-8m                      | 4     | 4     | 5     | 8     | 4     | 0.0%               |
| 8-10m                     | 1     | 3     | 3     | 4     | 5     | 400.0%             |
| 10-12m                    | 5     | 6     | 7     | 6     | 3     | -40.0%             |
| 12-15m                    | 0     | 0     | 1     | 1     | 1     | n.a.               |
| 15-25m                    | 0     | 0     | 0     | 0     | 0     | n.a.               |
| 25m+                      | 0     | 0     | 0     | 0     | 0     | n.a.               |
| Total                     | 12    | 14    | 18    | 20    | 17    | 41.7%              |
| <b>Boats Without Sail</b> |       |       |       |       |       |                    |
| <3m                       | 37    | 40    | 37    | 32    | 32    | -13.5%             |
| 3-5m                      | 1,346 | 1,383 | 1,569 | 1,564 | 1,592 | 18.3%              |
| 5-8m                      | 280   | 311   | 371   | 397   | 427   | 52.5%              |
| 8-10m                     | 12    | 11    | 18    | 17    | 19    | 58.3%              |
| 10-12m                    | 6     | 7     | 7     | 7     | 6     | 0.0%               |
| 12-15m                    | 3     | 4     | 4     | 3     | 4     | 33.3%              |
| 15-25m                    | 2     | 0     | 2     | 2     | 3     | 50.0%              |
| 25m+                      | 0     | 0     | 2     | 1     | 0     | n.a.               |
| Total                     | 1,686 | 1,756 | 2,010 | 2,023 | 2,083 | 23.5%              |
| <b>All Boats</b>          |       |       |       |       |       |                    |
| <3m                       | 37    | 40    | 37    | 32    | 32    | -13.5%             |
| 3-5m                      | 1,348 | 1,384 | 1,571 | 1,565 | 1,596 | 18.4%              |
| 5-8m                      | 284   | 315   | 376   | 405   | 431   | 51.8%              |
| 8-10m                     | 13    | 14    | 21    | 21    | 24    | 84.6%              |
| 10-12m                    | 11    | 13    | 14    | 13    | 9     | -18.2%             |
| 12-15m                    | 3     | 4     | 5     | 4     | 5     | 66.7%              |
| 15-25m                    | 2     | 0     | 2     | 2     | 3     | 50.0%              |
| 25m+                      | 0     | 0     | 2     | 1     | 0     | n.a.               |
| Total                     | 1,698 | 1,770 | 2,028 | 2,043 | 2,100 | 23.7%              |

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Table B.2: Historical Boat Registrations by Length – Cardwell Catchment

|                           | 2007 | 2008 | 2009 | 2010 | 2011 | Growth,<br>2007-11 |
|---------------------------|------|------|------|------|------|--------------------|
| <b>Boats With Sail</b>    |      |      |      |      |      |                    |
| <3m                       | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 3-5m                      | 0    | 0    | 0    | 1    | 1    | n.a.               |
| 5-8m                      | 4    | 4    | 2    | 3    | 3    | -25.0%             |
| 8-10m                     | 4    | 5    | 3    | 2    | 1    | -75.0%             |
| 10-12m                    | 12   | 10   | 12   | 10   | 7    | -41.7%             |
| 12-15m                    | 2    | 5    | 5    | 5    | 4    | 100.0%             |
| 15-25m                    | 2    | 2    | 1    | 0    | 1    | -50.0%             |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 24   | 26   | 23   | 21   | 17   | -29.2%             |
| <b>Boats Without Sail</b> |      |      |      |      |      |                    |
| <3m                       | 4    | 1    | 1    | 2    | 3    | -25.0%             |
| 3-5m                      | 309  | 318  | 339  | 343  | 353  | 14.2%              |
| 5-8m                      | 117  | 124  | 125  | 133  | 141  | 20.5%              |
| 8-10m                     | 15   | 14   | 11   | 8    | 8    | -46.7%             |
| 10-12m                    | 10   | 11   | 10   | 12   | 14   | 40.0%              |
| 12-15m                    | 3    | 5    | 7    | 8    | 3    | 0.0%               |
| 15-25m                    | 2    | 3    | 4    | 4    | 4    | 100.0%             |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 460  | 476  | 497  | 510  | 526  | 14.3%              |
| <b>All Boats</b>          |      |      |      |      |      |                    |
| <3m                       | 4    | 1    | 1    | 2    | 3    | -25.0%             |
| 3-5m                      | 309  | 318  | 339  | 344  | 354  | 14.6%              |
| 5-8m                      | 121  | 128  | 127  | 136  | 144  | 19.0%              |
| 8-10m                     | 19   | 19   | 14   | 10   | 9    | -52.6%             |
| 10-12m                    | 22   | 21   | 22   | 22   | 21   | -4.5%              |
| 12-15m                    | 5    | 10   | 12   | 13   | 7    | 40.0%              |
| 15-25m                    | 4    | 5    | 5    | 4    | 5    | 25.0%              |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 484  | 502  | 520  | 531  | 543  | 12.2%              |

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Table B.3: Historical Boat Registrations by Length - Tully Catchment

|                           | 2007 | 2008 | 2009 | 2010 | 2011 | Growth,<br>2007-11 |
|---------------------------|------|------|------|------|------|--------------------|
| <b>Boats With Sail</b>    |      |      |      |      |      |                    |
| <3m                       | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 3-5m                      | 1    | 1    | 1    | 1    | 1    | 0.0%               |
| 5-8m                      | 1    | 2    | 1    | 0    | 0    | -100.0%            |
| 8-10m                     | 0    | 0    | 1    | 1    | 1    | n.a.               |
| 10-12m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 12-15m                    | 0    | 0    | 0    | 0    | 1    | n.a.               |
| 15-25m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 2    | 3    | 3    | 2    | 3    | 50.0%              |
| <b>Boats Without Sail</b> |      |      |      |      |      |                    |
| <3m                       | 7    | 8    | 7    | 6    | 6    | -14.3%             |
| 3-5m                      | 99   | 117  | 123  | 137  | 138  | 39.4%              |
| 5-8m                      | 37   | 52   | 49   | 53   | 60   | 62.2%              |
| 8-10m                     | 1    | 0    | 0    | 0    | 1    | 0.0%               |
| 10-12m                    | 1    | 0    | 0    | 1    | 1    | 0.0%               |
| 12-15m                    | 1    | 1    | 1    | 1    | 1    | 0.0%               |
| 15-25m                    | 1    | 0    | 0    | 1    | 1    | 0.0%               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 147  | 178  | 180  | 199  | 208  | 41.5%              |
| <b>All Boats</b>          |      |      |      |      |      |                    |
| <3m                       | 7    | 8    | 7    | 6    | 6    | -14.3%             |
| 3-5m                      | 100  | 118  | 124  | 138  | 139  | 39.0%              |
| 5-8m                      | 38   | 54   | 50   | 53   | 60   | 57.9%              |
| 8-10m                     | 1    | 0    | 1    | 1    | 2    | 100.0%             |
| 10-12m                    | 1    | 0    | 0    | 1    | 1    | 0.0%               |
| 12-15m                    | 1    | 1    | 1    | 1    | 2    | 100.0%             |
| 15-25m                    | 1    | 0    | 0    | 1    | 1    | 0.0%               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 149  | 181  | 183  | 201  | 211  | 41.6%              |

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Table B.4: Historical Boat Registrations by Length – Mission Beach Catchment

|                           | 2007 | 2008 | 2009 | 2010 | 2011 | Growth,<br>2007-11 |
|---------------------------|------|------|------|------|------|--------------------|
| <b>Boats With Sail</b>    |      |      |      |      |      |                    |
| <3m                       | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 3-5m                      | 2    | 2    | 3    | 3    | 4    | 100.0%             |
| 5-8m                      | 4    | 4    | 5    | 5    | 5    | 25.0%              |
| 8-10m                     | 0    | 2    | 2    | 0    | 0    | n.a.               |
| 10-12m                    | 1    | 0    | 1    | 2    | 2    | 100.0%             |
| 12-15m                    | 2    | 2    | 2    | 2    | 0    | -100.0%            |
| 15-25m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 9    | 10   | 13   | 12   | 11   | 22.2%              |
| <b>Boats Without Sail</b> |      |      |      |      |      |                    |
| <3m                       | 7    | 8    | 9    | 9    | 8    | 14.3%              |
| 3-5m                      | 266  | 257  | 260  | 262  | 267  | 0.4%               |
| 5-8m                      | 99   | 108  | 104  | 124  | 132  | 33.3%              |
| 8-10m                     | 6    | 6    | 7    | 6    | 5    | -16.7%             |
| 10-12m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 12-15m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 15-25m                    | 1    | 0    | 0    | 0    | 0    | -100.0%            |
| 25m+                      | 0    | 0    | 0    | 0    | 1    | n.a.               |
| Total                     | 379  | 379  | 380  | 401  | 413  | 9.0%               |
| <b>All Boats</b>          |      |      |      |      |      |                    |
| <3m                       | 7    | 8    | 9    | 9    | 8    | 14.3%              |
| 3-5m                      | 268  | 259  | 263  | 265  | 271  | 1.1%               |
| 5-8m                      | 103  | 112  | 109  | 129  | 137  | 33.0%              |
| 8-10m                     | 6    | 8    | 9    | 6    | 5    | -16.7%             |
| 10-12m                    | 1    | 0    | 1    | 2    | 2    | 100.0%             |
| 12-15m                    | 2    | 2    | 2    | 2    | 0    | -100.0%            |
| 15-25m                    | 1    | 0    | 0    | 0    | 0    | -100.0%            |
| 25m+                      | 0    | 0    | 0    | 0    | 1    | n.a.               |
| Total                     | 388  | 389  | 393  | 413  | 424  | 9.3%               |

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Table B.5: Historical Boat Registrations by Length – Kurramine Beach Catchment

|                           | 2007 | 2008 | 2009 | 2010 | 2011 | Growth,<br>2007-11 |
|---------------------------|------|------|------|------|------|--------------------|
| <b>Boats With Sail</b>    |      |      |      |      |      |                    |
| <3m                       | 0    | 0    | 1    | 1    | 1    | n.a.               |
| 3-5m                      | 0    | 0    | 0    | 1    | 2    | n.a.               |
| 5-8m                      | 0    | 2    | 2    | 2    | 3    | n.a.               |
| 8-10m                     | 0    | 2    | 2    | 2    | 1    | n.a.               |
| 10-12m                    | 0    | 2    | 2    | 2    | 2    | n.a.               |
| 12-15m                    | 0    | 2    | 1    | 1    | 0    | n.a.               |
| 15-25m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 0    | 8    | 8    | 9    | 9    | n.a.               |
| <b>Boats Without Sail</b> |      |      |      |      |      |                    |
| <3m                       | 3    | 4    | 6    | 7    | 6    | 100.0%             |
| 3-5m                      | 198  | 204  | 211  | 213  | 225  | 13.6%              |
| 5-8m                      | 61   | 72   | 69   | 74   | 74   | 21.3%              |
| 8-10m                     | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 10-12m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 12-15m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 15-25m                    | 0    | 0    | 0    | 1    | 1    | n.a.               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 262  | 280  | 286  | 295  | 306  | 16.8%              |
| <b>All Boats</b>          |      |      |      |      |      |                    |
| <3m                       | 3    | 4    | 7    | 8    | 7    | 133.3%             |
| 3-5m                      | 198  | 204  | 211  | 214  | 227  | 14.6%              |
| 5-8m                      | 61   | 74   | 71   | 76   | 77   | 26.2%              |
| 8-10m                     | 0    | 2    | 2    | 2    | 1    | n.a.               |
| 10-12m                    | 0    | 2    | 2    | 2    | 2    | n.a.               |
| 12-15m                    | 0    | 2    | 1    | 1    | 0    | n.a.               |
| 15-25m                    | 0    | 0    | 0    | 1    | 1    | n.a.               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 262  | 288  | 294  | 304  | 315  | 20.2%              |

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Table B.6: Historical Boat Registrations by Length – Mourilyan Catchment

|                           | 2007 | 2008 | 2009 | 2010 | 2011 | Growth,<br>2007-11 |
|---------------------------|------|------|------|------|------|--------------------|
| <b>Boats With Sail</b>    |      |      |      |      |      |                    |
| <3m                       | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 3-5m                      | 1    | 1    | 1    | 1    | 1    | 0.0%               |
| 5-8m                      | 1    | 1    | 1    | 1    | 1    | 0.0%               |
| 8-10m                     | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 10-12m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 12-15m                    | 0    | 0    | 0    | 0    | 1    | n.a.               |
| 15-25m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 2    | 2    | 2    | 2    | 3    | 50.0%              |
| <b>Boats Without Sail</b> |      |      |      |      |      |                    |
| <3m                       | 1    | 0    | 0    | 0    | 0    | -100.0%            |
| 3-5m                      | 34   | 37   | 38   | 39   | 48   | 41.2%              |
| 5-8m                      | 8    | 10   | 11   | 10   | 14   | 75.0%              |
| 8-10m                     | 1    | 1    | 1    | 1    | 1    | 0.0%               |
| 10-12m                    | 0    | 0    | 0    | 1    | 0    | n.a.               |
| 12-15m                    | 1    | 1    | 1    | 1    | 1    | 0.0%               |
| 15-25m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 45   | 49   | 51   | 52   | 64   | 42.2%              |
| <b>All Boats</b>          |      |      |      |      |      |                    |
| <3m                       | 1    | 0    | 0    | 0    | 0    | -100.0%            |
| 3-5m                      | 35   | 38   | 39   | 40   | 49   | 40.0%              |
| 5-8m                      | 9    | 11   | 12   | 11   | 15   | 66.7%              |
| 8-10m                     | 1    | 1    | 1    | 1    | 1    | 0.0%               |
| 10-12m                    | 0    | 0    | 0    | 1    | 0    | n.a.               |
| 12-15m                    | 1    | 1    | 1    | 1    | 2    | 100.0%             |
| 15-25m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 47   | 51   | 53   | 54   | 67   | 42.6%              |

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Table B.7: Historical Boat Registrations by Length - Innisfail Catchment

|                           | 2007 | 2008 | 2009 | 2010 | 2011 | Growth,<br>2007-11 |
|---------------------------|------|------|------|------|------|--------------------|
| <b>Boats With Sail</b>    |      |      |      |      |      |                    |
| <3m                       | 0    | 0    | 1    | 1    | 1    | n.a.               |
| 3-5m                      | 0    | 0    | 0    | 1    | 2    | n.a.               |
| 5-8m                      | 3    | 2    | 2    | 2    | 3    | 0.0%               |
| 8-10m                     | 0    | 2    | 2    | 2    | 1    | n.a.               |
| 10-12m                    | 3    | 2    | 2    | 2    | 2    | -33.3%             |
| 12-15m                    | 1    | 2    | 1    | 1    | 0    | -100.0%            |
| 15-25m                    | 0    | 0    | 0    | 0    | 0    | n.a.               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 7    | 8    | 8    | 9    | 9    | 28.6%              |
| <b>Boats Without Sail</b> |      |      |      |      |      |                    |
| <3m                       | 16   | 16   | 15   | 12   | 10   | -37.5%             |
| 3-5m                      | 365  | 361  | 359  | 376  | 361  | -1.1%              |
| 5-8m                      | 65   | 74   | 89   | 93   | 98   | 50.8%              |
| 8-10m                     | 2    | 0    | 0    | 3    | 1    | -50.0%             |
| 10-12m                    | 0    | 0    | 0    | 1    | 1    | n.a.               |
| 12-15m                    | 1    | 0    | 0    | 0    | 1    | 0.0%               |
| 15-25m                    | 1    | 1    | 1    | 1    | 1    | 0.0%               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 450  | 452  | 464  | 486  | 473  | 5.1%               |
| <b>All Boats</b>          |      |      |      |      |      |                    |
| <3m                       | 16   | 16   | 16   | 13   | 11   | -31.3%             |
| 3-5m                      | 365  | 361  | 359  | 377  | 363  | -0.5%              |
| 5-8m                      | 68   | 76   | 91   | 95   | 101  | 48.5%              |
| 8-10m                     | 2    | 2    | 2    | 5    | 2    | 0.0%               |
| 10-12m                    | 3    | 2    | 2    | 3    | 3    | 0.0%               |
| 12-15m                    | 2    | 2    | 1    | 1    | 1    | -50.0%             |
| 15-25m                    | 1    | 1    | 1    | 1    | 1    | 0.0%               |
| 25m+                      | 0    | 0    | 0    | 0    | 0    | n.a.               |
| Total                     | 457  | 460  | 472  | 495  | 482  | 5.5%               |



## Appendix C

# Projected Boat Registrations by Catchment Area and Scenario

Table C.1: Projected Wet Berth Demand, Ingham Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 3    | 2             | 2    | 2    | 2    | 2    |
| 8-10m              | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    | 4             | 3    | 3    | 3    | 2    |
| 10-12m             | 3            | 3    | 3    | 3    | 3    | 3               | 3    | 3    | 4    | 4    | 3             | 4    | 6    | 8    | 10   |
| 12-15m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 2    | 2    | 3    | 4    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 1    | 1    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 10           | 10   | 10   | 11   | 11   | 10              | 10   | 11   | 12   | 13   | 10            | 12   | 13   | 16   | 20   |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 85           | 86   | 88   | 89   | 90   | 85              | 87   | 89   | 92   | 95   | 85            | 93   | 101  | 112  | 125  |
| 8-10m              | 13           | 13   | 14   | 14   | 14   | 13              | 14   | 14   | 14   | 15   | 13            | 19   | 24   | 31   | 38   |
| 10-12m             | 6            | 6    | 6    | 6    | 6    | 6               | 6    | 6    | 7    | 7    | 6             | 17   | 28   | 41   | 56   |
| 12-15m             | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    | 4             | 9    | 14   | 19   | 25   |
| 15-25m             | 3            | 3    | 3    | 3    | 3    | 3               | 3    | 3    | 3    | 3    | 3             | 6    | 9    | 13   | 17   |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 112          | 113  | 115  | 116  | 117  | 112             | 114  | 117  | 120  | 125  | 112           | 143  | 177  | 216  | 262  |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 87           | 88   | 90   | 91   | 92   | 87              | 89   | 91   | 94   | 98   | 87            | 95   | 103  | 114  | 127  |
| 8-10m              | 17           | 17   | 17   | 18   | 18   | 17              | 17   | 18   | 18   | 19   | 17            | 22   | 27   | 33   | 41   |
| 10-12m             | 9            | 9    | 9    | 10   | 10   | 9               | 9    | 10   | 10   | 11   | 9             | 21   | 34   | 49   | 66   |
| 12-15m             | 5            | 5    | 5    | 5    | 5    | 5               | 5    | 5    | 5    | 6    | 5             | 10   | 16   | 22   | 30   |
| 15-25m             | 3            | 3    | 3    | 3    | 3    | 3               | 3    | 3    | 3    | 3    | 3             | 6    | 10   | 13   | 18   |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 122          | 123  | 125  | 127  | 128  | 122             | 124  | 128  | 132  | 137  | 122           | 154  | 190  | 232  | 281  |

Note: Some totals may not add due to rounding.

Table C.2: Projected Dry Berth Demand, Ingham Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 16           | 16   | 16   | 17   | 17   | 16              | 16   | 17   | 17   | 18   | 16            | 16   | 16   | 16   | 16   |
| 5-8m               | 11           | 11   | 11   | 11   | 11   | 11              | 11   | 11   | 11   | 12   | 11            | 12   | 13   | 14   | 16   |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 1    | 1    | 0             | 1    | 1    | 1    | 1    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 27           | 27   | 28   | 28   | 29   | 27              | 28   | 28   | 29   | 30   | 27            | 28   | 29   | 31   | 33   |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 16           | 16   | 16   | 17   | 17   | 16              | 16   | 17   | 17   | 18   | 16            | 16   | 16   | 16   | 16   |
| 5-8m               | 11           | 11   | 11   | 11   | 11   | 11              | 11   | 11   | 12   | 12   | 11            | 12   | 13   | 14   | 16   |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 1    | 1    | 0             | 1    | 1    | 1    | 1    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 27           | 28   | 28   | 28   | 29   | 27              | 28   | 28   | 29   | 31   | 27            | 28   | 29   | 31   | 33   |

Note: Some totals may not add due to rounding.

Table C.3: Projected Wet Berth Demand, Cardwell Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    |               |      |      |      |      |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    |               |      |      |      |      |
| 5-8m               | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 2    |               |      |      |      |      |
| 8-10m              | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    |               |      |      |      |      |
| 10-12m             | 7            | 7    | 8    | 8    | 8    | 7               | 7    | 7    | 7    | 7    |               |      |      |      |      |
| 12-15m             | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    |               |      |      |      |      |
| 15-25m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    |               |      |      |      |      |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    |               |      |      |      |      |
| Total              | 14           | 15   | 15   | 16   | 16   | 14              | 15   | 15   | 15   | 15   |               |      |      |      |      |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    |               |      |      |      |      |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    |               |      |      |      |      |
| 5-8m               | 28           | 29   | 29   | 30   | 30   | 28              | 29   | 30   | 31   | 31   |               |      |      |      |      |
| 8-10m              | 6            | 6    | 6    | 6    | 6    | 6               | 6    | 6    | 6    | 7    |               |      |      |      |      |
| 10-12m             | 14           | 14   | 15   | 15   | 15   | 14              | 14   | 15   | 15   | 15   |               |      |      |      |      |
| 12-15m             | 3            | 3    | 3    | 3    | 3    | 3               | 3    | 3    | 3    | 4    |               |      |      |      |      |
| 15-25m             | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    |               |      |      |      |      |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    |               |      |      |      |      |
| Total              | 55           | 56   | 57   | 59   | 59   | 55              | 57   | 58   | 60   | 61   |               |      |      |      |      |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    |               |      |      |      |      |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    |               |      |      |      |      |
| 5-8m               | 30           | 30   | 31   | 32   | 32   | 30              | 31   | 31   | 32   | 33   |               |      |      |      |      |
| 8-10m              | 6            | 7    | 7    | 7    | 7    | 6               | 7    | 7    | 7    | 7    |               |      |      |      |      |
| 10-12m             | 21           | 22   | 22   | 23   | 23   | 21              | 21   | 22   | 22   | 23   |               |      |      |      |      |
| 12-15m             | 7            | 7    | 7    | 8    | 8    | 7               | 7    | 7    | 8    | 8    |               |      |      |      |      |
| 15-25m             | 5            | 5    | 5    | 5    | 5    | 5               | 5    | 5    | 5    | 5    |               |      |      |      |      |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    |               |      |      |      |      |
| Total              | 69           | 71   | 73   | 74   | 75   | 69              | 71   | 73   | 75   | 76   |               |      |      |      |      |

Note: Some totals may not add due to rounding.



Table C.4: Projected Dry Berth Demand, Cardwell Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    | 4             | 4    | 4    | 4    | 4    |
| 5-8m               | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    | 4             | 4    | 4    | 4    | 4    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 7            | 7    | 8    | 8    | 8    | 7               | 7    | 8    | 8    | 8    | 7             | 7    | 8    | 8    | 8    |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    | 4             | 4    | 4    | 4    | 4    |
| 5-8m               | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    | 4             | 4    | 4    | 4    | 4    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 7            | 7    | 8    | 8    | 8    | 7               | 8    | 8    | 8    | 8    | 7             | 8    | 8    | 8    | 8    |

Note: Some totals may not add due to rounding.

Table C.5: Projected Wet Berth Demand, Tully Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 8-10m              | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 1    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 1    | 1    | 2    |
| 12-15m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 1    | 1    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 2    | 2             | 2    | 2    | 3    | 4    |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 12           | 12   | 12   | 13   | 13   | 12              | 12   | 13   | 14   | 15   | 12            | 12   | 13   | 13   | 15   |
| 8-10m              | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 2    | 3    | 4    |
| 10-12m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 2    | 3    | 5    | 6    |
| 12-15m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 2    | 2    | 3    |
| 15-25m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 2    | 2    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 16           | 16   | 16   | 17   | 17   | 16              | 16   | 17   | 18   | 19   | 16            | 18   | 21   | 25   | 30   |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 12           | 12   | 12   | 13   | 13   | 12              | 12   | 13   | 14   | 15   | 12            | 12   | 13   | 13   | 15   |
| 8-10m              | 1            | 1    | 1    | 1    | 2    | 1               | 1    | 2    | 2    | 2    | 1             | 2    | 3    | 4    | 5    |
| 10-12m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 2    | 4    | 6    | 9    |
| 12-15m             | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 2    | 2             | 2    | 3    | 3    | 4    |
| 15-25m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 2    | 2    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 18           | 18   | 18   | 18   | 19   | 18              | 18   | 19   | 20   | 21   | 18            | 20   | 23   | 28   | 34   |

Note: Some totals may not add due to rounding.

Table C.6: Projected Dry Berth Demand, Tully Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 2    | 2    | 2    | 1             | 1    | 2    | 2    | 2    |
| 5-8m               | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 2    | 2             | 2    | 2    | 2    | 2    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 3            | 3    | 3    | 3    | 3    | 3               | 3    | 3    | 3    | 4    | 3             | 3    | 3    | 3    | 4    |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 1            | 1    | 1    | 1    | 2    | 1               | 1    | 2    | 2    | 2    | 1             | 1    | 2    | 2    | 2    |
| 5-8m               | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 2    | 2             | 2    | 2    | 2    | 2    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 3            | 3    | 3    | 3    | 3    | 3               | 3    | 3    | 3    | 4    | 3             | 3    | 3    | 3    | 4    |

Note: Some totals may not add due to rounding.

Table C.7: Projected Wet Berth Demand, Mission Beach Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 3            | 3    | 3    | 3    | 3    | 3               | 3    | 3    | 3    | 3    | 3             | 2    | 2    | 1    | 1    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 1    | 1    | 1    |
| 10-12m             | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 2    | 2             | 3    | 4    | 5    | 6    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 1    | 1    | 2    | 3    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 1    | 1    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 5            | 5    | 5    | 5    | 6    | 5               | 5    | 5    | 6    | 6    | 5             | 6    | 8    | 10   | 12   |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 26           | 27   | 28   | 29   | 29   | 26              | 27   | 28   | 29   | 30   | 26            | 26   | 26   | 25   | 25   |
| 8-10m              | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    | 4             | 4    | 5    | 6    | 8    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 2    | 5    | 8    | 11   |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 1    | 2    | 4    | 5    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 1    | 2    | 2    | 3    |
| 25m+               | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 0    | 0    |
| Total              | 31           | 32   | 33   | 34   | 34   | 31              | 32   | 33   | 34   | 35   | 31            | 36   | 41   | 46   | 51   |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 29           | 30   | 31   | 31   | 32   | 29              | 30   | 31   | 32   | 33   | 29            | 28   | 27   | 27   | 26   |
| 8-10m              | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    | 4             | 5    | 6    | 7    | 9    |
| 10-12m             | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 2    | 2             | 5    | 9    | 13   | 17   |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 2    | 3    | 5    | 8    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 1    | 2    | 3    | 4    |
| 25m+               | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 0    | 0    |
| Total              | 36           | 37   | 38   | 39   | 40   | 36              | 37   | 38   | 40   | 41   | 36            | 42   | 49   | 56   | 63   |

Note: Some totals may not add due to rounding.

Table C.8: Projected Dry Berth Demand, Mission Beach Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 3            | 3    | 3    | 3    | 3    | 3               | 3    | 3    | 3    | 3    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 3            | 3    | 3    | 4    | 4    | 3               | 3    | 4    | 4    | 4    | 3             | 3    | 3    | 3    | 3    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 3             | 3    | 3    | 3    | 3    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 6            | 6    | 6    | 7    | 7    | 6               | 6    | 7    | 7    | 7    | 6             | 6    | 6    | 6    | 7    |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 3            | 3    | 3    | 3    | 3    | 3               | 3    | 3    | 3    | 3    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 3            | 3    | 4    | 4    | 4    | 3               | 3    | 4    | 4    | 4    | 3             | 3    | 3    | 3    | 3    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 3             | 3    | 3    | 3    | 3    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 6            | 6    | 7    | 7    | 7    | 6               | 6    | 7    | 7    | 7    | 6             | 6    | 6    | 6    | 7    |

Note: Some totals may not add due to rounding.

Table C.9: Projected Wet Berth Demand, Kurramine Beach Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 1    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 1    | 0    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 1    | 1    | 1    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 1    | 2    | 2    | 3    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 1    | 1    | 1    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 3    | 4    | 5    | 6    |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 15           | 15   | 16   | 16   | 17   | 15              | 15   | 16   | 17   | 18   | 15            | 16   | 17   | 18   | 20   |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 1    | 3    | 4    | 6    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 2    | 4    | 6    | 9    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 1    | 2    | 3    | 4    |
| 15-25m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 2    | 2    | 3    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 16           | 16   | 17   | 18   | 18   | 16              | 16   | 17   | 18   | 19   | 16            | 21   | 27   | 34   | 42   |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 1    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 15           | 16   | 16   | 17   | 18   | 15              | 16   | 17   | 18   | 19   | 15            | 16   | 18   | 19   | 21   |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 2    | 3    | 5    | 7    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 3    | 6    | 9    | 12   |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 1    | 2    | 4    | 5    |
| 15-25m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 2    | 2    | 3    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 17           | 17   | 18   | 18   | 19   | 17              | 17   | 18   | 19   | 21   | 17            | 24   | 31   | 38   | 48   |

Note: Some totals may not add due to rounding.

Table C.10: Projected Dry Berth Demand, Kurramine Beach Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 2            | 2    | 2    | 2    | 3    | 2               | 2    | 2    | 3    | 3    | 2             | 2    | 2    | 2    | 3    |
| 5-8m               | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 2    | 2             | 2    | 2    | 2    | 3    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 4            | 4    | 4    | 5    | 5    | 4               | 4    | 5    | 5    | 5    | 4             | 4    | 5    | 5    | 5    |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 2            | 2    | 3    | 3    | 3    | 2               | 2    | 3    | 3    | 3    | 2             | 2    | 2    | 2    | 3    |
| 5-8m               | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 2    | 2             | 2    | 2    | 2    | 3    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 4            | 4    | 5    | 5    | 5    | 4               | 4    | 5    | 5    | 5    | 4             | 4    | 5    | 5    | 5    |

Note: Some totals may not add due to rounding.



Table C.11: Projected Wet Berth Demand, Mourilyan Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 0    | 0    | 0    | 0    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 1    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 1    | 1    | 3    |
| 12-15m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 1    | 1    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 2    | 2             | 2    | 2    | 3    | 5    |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 3            | 3    | 3    | 3    | 3    | 3               | 3    | 3    | 4    | 4    | 3             | 3    | 4    | 4    | 6    |
| 8-10m              | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 1    | 2    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 1    | 1    | 2    |
| 12-15m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 2    | 1             | 1    | 1    | 1    | 1    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 1    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 5            | 5    | 5    | 5    | 5    | 5               | 5    | 5    | 6    | 7    | 5             | 5    | 7    | 8    | 11   |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 3            | 3    | 3    | 4    | 4    | 3               | 3    | 4    | 4    | 5    | 3             | 4    | 4    | 5    | 6    |
| 8-10m              | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 2    | 2    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 1    | 2    | 3    | 5    |
| 12-15m             | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 3    | 2             | 2    | 2    | 2    | 2    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 1    | 1    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 6            | 6    | 6    | 7    | 7    | 6               | 6    | 7    | 8    | 9    | 6             | 7    | 9    | 12   | 16   |

Note: Some totals may not add due to rounding.

Table C.12: Projected Dry Berth Demand, Mourilyan Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 1    | 1    | 1    | 0               | 1    | 1    | 1    | 1    | 0             | 0    | 1    | 1    | 1    |
| 5-8m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 1    | 1    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 1    | 1    |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 1    | 1    |
| 5-8m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 1    | 0             | 0    | 0    | 1    | 1    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 1    | 1    |

Note: Some totals may not add due to rounding.

Table C.13: Projected Wet Berth Demand, Innisfail Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 2    | 2             | 1    | 1    | 1    | 1    |
| 8-10m              | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 1    | 1    | 1    | 1    |
| 10-12m             | 2            | 2    | 2    | 2    | 2    | 2               | 2    | 2    | 2    | 3    | 2             | 3    | 3    | 4    | 6    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 1    | 2    | 2    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 1    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 4            | 5    | 5    | 5    | 5    | 4               | 5    | 5    | 5    | 6    | 4             | 6    | 7    | 8    | 11   |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 20           | 20   | 21   | 21   | 22   | 20              | 20   | 21   | 21   | 22   | 20            | 21   | 23   | 25   | 28   |
| 8-10m              | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 2    | 4    | 6    | 8    |
| 10-12m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 4    | 6    | 9    | 12   |
| 12-15m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 2    | 3    | 4    | 6    |
| 15-25m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 2    | 2    | 3    | 4    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 23           | 24   | 24   | 25   | 26   | 23              | 24   | 24   | 25   | 26   | 23            | 31   | 39   | 48   | 58   |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 21           | 22   | 22   | 23   | 23   | 21              | 22   | 22   | 23   | 24   | 21            | 23   | 25   | 26   | 28   |
| 8-10m              | 1            | 2    | 2    | 2    | 2    | 1               | 2    | 2    | 2    | 2    | 1             | 3    | 5    | 7    | 10   |
| 10-12m             | 3            | 3    | 3    | 3    | 3    | 3               | 3    | 3    | 3    | 4    | 3             | 6    | 10   | 14   | 18   |
| 12-15m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 2    | 4    | 6    | 8    |
| 15-25m             | 1            | 1    | 1    | 1    | 1    | 1               | 1    | 1    | 1    | 1    | 1             | 2    | 3    | 3    | 4    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 28           | 29   | 29   | 30   | 31   | 28              | 29   | 30   | 31   | 32   | 28            | 37   | 46   | 57   | 68   |

Note: Some totals may not add due to rounding.

Table C.14: Projected Dry Berth Demand, Innisfail Catchment

|                    | Low Scenario |      |      |      |      | Medium Scenario |      |      |      |      | High Scenario |      |      |      |      |
|--------------------|--------------|------|------|------|------|-----------------|------|------|------|------|---------------|------|------|------|------|
|                    | 2011         | 2016 | 2021 | 2026 | 2031 | 2011            | 2016 | 2021 | 2026 | 2031 | 2011          | 2016 | 2021 | 2026 | 2031 |
| Boats With Sail    |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 5-8m               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Boats Without Sail |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    | 4             | 4    | 4    | 4    | 4    |
| 5-8m               | 2            | 3    | 3    | 3    | 3    | 2               | 3    | 3    | 3    | 3    | 2             | 3    | 3    | 3    | 3    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 6            | 6    | 6    | 7    | 7    | 6               | 6    | 6    | 7    | 7    | 6             | 6    | 7    | 7    | 7    |
| All Boats          |              |      |      |      |      |                 |      |      |      |      |               |      |      |      |      |
| <3m                | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 3-5m               | 4            | 4    | 4    | 4    | 4    | 4               | 4    | 4    | 4    | 4    | 4             | 4    | 4    | 4    | 4    |
| 5-8m               | 2            | 3    | 3    | 3    | 3    | 2               | 3    | 3    | 3    | 3    | 2             | 3    | 3    | 3    | 3    |
| 8-10m              | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 10-12m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 12-15m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 15-25m             | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| 25m+               | 0            | 0    | 0    | 0    | 0    | 0               | 0    | 0    | 0    | 0    | 0             | 0    | 0    | 0    | 0    |
| Total              | 6            | 6    | 7    | 7    | 7    | 6               | 6    | 7    | 7    | 7    | 6             | 6    | 7    | 7    | 7    |

Note: Some totals may not add due to rounding.



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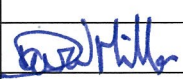
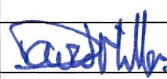
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