International Organization of
Masters, Mates & Pilots
700 Maritime Blvd., Suite B, Linthicum Heights, MD 21090-1953
Telephone: 410-850-8700 • Fax: 410-850-0973
Internet: www.bridgedeck.org • E-mail: iommp@bridgedeck.org

Exh. 1

DONALD J. MARCUS
International President

STEVEN E. WERSE
International Secretary-Treasurer

September 26, 2018

Captain George Quick
International Organization for
Masters, Mates & Pilots, AFL-CIO
700 Maritime Blvd., Suite B
Linthicum Heights, MD 21090

Re: Current Rates of Maersk Line Masters

Dear Captain Quick:

Enclosed, please find the current wage and aggregate benefit cost for Masters working under our collective bargaining agreement with Maersk Line Ltd.

With regard to your question regarding the change in the rates since 2014, effective January 1, 2015 through the present, the wage and fringe benefit rates have been increased annually at a rate of 2.75% of the total labor cost (TLC). Thus, the rates provided to you in the attached will be increased again on January 1, 2019.

Please feel free to let me know if you have any additional questions regarding this matter.

Best regards,

Jennifer L. Stair
Contracts Coordinator

Encl.

cc: Capt. Steve Werse, Secretary-Treasurer
Capt. Don Josberger, Vice President- Offshore
George Korba, Contract Support

International Organization of Masters, Mates & Pilots, AFL-CIO
&
Maersk Line Ltd.

Wages and Rates of Pay
Effective January 1, 2018 – December 31, 2018
Billet: Master

Daily Base Wage:	$471.06
Daily Non-Watch Allowance:	$113.59
Shipboard Wage:	$584.65
Shipboard Wage w/ GMDSS:	$667.09
Hourly OT Rate:	$116.20
Aggregate Benefit*:	$950.67

**Includes Pension contributions, IRAP, Health & Benefit Plan, FPHC, Vacation, Mates, JEC,*

REPORT OF THE INVESTIGATIVE COMMITTEE
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
PILOTAGE RATE REVIEW COMMITTEE
APPLICATIONS FOR CHANGE OF RATES OF PILOTAGE
AT PORT EVERGLADES

Exh. 3

4. Pilotage rates in other ports. (continued)

Table 2 presents the number of handles; total pilotage revenue; the average revenue per handle; and the revenue per handle hour for each Florida port. Previous rate investigations (Prior to 2001) used a handle time at Port Everglades of 1.9 hours. Since the events of 9/11/2001, the Coast Guard requires all vessels and pilots to meet 2.0 miles from the sea buoy. The previous distance was .5 miles, which currently adds three additional miles for each handle. Additionally, the increase in the number of larger vessels which insist on not making a turn on approach or not being delayed on approach, require a pilot, or at times, a number of pilots be available at sea, in pilot boats, to meet inbound or outbound vessels. The handle times used in this table have not been updated for similar Coast Guard requirements in any other Florida ports and that will result in inaccurate revenue per handle hour comparisons.

Table 2: Handles, Pilots and Revenue - 2017 data

Florida Port	#handles	Revenue	Avg Handle Time	# Pilots	Revenue/ Handle	Revenue Handle hr
Fernandina	161	$ 182,707	4.0	1	$ 1,135	$ 284
Jacksonville	3,734	9,897,138	4.0	14/1	2,651	662
Port Canaveral*	2,194	5,562,701	2.0	9/1	2,535	1,268
Fort Pierce**						
Palm Beach	2,564	1,529,444	1.5	5/1	597	398
Port Everglades	8,017	11,800,285	2.6	17/4	1,472	566
Miami	5,537	11,902,547	2.6	16/4	2,150	827
Key West	699	2,107,215	2.5	3/1	3,015	1.206
Tampa	4,644	13,203,458	7.5	17/4	2,843	379
Panama City	494	642,813	2.5	2	1,301	520
Pensacola	24	44,095	2.5	1	1,837	735

- * Port Canaveral Pilots submitted a letter to PRRB on 10 Feb 06 indicating their average handling time should be increased. Used historical data for consistency.
- ** Ft Pierce's closed operations as of 2015
- All Deputies indicated by number after / are replacing retiring pilots

Analysis of Crescent River Port Pilot Association Operations, Activity and Pilot Requirements

Prepared for:

Crescent River Port Pilots Association

Belle Chasse, LA

Prepared by:

Dibner Maritime Associates LLC
Chestnut Hill, MA

February 3, 2014

I. INTRODUCTION

The pilots of the Crescent River Port Pilots Association ("CRPPA") provide state-commissioned pilotage services on the Lower Mississippi River from mile 0.0 to above mile 105, encompassing approximately 165 statute miles of the Mississippi river and additional inland waterways including the Industrial, Intra-Coastal and Harvey Canals which are typically narrow, shallow draft, and involve transits of numerous locks and bridges. The pilots dock and undock vessels at all berths, buoys and anchorages within their service area. They also exchange up-bound and down-bound vessels with the New Orleans Baton Rouge Pilot Association ("NOBRA") at mile 90.5 or below Canal Street. The CRPPA handles 100% of the ships that are bound for berths and anchorages in NOBRA territory. At the southern boundary of its service area, CRPPA pilots exchange ships with the Associated Branch Pilots, who handle ships between the sea buoy and approximately mile 0.0 near the CRPPA's pilot station at Pilottown, LA. The CRPPA Mississippi River service route is the second longest river pilot service route in the United States. The route is longer than that of the Port of Shanghai, the Panama Canal, and the original Suez Canal. The service area also encompasses two US Army Corps of Engineers distinct "port regions": the greater Port of New Orleans (mile 81.2 to115) and the greater Port of Plaquemines (mile 0 to 81), encompassing various private and public port facilities and jurisdictions, which are used by the Corps to report cargo tonnage and vessel activity.

The CRPPA serves all foreign-trading ships calling on the Lower Mississippi River. Along with NOBRA and the Houston Pilots, its annual operations involve millions of tons of foreign trade and thousands of ships that must be navigated on waterways that are heavily travelled by tens of thousands of domestic coastal tugs, inland towboats and barges. While each of the three pilot service areas has distinct characteristics, they are more similar than any other Gulf ports – in scale and in terms of very high vessel traffic per mile. This activity leads to very high densities of traffic within each service area, i.e. high numbers of ships per mile of channel, with more vessels crossing or passing each other per mile than in most other ports.

Exhibit I-1 provides annual summary statistics to provide a sense of the cargo loaded and unloaded, and vessels movements (arrivals and departures) from the three pilot service areas in 2011. It shows that CRPPA served more than 10,000 vessel arrivals and departures (and also shifted a substantial number of these vessels from anchorage to berth, berth to berth or vice versa) during the year and handled foreign trading ships carrying more than 200 million tons of cargo. Its pilots navigated in a pilotage area in which more than 240,000 ships, towing vessels and barges arrived and departed – approximately one every 30 seconds throughout the year. CRPPA exchanged more than 5,500 ships with NOBRA, but also handled more than 5,400 ships that arrived and departed from its service area and transported more than 111 million short tons from wharves in its 105-mile service area. CRPPA pilots handled foreign-trading ships laden with more than twice as many tons of cargo as Houston and about 90% as many ships.

Exhibit I-1

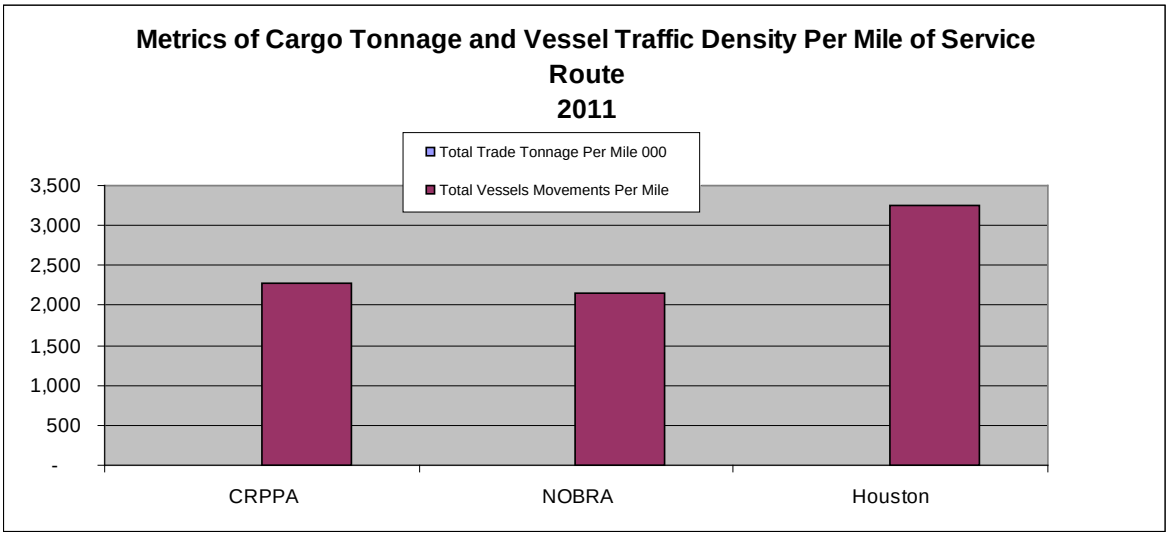
KEY METRICS OF CARGO MOVEMENTS AND VESSELS TRANSITING ON THE LOWER MISSISSIPPI AND HOUSTON

Pilot Area	Miles	Total Tonnage Loaded or Unloaded in Segment mm tons	Total Tonnage Moving on Segment mm tons	Foreign Tonnage Moving In Area mm tons	Domestic Tonnage Moving in Area mm tons	Foreign Ship Arrivals and Departures Per Year	Domestic Ship, Tug & Barge Trips Per Year
NOBRA	106-253	324.0	361.7	143.9	217.8	5,505	310,650
CRPPA	0-106	111.6	318.7	201.3	117.4	10,996	231,138
Both Segments		435.6	680.4	345.2	335.2	16,501	541,788
Houston	All	237.8	245.0	167.1	70.7	11,971	158,996

Source: DMA analysis of US Army Corps statistics for 2011. Tons are short tons of 2,000 lbs
Note: Foreign ship arrivals and departures does not include shifts within the service regions
Note: The Corps data for river segments is delineated at Mile 106 rather than Mile 105, but this is insignificant.

When this total activity is reduced to density of activity (vessel calls and departures per mile of service area), the density of activity is evident. Exhibit I-2 shows the total traffic (ships, towing vessels and barges per mile for the three service areas. The CRRPA experiences slightly more vessel movements per mile than NOBRA, but Houston has a higher density per mile.

Exhibit I-2



However, the Lower Mississippi River and the Houston Ship Channel have different characteristics: the upper Houston Ship Channel is a narrow, crowded waterway that was cut through a small river bed while the lower portion of the Channel is a rather straight deepwater Channel that has separate zones to accommodate inland river barge traffic. By contrast, the Lower Mississippi River is the terminus of a fast-flowing, wide, and twisting river that is subject to wide swings in river conditions and tides due to oceanic and inland weather forces.

The CRPPA service area has the swift flow of the Mississippi River which varies in strength with tides, river stages (to flood stage), and many curves and twists. In the 105 miles of river that naturally runs from north to south, DMA identified major turns including:

- One bend exceeding 180 degrees
- Four exceeding 90 degrees
- Five exceeding 45 degrees
- Several additional channel bends exceeding 22.5 degrees

The nature of CRPPA pilot operations is shaped by many logistical and operational challenges. CRPPA pilots not only guide ships to and from the exchange point with the NOBRA and Associated Branch, but also re-position ships within their area. These movements are typically between berth and berth, berth and buoy, anchorage and berth, and anchorage and anchorage.

Operating Overview

The CRPPA divides it basic pilot assignments into two primary categories:

- River trips involve all movements to and from Pilottown regardless of length and also all movements that take the pilot out of the New Orleans area. New Orleans is defined as between mile 80 and the upper boundary of CRPPA service. River trips that do not begin or end at Pilottown are termed “short trips” regardless of their length. These “short” trips can range from less than a mile to approximately 80 miles in length. A long “short trip” could be from a lower anchorage such as the Boothville Anchorage between miles 12.2 and 18.5 and points in New Orleans between miles 100 and 105.
- Harbor trips typically involve movements entirely within the New Orleans area and are generally less than 25 miles

In addition, the CRPPA provides 24/7/365-day coverage of pilot watches at the US Coast Guard’s Vessel Traffic Center (“VTC”) in New Orleans. Each day, three eight-hour shifts are performed by three different CRPPA pilots for a total of 1,095 watches totaling 8,760 hours of on-watch time. Each pilot is assigned two weeks of Vessel Traffic Control Service (“VTS”) duty each year.

The CRPPA typically assigns five pilots to provide harbor service on any given day, and this can be raised to six pilots during high water. The balance of on-duty pilots that are not on VTS duty are assigned to river duty.

The typical or "ideal" pattern of river duty is to pilot a vessel down river from New Orleans or some other northern point to Pilottown, rest and recompose at the CRPPA pilot station, then pilot another vessel north towards New Orleans and then rest at home. However, the nature of traffic frequently dictates "short trips" which require pilots to travel by car and river launch to points along the 105 miles of river, then to be picked up at other points along the river upon the completion of the voyage. Imbalances of traffic also frequently require pilots to travel in "light man" mode by car (and also by pilot boat between Venice and Pilottown) to meet ship movement needs. Lightman trips are ordered by the CRPPA dispatchers in order to assure that ships move at the requested and appropriate times. The entire trip between the Belle Chasse area (either the launch berth or the CRPPA parking lot) and Pilottown takes about one hour and 45 minutes under typical circumstances.

The CRPPA operates four pilot boats at Pilottown, which are also dispatched to transport pilots between Pilottown and Venice. When pilots must move to and from vessels at all other locations, cars and hired launches are used as necessary. Pilots arrange their own transportation through launch and car services as necessary before, during, and after docking. Due to the thousands of pilot jobs that take ships to or from anchorages or mooring buoys, pilots must select the appropriate launches and pick-up points for cars. Pilots are often picked up and delivered at their homes by hired car when working in remote locations, but sometimes drive their cars and park them at the CRPPA parking lot or launch docks in Belle Chasse. This maximizes their productivity by minimizing extra time spent recovering personal cars from remote locations.

Pilot Station

CRPPA operates a single pilot station that provides accommodation for its pilots. This is necessary to provide pilots with a place to eat, sleep, and re-compose, particularly after long down bound pilot assignments. Operations at the station include house-keeping, food preparation, facility maintenance, and pilot boat operations and maintenance. The severe damage to the CRPPA's pilot station during Hurricane Katrina in 2005 led to the construction of new hurricane-resistant pilot station, which is to be completed and sited in 2014. Pilots generally reside in the greater New Orleans area. Thus, they are as close, if not closer to, highways leading to assignments than any New Orleans area pilot station would be. They are also more comfortable and used to sleeping in their homes.

Elements of Pilot Time

State-commissioned pilots do not have other jobs or professions that require them to go to work. Because their energy is finite, their obligation to rest and be prepared for their assignments is paramount. They must recover from the implications of varying schedules of duty from day-to-day.. Each pilot works on a rotation of one week on and one week off.

In order to meaningfully understand pilot work loads, two key measures are useful:

- Bridge time
- Time on task

Bridge time is the time spent on the bridge of a moving ship in state pilotage waters. Though the ship's master is always in control, the pilot will typically have advisory control of the ship while performing pilotage service. This means that the pilot is on watch and directing the bridge team, while communicating as necessary with the ship's master, VTC centers, the bridge team and other vessels underway or at berths. Bridge time is impacted by the following factors:

- Numbers and types of trips performed (transfers to/from NOBRA, anchoring and buoying arrivals and departures, dockings at and sailings from berths)
- Distances of the pilot trips
- Weather effects on speed (including wind and visibility)
- Tidal and current effects on speed
- Passing and/or speed restrictions
- Docking, mooring, turning, and anchoring times
- Time impact on types of ships at various locations in the port or harbor area
- Trips involving more than one pilot – such as drilling rig and hawser tows

As stated previously, NOBRA and CRPPA pilots also have VTS assignments. This must be treated in a fair and consistent manner so that this time is neither double-counted nor ignored.

Time on task is the total time that a pilot is engaged in an assignment from beginning to end, during which that pilot is unable to perform another assignment or get restorative rest. Time on task includes bridge time (defined above) but also includes the following elements, which are presented in approximate chronological order of performance:

- Time to travel from home or pilot station
- Time on pilot boat or in car, from station or other pilot job, with allowance for some time margin of pre-arrival to assure that the ship is not delayed
- Time from arrival at the ship to accessing the bridge of the ship (sometimes hundreds of feet horizontally and climbing 4-8 deck levels)
- For departures, time for bridge team meetings and coordination (pilots typically orient bridge teams when a ship is already underway as soon as possible)
- Bridge time underway including docking and/or undocking time, turning, anchoring, mooring at a buoy and/or and the setting of lines.
- Time to walk from the bridge to the gunwale of the ship and any time awaiting the ability to leave the ship
- Time allowances for average ship movement delays (billable average incidence after any grace period) and average incidence of grace period delays, adjusted for bridge meeting time required. Billing records are helpful in this analysis.
- Time for transport to the next job, or to the pilot station. This must consider port-specific piloting practices, sequencing of pilots, the use of pilot stations and/or bases, the length of trips, the frequency of trips by direction, the number of pilots on duty at a given time, rotational and work factors. A pilot may be forced to wait in a pilot boat, in a car, on a launch, at a station or base. Time may also be spent being driven to or from the pilot's home, and recovering their car. While most river trips and

"long" short trips must be followed a pilot rest cycle, CRPPA pilots assigned to harbor duty may perform as many as three jobs before a rest period and may perform four or five jobs within a 24-hour period with rest.

- Time lost due to cancellations which typically entail the dispatcher calling a CRPPA pilot at home and ending their sleep period to assign them a job. Typically, a CRPPA dispatcher will inform the pilot of a cancellation within one-hour of the initial call, but the cancellation has ended pilot rest and effectively begins "on duty" time, often before the pilot was optimally rested . Cancellations can necessitate the extension of waiting prior to assignment, which is sub-optimal in terms of pilot alertness if the pilot is moved to the bottom of the assigned pilot list.
- Time expended in travelling to and waiting aboard ships that suddenly decide not to require the services of the pilot that has boarded the ship to provide service. These "discharges" disrupt pilot productivity and rest/work cycles, for reasons similar to cancellations (above), but are more severe: the pilot has typically been "on duty and on task" for two hours or more, and now repositioned to the bottom of the assigned pilot list – and must wait for another assignment – which can take hours. Customers are charged for discharges because they consume a pilot's rest period and disrupt the rotation.

The determination of task time is based upon consideration of various factors, including those set forth below for bridge time. Task time must also take into account the particular requirements and practices of various pilot associations, which can include long trips (approximately 105 miles from Pilottown to the CRPPA northern limit in New Orleans for example), requirements for rest, the ability to rotate for short or long rest periods, the propensity for multiple ship movements simultaneously and its effects on pilot organization productivity, detention time aboard pilot boats stationed offshore, the distances and speeds of pilot boat and car operations, etc. Task time does not include sleeping, eating, or resting unless it is on-board a pilot boat. Sleeping in a pilot boat is not sound sleep due to engine noise, motion, and activity as the vessel maneuvers and bumps against ships.

Average times and amounts of pilot activity are most important, but maximum and minimum times must also be considered to understand the sustainable tempo and pace of pilot organization operations. Careful segmentation of types of trips may be necessary to help understand task time and pilot work and rest patterns. Allowances for pilot absence from duty due to sickness, injury, and family emergencies may also bear on peak staffing loads. While a pilot may be able to exchange with a pilot for a short disability or emergency, a prolonged illness or injury reduces the pilot cadre. Care must be taken to assure that the time analysis is fair and accurate and not distorted upward or downward.

Assuring ample time for pilot arrival at/aboard ships before ships are ready to move is critical to minimize delays to ships. Pilots should wait for ships, ships should never wait for pilots. This applies to inbound and outbound movements. Time on task encompasses time on bridge.

Task time includes time spent on non-direct tasks such as training, organization or management. Training is essential to safe pilotage while organizational and management tasks – if possible – reduce general and administrative costs and waiting time. Education,

training, management and administrative tasks are separate time demands that should be accounted for and can be considered as on-duty obligations under appropriate circumstances.

Time on Watch is when a pilot has moved at the upper end of the watch rotation and is awaiting the next assignment. Having rested to the extent possible or permitted by the wake-up call, the pilot is unassigned, but is ready to work and cannot reasonably go back to sleep. The pilot may have been called in to a pilot station and is unassigned or is perhaps sleeping, eating, resting or loitering at a station or at home in anticipation of an assignment. The pilot may be rested and awaiting work that will typically be assigned within 4-8 hours. In contrast, a pilot off watch has completed an assignment or assignment(s) and is in rotation for a longer rest period to sleep, eat, and restore capabilities for their next time on watch. Time on watch encompasses bridge time and time on task.

Time on Duty is the multi-day rotational period (typically one week on duty, followed by an equal amount of off duty) when a pilot can expect to be scheduled to pilot ships, cannot leave the service area, and cannot rely on any pilot in a higher level of "on duty" to relieve them of their obligation to pilot at any time of day or night. CRPPA divides its pilots into two watches, and each pilot is scheduled by dispatchers according to this division of the pilot roll. A pilot is typically in a rotation to permit rest and recovery after assignments, but must go on duty if no other more-rested pilot on the duty roster is available. The pilot may be sleeping, resting, recreating and not on watch. An **on duty** pilot must be proximate to the pilotage service area at all times. Time on duty encompasses time on watch. Pilots may exchange service hours to meet requirements for rest or other needs, but in the end, pilots should perform a roughly equal number of on-duty days and bridge hours (defined below each year to ensure that all pilots have the opportunity to rest and recompose).

Time off Duty is that multi-day rotational period during which the pilot would be able to leave the service area, might travel domestically, but would be within, say 12 to 24 hours of being available to deal with an emergency situation, such as a hurricane that required all pilots to be available. Under normal operating conditions, and barring a shortage of pilots due to traffic, an industrial or terminal incident, seasonality or weather, the pilot would be unlikely to be called in.

Vacation time is assigned to each CRPPA pilot by the dispatchers at approximate 6-month intervals and consists of a week of time that can follow the rest period, and precede the rest period that would follow the week on duty that is on vacation. Thus, a pilot would be able to take three weeks consecutively[1]. Pilots may choose to swap time with other pilots in order to take time that fits personal and family plans. However, two weeks of vacation is the annual amount of vacation allocated to each pilot.

Administrative time has not been used by Dibner Maritime Associates as an element of time for its various studies, as suggested in comments above. While pilots spend time training, studying, having physicals, and managing, none of the bridge time or total task times developed and compared by DMA include these responsibilities. Calling in job times can be

[1] The normal work cycle is (by week): ON-OFF-ON-OFF-ON-etc. A vacation week creates: ON-OFF-***OFF***-OFF-ON.

accomplished electronically (by laptop or cell phone) in less than a minute, sometimes while being transported (by pilot boat or car).

Training time is required for many pilot associations through programs for continuing education, qualification, skills-building, practice and instruction. Each pilot is required to travel to a model ship maneuvering training facility for intensive maneuvering training for one week every five years. This is effectively the loss of 7 on-duty days per 5 years because travel is frequently international. In addition, each pilot is required to attend a week-long program of training on matters of importance to pilots at five-year intervals.

Pilot Administration

The scale of pilot administration time demands ranges with the scale and complexity of the pilot organization and is strongly influenced by the effectiveness and structure of the non-pilot support staff. It is also influenced by the degree that leadership and managerial responsibilities are shared amongst pilots.

Pilot organizations up to approximately 30 or more pilots can be managed by a managing pilot, who can frequently also actively pilot ships to the degree that time permits at any point in time. Larger organizations typically see a gradual transition towards a full-time president, who may be supported by 1 or 2 part-time managing pilots. Larger organizations, like CRPPA and NOBRA with more than 100 pilots tend to have a president who is fully engaged in managerial duties and does not pilot at all or with any frequency. Assuming that a managing pilot works about 47 weeks per year and 40 hours per week, then a full-time managing pilot works about 1,800 hours per year. Divided by 30 total pilots this implies 60 management pilot hours per pilot per year (1,800 hours/30 pilots). For larger groups, about 1.75 full-time managing pilot equivalents are typical. Divided by 100 pilots, the larger group ratio implies about 32 managing hours per pilot (3,150 hours/100 pilots. Organizations that face protracted rate and other regulatory and investigative hearings typically bear heavier administrative time demands, as well as legal and/or accounting expenses.

Average CRPPA Pilot Time on Task

The primary objective of this report is to develop a definitive analysis of the workload of the CRPPA pilots. The workload is primarily determined by bridge hours and secondarily through the determination of the combined workload that is the result of bridge hours and the additional time on task that paces CRPPA pilot activity and the exertion that eventually limits the amount of work that can be performed. To accomplish this, DMA analyzed all self-reported pilot activity for the nearly nine years between January 1, 2005 and August 31, 2013. This encompassed more than 155,000 pilot records. The activity is captured through the CRPPA dispatch and billing system, which is based upon pilots reporting their pilotage activities (time on bridge) and certain related tasks that form additional elements of task time. These include travelling between Belle Chasse and Pilottown by car and boat (termed “light man” travel) as well as certain disruptions of time when jobs are cancelled. The CRPPA system is based upon

dispatcher assignments of jobs to pilots with specified times to arrive at the ship, the expected sailing time, location and pilot self-reporting of time on board, time underway, time off the ship, and time reporting in for any further assignment.

II. SCALE OF OPERATIONS

Pilot Staffing

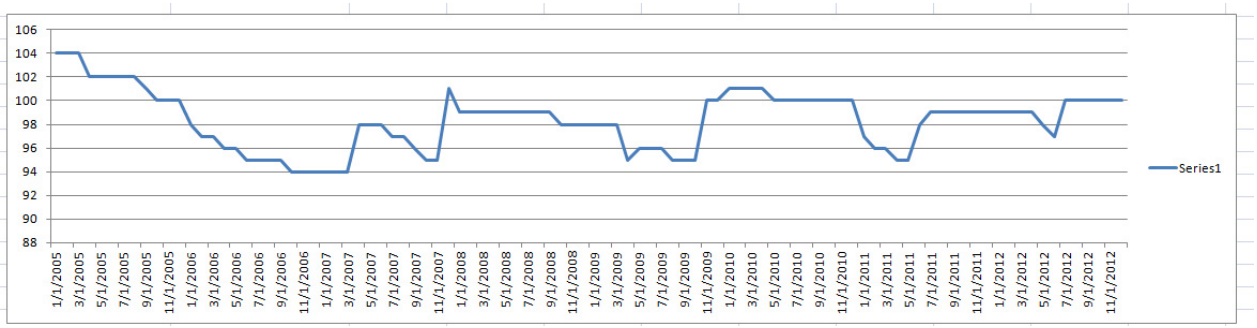
- CRPPA is authorized for 106 pilots and is staffed to sustain this number. As of the date of this report (December 2013), the Association has 108 pilots due to the commissioning of five new pilots in anticipation of the imminent retirement of two. Based upon the 106 authorized and filled pilot positions, the CRPPA can place a total of 44.2 pilots on each of the two watches for ship piloting. The analysis that supports this is as follows:
- Total number of pilots on each watch (44.2)
- Multiplied by 2 for the port and starboard watches (88.4)
- Plus 6 VTS pilots to provide 3 watches per day, 365 days as part of the two watches (94.4)
- Multiplied by (1.0076) to allow for the absence of each pilot for one week in 130 weeks (every 2.5 years) for offsite training (95.1)
- Multiplied by 1.0769 to allow for the two weeks off per year for pilot vacation (there are no holidays) (102.4)
- Multiplied by 1.02 to allow for the illness, injury, or family emergency of pilots – a 2% allowance (104.4), plus
- 1.5 managing pilot equivalents (of 3 managing/officer pilots) – 105.9

The approximately 44 pilots on each watch must fulfill the full range of demand – on peak days, on very quiet days, and on "average days".

The number of active pilots performing ship jobs or VTS watches during each month from 2005 through 2012 is tracked in Exhibit II-1. These figures exclude pilots who did not work in any one month because they were on vacation, or ill, or retired, or had not yet been appointed as full pilots. The figures tend to slightly exceed DMA's estimate of approximately 87 pilots working at any one time, because pilots take vacations within months that they also work. Typically, 97 pilots worked each month, with some taking vacation days during each month.

Exhibit II-1

Active CRPPA Pilots (Jan. 1 2005 through Dec. 31 2012)



Ship Pilotage

CRPPA provided pilotage service for more than 17,500 vessel movements in 2011, which was the highest level of activity since 2005. CRPPA pilots have performed an average of 15,023 pilot-movements each year for the past eight years, excluding VTS. Some of these ship movements require two pilots due to the length of the trip and the need for pilot relief or other factors[2]. The 2008 economic downturn led to a reduction in demand for CRPPA services, but since that time, demand has rebounded.

Vessel Traffic Center Workload

Since 1999, in addition to piloting ships directly, the Crescent River Port Pilots have been constantly present in the US Coast Guard's VTC , working alongside members of the US Coast Guard Vessel Traffic Service VTS team. The pilots track vessels by radar and AIS position indicating system and provide notices, communications, and advice to the masters and pilots aboard all types of vessels operating on the river. This includes large sea-going vessels in foreign trade, US-flag coastwise ocean-going vessels, and all types of commercial, recreational, and government inland river craft. Their duty is to help coordinate vessel movements and maneuvers, and to advise pilots and bridge teams on emerging situations and developments. VTS duty is divided into three daily shifts, each eight hours long. Due to Coast Guard regulations and safety concerns, each pilot can only stand one watch at the VTC per day. Therefore manning the VTC takes three pilots a day, 365 days a year. Due to the on/off assignment of pilot personnel on a weekly basis, CRPPA must dedicate six pilots to this activity: three on daily 8-hour per day duty rotation, and three on off-duty status. As a general rule, each pilot does VTS duty as a portion of their services.

[2] Cruise ships during the winter season, dead (powerless) ships under tow by tugs and tug/barge tows with the tug towing the barge astern on a hawser are examples of assignments that require two pilots.

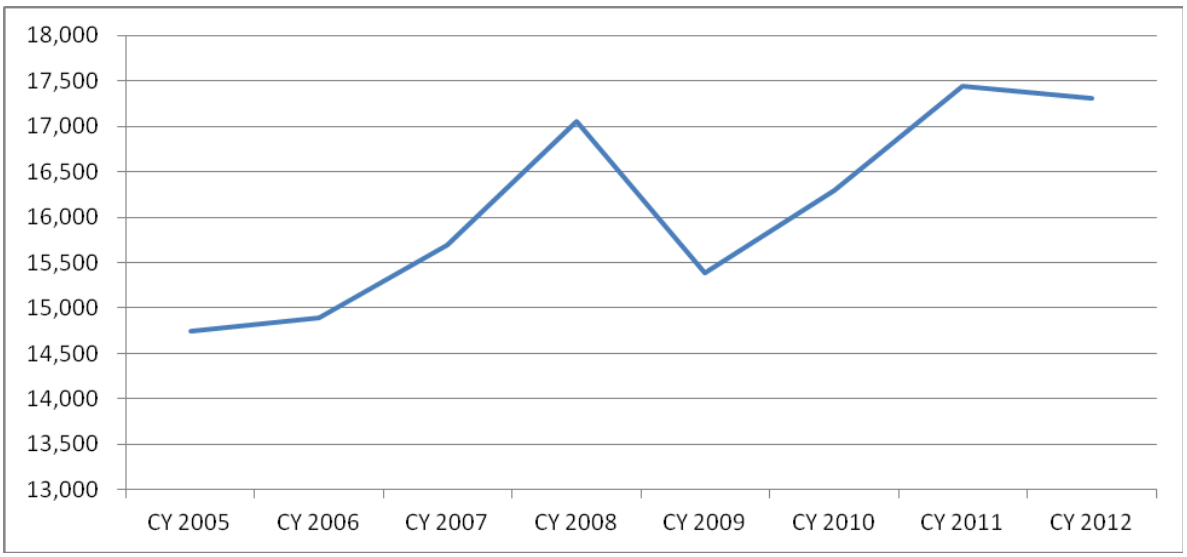
III. STATISTICAL RECAP OF CRPPA PILOT METRICS

OVERVIEW OF PILOT TOTAL WORKLOAD AND ACTIVITY PER CALLING VESSEL

The activity performed by the CRPPA has been increasing from less than 15,000 assignments per year in 2003 to approximately 17,500 assignments in 2011 and 2012. This includes the 1,095 VTS watches performed annually. The impact of the Great Recession of 2009/10 is evident. In broad terms, CRPPA performed an average of nearly 48 assignments per calendar day with 46 pilots typically on watch (43 for ship work and 3 for VTS watches). This means that the average number of daily jobs per pilot was 1.04 per pilot on duty.

Exhibit III-1 Pilot-Trips Per Year

Total Pilot Work (VTS, River Work, Harbor Work)



Source: CRPPA statistics, Dibner Maritime Analysis.

For each ship that entered the Lower Mississippi River, the CRPPA performed an average of 3.23 pilotage jobs in 2012, the latest year for which ship call data was available. The minimum that would be performed is two – one upon arrival and one upon departure. However, a substantial number of ships must anchor within the CRPPA district while awaiting their first berth or mooring, thus adding a third river or harbor trip for its pilots. A smaller fraction of ships may anchor or berth a second or even third time within the CRPPA district, creating additional activity for pilots. Exhibit III-2A provides a tabulation of ships calling at the Lower Mississippi River and CRPPA pilot trips and VTS watches performed. While the VTS watches are steady at approximately 1,095 per year (three per day), the ratio of pilot jobs per ship arrival has slightly increased for both river and harbor jobs. Exhibit III-

2B presents the number of calls and ratio of pilot jobs per call for the 2005 to 2011 period. 2012 is not shown because the definitive number of ship calls is not yet available from the US Army Corps of Engineers, but it is estimated to be very similar but slightly less than 2011. Exhibit II-2C charts the trends in CRPPA pilot jobs per ship call into CRPPA territory and shows the general stability of the workload per ship call.

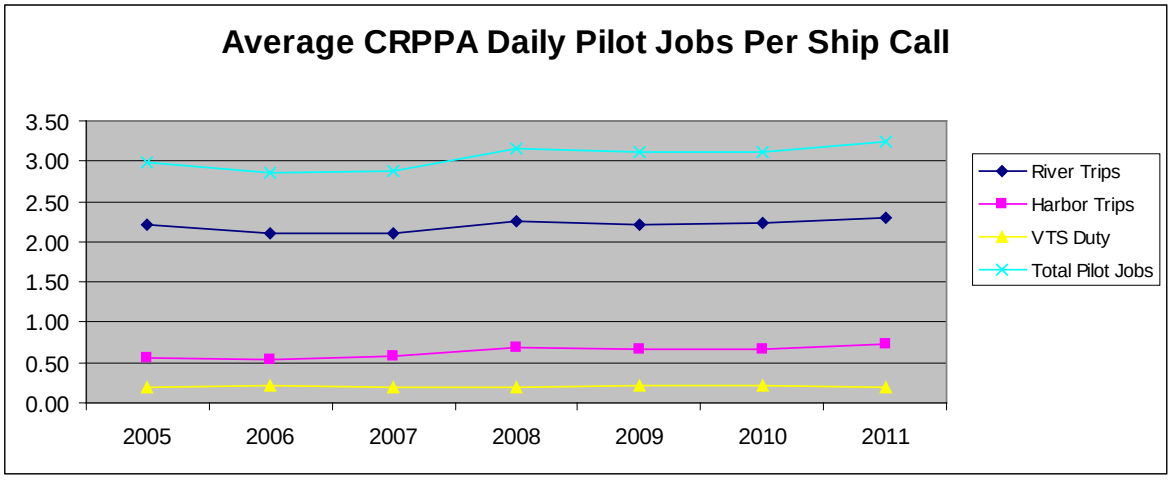
Exhibit III-2A

AVERAGE ANNUAL CRPPA PILOT ASSIGNMENTS PER SHIP ENTERING THE LOWER MISSISSIPPI RIVER 2005-2011

	2005	2006	2007	2008	2009	2010	2011
Ship Calls to River	4,954	5,227	5,448	5,421	4,943	5,226	5,393
River Trips	10,993	11,007	11,482	12,222	10,971	11,670	12,433
Harbor Trips	2,750	2,795	3,117	3,754	3,317	3,534	3,915
VTS Duty	1,004	1,095	1,097	1,084	1,093	1,094	1,093
Total Pilot Jobs	14,747	14,897	15,696	17,060	15,381	16,298	17,441
Ratios of Trips/Duties per Ship Call:							
River Trips	2.22	2.11	2.11	2.25	2.22	2.23	2.31
Harbor Trips	0.56	0.53	0.57	0.69	0.67	0.68	0.73
VTS Duty	0.20	0.21	0.20	0.20	0.22	0.21	0.20
Total Pilot Jobs	2.98	2.85	2.88	3.15	3.11	3.12	3.23

Source: Ship Calls: DMA analysis of US Army Corps of Engineers data
Source: Trips and VTS duty - DMA analysis of CRPPA data

Exhibit III-2B



Summary of CRPPA Pilot Activity, Miles, Time and Average Workload

Key metrics of the CRPPA pilots are presented in Exhibit III-3 below. This table is based upon the analysis of more than 157,500 pilot jobs and other reported activities (most involving bridge time and VTS watches, but others involving task-related events such as re-locations between Pilottown and Belle Chasse, cancellations and terminated assignments). Throughout the analysis, only bridge time assignments were evaluated for bridge time and VTS assignments. Task time information that was not related to bridge time or VTS was used to understand non-bridge and non-VTS tasks and ship movements that required a relief pilot on assignments of exceptional length (typically exceeding 7 or 8 hours due to fog, river current or other factors), or as set forth in the CRPPA tariff and rules for pilot services (such as tugs and their tows, powerless ships, or ships with impairments).

The eight-year tabulation of all major metrics of the CRPPA's activity and time analysis is presented in Exhibit III-3 below. It provides consistent and comprehensive tabulations of key metrics including:

- Miles piloted (river and harbor)
- Number of movements performed by pilots for river and harbor trips
- Number of pilot assignments (including VTS)
- Average distances of river, harbor and total trips
- Average time durations for such trips
- Average number of bridge/VTS activities performed per pilot
- Average pilot hours per year for such trips and VTS activities

In addition, a tabulation of the number, duration, and hours spent in "lightman" relocations between Pilottown and Belle Chasse is provided because it is tracked in the system.

Importantly, DMA used the average number of active pilots working each year, which was 98. This figure was used to calculate the per pilot metrics because it reveals the hours they actually worked. The president of the CRPPA was excluded from the analysis – he would have brought the total number up to 99. The hours per pilot would be approximately 7 percent lower at the full and authorized number of 106 pilots.

Exhibit III-3 Activity and Time Summary

(This exhibit appears on the next page so that it can be seen in its entirety on a single page)

CRESCENT RIVER PORT PILOT - KEY METRICS AND TASK MILES	CY 2005	CY 2006	CY 2007	CY 2008	CY 2009	CY 2010	CY 2011	CY 2012
RECAP OF SHIP MOVEMENT MILES								
Total River Movement Miles	834,247	855,240	891,454	906,838	829,915	867,358	915,373	935,303
Total Harbor Movement Miles	48,348	41,361	49,318	59,170	48,543	52,197	61,419	61,312
Total Movement Miles	882,595	896,601	940,772	966,008	878,458	919,555	976,792	996,615
RECAP OF SHIP MOVEMENTS								
Total River Movements	10,993	11,007	11,482	12,222	10,971	11,670	12,433	12,682
Total Harbor Movements	2,750	2,795	3,117	3,754	3,317	3,534	3,915	3,542
Total Movements	13,743	13,802	14,599	15,976	14,288	15,204	16,348	16,224
RECAP OF PILOT ASSIGNMENTS								
River Trips	10,993	11,007	11,482	12,222	10,971	11,670	12,433	12,682
Harbor Trips	2,750	2,795	3,117	3,754	3,317	3,534	3,915	3,542
VTS Duty	1,004	1,095	1,097	1,084	1,093	1,094	1,093	1,088
Total Pilot Jobs	14,747	14,897	15,696	17,060	15,381	16,298	17,441	17,312
Lightman Trips (task time)	1,410	1,757	1,725	1,764	1,618	1,694	1,804	1,841
AVERAGE SHIP MOVEMENT DISTANCES (Statue Miles)								
Average River Miles	75.9	77.7	78	74.3	75.6	74.3	73.6	73.8
Average Harbor Miles	17.6	14.8	16	15.8	14.6	14.8	15.7	17.3
Average Movement Miles	64.2	65.0	64	60.5	61.5	60.5	59.7	61.4
AVERAGE TIMES PER SHIP OR PILOT (Hours Per Move)								
Average Bridge Time for River Movements	6:06	06:17	6:11	06:04	06:06	06:03	06:00	06:00
Average Bridge Time for Harbor Movements	02:12	02:08	2:01	02:05	02:03	01:58	02:02	01:52
AVERAGE ANNUAL ACTIVITIES PER PILOT								
Number of Active Pilots	98	98	98	98	98	98	98	98
River Trips	112.2	112.3	117	124.7	111.9	119.1	126.9	129.4
Harbor Trips	28.1	28.5	32	38.3	33.8	36.1	39.9	36.1
VTS Watches Performed per Year	10.2	11.2	11	11.1	11.2	11.2	11.2	11.1
Total Trips and VTS Watches	150.5	152.0	160	174.1	156.9	166.3	178.0	176.7
TOTAL HOURS OF ACTIVITY								
River Movements	67,057	69,454	70,959	73,699	66,923	70,604	74,598	76,092
Harbor Movements	6,050	5,953	6,296	7,808	6,800	10,496	7,987	6,624
VTS Watches	8,760	8,760	8,760	8,760	8,760	8,760	8,760	8,760
Total Hours	81,867	84,168	86,015	90,267	82,483	89,859	91,345	91,476
AVERAGE ANNUAL BRIDGE HOURS PER PILOT (Including VTS)								
VTS Duty Hours	82.0	89.4	90	88.5	89.2	89.3	89.2	88.8
Average Bridge Time for River Movements	685.9	707.4	725	758.1	683.3	720.7	761.8	777.3
Average Bridge Time for Harbor Movements	62.1	61.1	64	80.4	69.7	71.4	81.2	68.0
Total Bridge Time Per 98 Pilots	**829.9**	**857.9**	**878**	**926.9**	**842.3**	**881.5**	**932.3**	**934.2**
Total Time Per Pilot (including lightman task t	849.2	880.2	900	949.1	866.3	908.4	961.9	964.1
Bridge Time Per 106 Authorized Pilots	772.3	794.0	811.5	851.6	778.1	847.7	861.7	863.0
Average Lightman Task Time Elements								
Lightman Trips (Counted as a Non-Bridge Task	14.4	17.9	18	18.0	16.5	17.3	18.4	18.8
Annual Hours En Route for Lightman (Task Tin	19.3	22.3	22	22.2	24.0	26.9	29.6	30.0
Average Time En Route for Lightman Per Trip	1.33	1.23	1.33	1.23	1.45	1.55	1.60	1.52

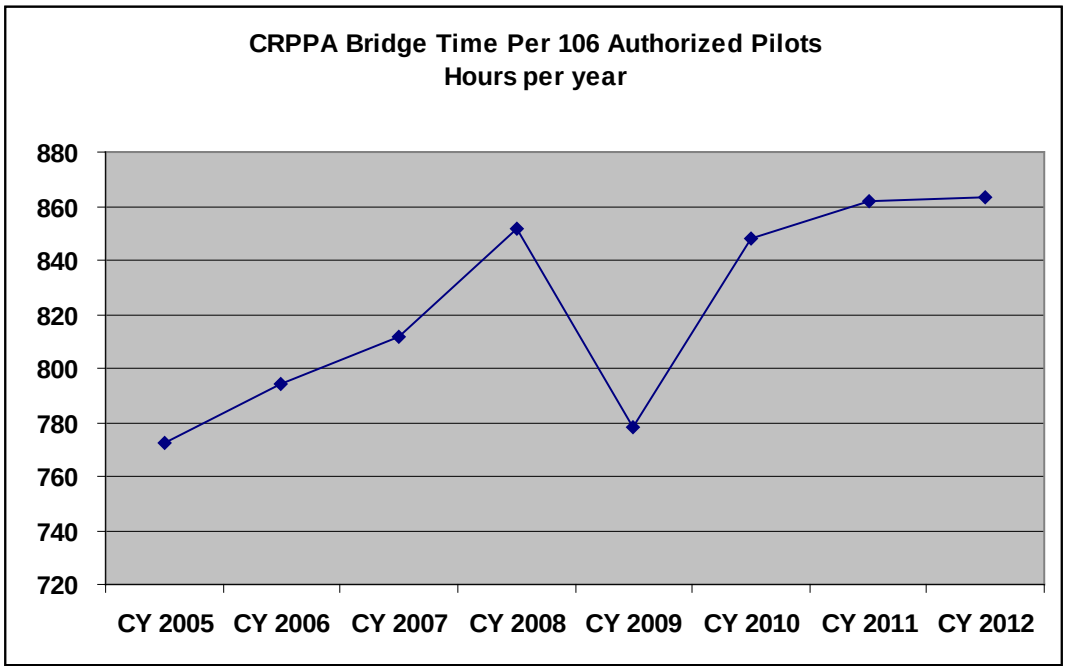
Source: DMA analysis of CRPPA dispatch and pilot time reporting database

DETERMINATION OF AVERAGE ANNUAL BRIDGE HOURS PER CRPPA PILOT

The eight-year analysis provides ample information to determine the average annual bridge hours performed by CRPPA pilots. Exhibit III-4 shows that per each of the 106 authorized

pilots, in 2004 the average was 772 hours and in 2006, 2007, and 2008 it increased steadily to 852 hours. The Great Recession of 2008-2010 impacted this negatively, forcing average hours down to 778 hours in 2009. During 2010 the average began to recover to 848 hours, and in 2011 and 2012 it returned very close to the 2008 level, averaging 863 hours per pilot per year.

Exhibit III-4

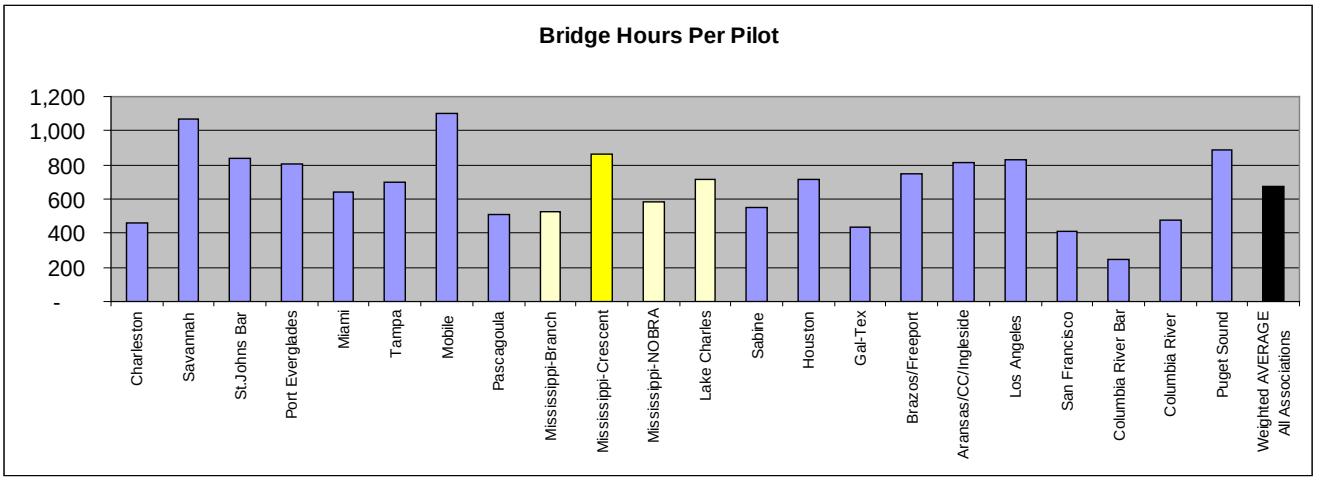


Average Hours in Context of Other State Pilots

To place the CRPPA average annual bridge hours in context, DMA updated and further refined its analysis of bridge hours for other pilot groups. The pilot complement of NOBRA has been increased to the authorized number of 120. As Exhibit III-5 shows below the CRPPA's current average hours is 27% higher than the average of 742 pilots in the 22 organizations: 863 hours for CRPPA compared with the average of 673 hours for all 742 pilots. This higher productivity is to be expected given the relatively longer lengths of its river trips. This length improves productivity due to the longer voyages per hour of bridge time. Only the relatively smaller ports of Savannah (20 pilots) and Mobile (12 pilots) have significantly higher bridge hours per pilot than the CRPPA. These two organizations have average bridge times per trip of 3.5 and 4.5 hours per trip – which is shorter and permits two trips per day when necessary and possible catching outbound and inbound vessels in a single rotation. The large ports of Houston (700 hours), Los Angeles (829 hours), and Puget Sound (886) have similar average hours, as do other ports including Jacksonville/St. Johns

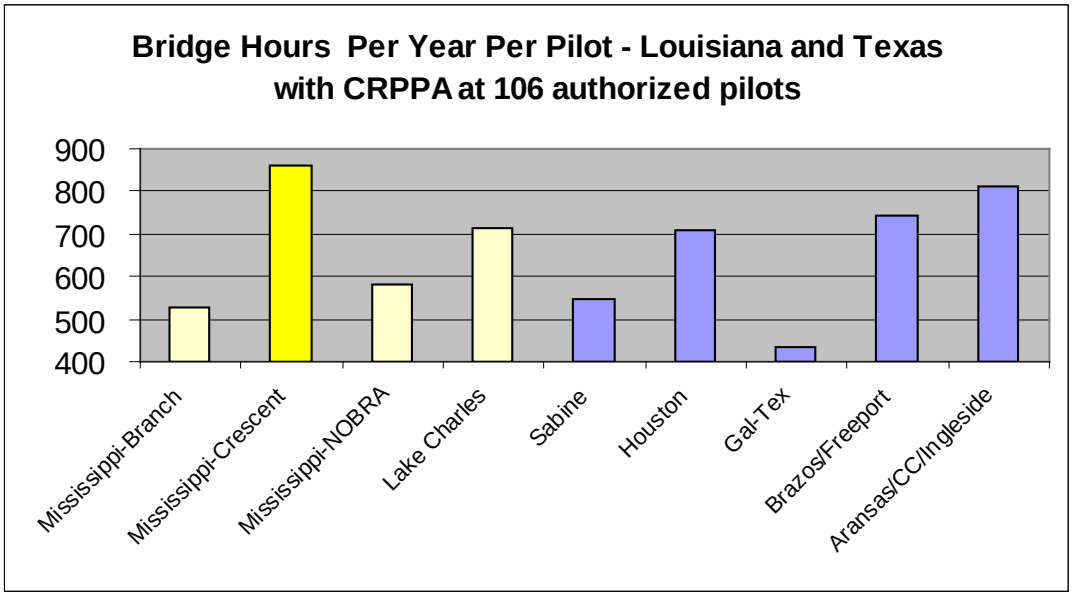
River, Port Everglades (multi-trips possible per day on a very short route), and the relatively shorter routes of Brazos/Freeport, and Corpus Christi/Ingleside.

Exhibit III-5



CRPPA pilots are performing significantly more bridge hours per year than any of the other Louisiana and Texas ports, as Exhibit III-6 shows. At present, CRPPA pilots work approximately 31-47% more bridge hours than the other pilot associations in Louisiana and more than all other Texas state pilots, including Houston which is the highest paid of all nine pilot associations.

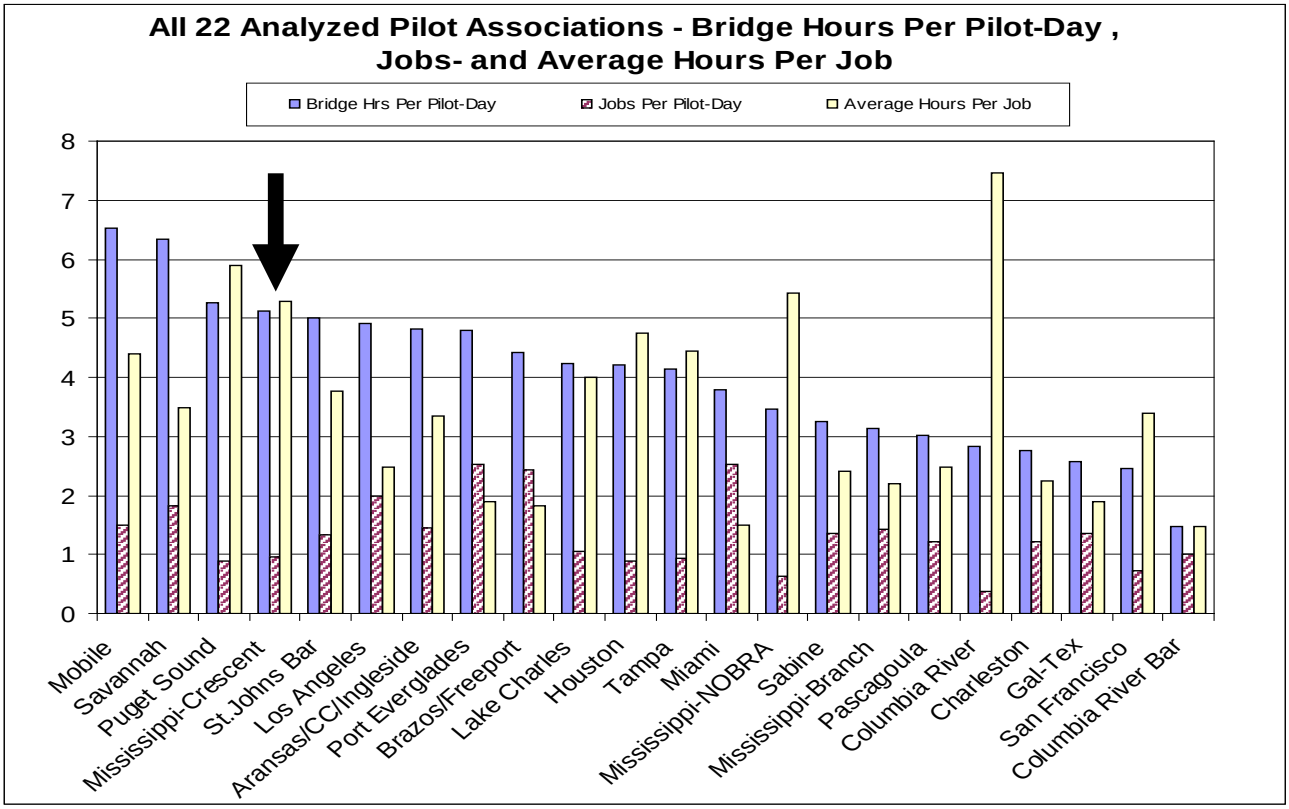
Exhibit III-6



Source: DMA analysis

DMA's analysis of 22 pilot associations includes the approximately 743 pilots within them. Bridge time metrics such as average bridge hours per pilot per day; average jobs worked per day; and the average length of tasks performed provide important insights into the range and norms of pilot activity for the 22 associations analyzed. As shown in Exhibit III-7, each of these metrics varies from association to association, but the averages, highs, and lows are important, as are these metrics for pilots with longer or shorter routes.

Exhibit III-7



Amongst the key insights are:

- The weighted average of all pilots in all associations are as follows (CRPPA data in parentheses):
    - Average bridge hours per day: 3.98 (5.12)
    - Average jobs per day: 1.05 (.97)
    - Average bridge hours per job 3.77 (5.3)

DMA also focused attention on the metrics of the pilot organizations with more than five-hour average bridge time hours per job because these organizations face the common challenge of relatively long jobs and the challenges and obstacles of assigning pilots to multiple assignments per day. The results of this focus is presented in Exhibit III-8 below.

Exhibit III-8

KEY METRICS OF PILOT ASSOCIATIONS WITH AVERAGE JOB EXCEEDING 5 BRIDGE HOURS

	Pilots	Ave Bridge Hrs/Job	Bridge-Hrs Per Pilot Per Day	Average Jobs/Day
Puget Sound	43	5.9	2.83	0.89
CRPPA	**106**	**5.3**	**5.12**	**0.97**
NOBRA	120	5.4	3.46	0.64
Columbia River	43	7.5	1.01	0.38

Source: DMA analysis of 22 pilot organizations, 2013 with latest traffic data

- Of the 22 organizations, the CRPPA has the fourth highest average bridge hours per day and is exceeded by only one other association with long trips, the Puget Sound Pilots, which is slightly higher at 5.9 hours per day. The difference is that Puget Sound pilots average 0.89 jobs per day while CRPPA average .97 jobs per day. And this is where averages are no longer meaningful. Frequently, CRPPA pilots must initiate two 5-7 hour jobs per day, leaving much less time for quality rest and restoration.

- For the 22 organizations, the average time of 3.77 hours of bridge time points to the limitation that at least half the pilots analyzed face. Assuming an average bridge time of four hours, the additional time for tasks associated with that assignment brings total task time to perform a job to between 5 and 7 hours. If a second job were performed by a pilot in a day, the work day would extend to between 12 hours (assuming no additional task time to begin the second job) and perhaps 14 hours(if some task time and/or scheduling delay occurs). Clearly, a 12-14-hour work day would not permit the pilot to be rested and restored for the second assignment.

- Of the four organizations with average jobs that exceed 5 hours, the CRPPA has the highest number of jobs per day,

- Organizations with much shorter average trips than the CRPPA may be able to deal with surges in activity by lengthening a pilot's day from 5 to 7 hours for one additional job within a 10 hour period, but for CRPPA pilots an extra job tends to reduce rest and restoration time to less than 10 hours per day

For further comparison, DMA organized the similar metrics for the following associations: the top five associations in the 22-association group; all Louisiana state pilot associations; and other significant groups on the Gulf coast in Exhibit III. A key insight is that the average CRPPA pilot, with 5.12 bridge hours per day, works more hours that any Gulf pilot set forth below.

Exhibit III-9

KEY METRICS OF MOST ACTIVE, LOUISIANA AND GULF PILOT ASSOCIATIONS

	Pilots	Ave Bridge Hrs/Job	Bridge-Hrs Per Pilot Per Day	Average Jobs/Day
Mobile, AL	12	4.4	6.53	1.49
Savannah, GA	19	3.5	6.33	1.82
Puget Sound, WA	52.5	5.9	5.26	0.89
CRPPA, LA	**106**	**5.3**	**5.12**	**0.97**
Corpus Christi/Ingleside, TX	13	3.3	4.81	1.44
Lake Charles, LA	17	4.0	4.24	1.06
Houston, TX	86	4.7	4.22	0.89
NOBRA, LA	120	5.4	3.46	0.64
Sabine, TX	28	2.4	3.26	1.36
Assoc. Branch Pilots, LA	45	2.2	3.13	1.21
Galveston-Texas City, TX	14	1.9	2.57	1.35

Source: DMA analysis of 22 pilot organizations, 2013 with latest traffic data

IV. FACTORS AFFECTING PILOT PRODUCTIVITY

The analysis presented above in Chapter III provides a meaningful and rigorous analysis of bridge time and shows that the CRPPA pilots have been highly-utilized. These facts necessarily raise a question:

- Is the number of CRPPA pilots adequate to meet the variations in peak demand that forces pilots to work for durations and at times of the day when they are not able to be sufficiently rested and restored to perform their assignments with their full mental and physical capability?

The preceding determinations in Chapter III of productivity, hours worked, miles sailed, and jobs per pilot per year are all averages. However, the shipping traffic calling in the Lower Mississippi River does not abide by averages. Terminal operations, tides, weather, daylight, ship loading and unloading schedules, market and cargo trading conditions, hurricanes, and many other factors lead to variations in the pace of demand. The capacity of state pilot associations must meet peak demands so that ships are not delayed at great cost to the ship-

owner, the cargo or passengers aboard the ship; and the terminals, railroads, barge lines, pipelines and other logistics elements that comprise the Lower Mississippi River.

The majority of cargo and ship calls on the Lower Mississippi River are bulk commodities that are loaded and discharged 24 hours per day. This creates a round-the-clock movement of ships and demand for pilotage services. Thus, pilots do not have a dominant activity in the early morning before longshore shifts as may occur in major container ports, where ships arrive prior to the "morning shift" and depart at the end of the morning or second shift. On the Lower Mississippi River, rested and refreshed pilots must be available at all hours of the day or night. The length of tasks on the river and "short trips" can extend to 10 or 12 hours each. Consequently pilots cannot be fit into consecutive "day" or "night" shifts that would promote regular sleep and work schedules. Rather, river pilots must work "day and night" and thus need longer periods of rest and restoration in order to overcome the fatigue that comes with the loss of regular periods of rest. The centuries old ocean-going watch-standing of "4 hours on, eight hours off" followed by another "4 on, 8 off", reflects the wisdom to recognize that a person must preserve sleep rhythm and have rest – not just sleep, but time to eat and restore through relaxation.

Within these restrictions, CRPPA encounters other challenges to efficiency. The trips undertaken by CRPPA pilots vary enormously in length, time, and location and vary from less than 2 hours to more than 8 hours of bridge time. These variations reduce efficiency and are an unchangeable factor in the efficiency of pilotage along this stretch of the Mississippi. It may be that a pilot is rested and available and yet cannot efficiently perform the next task because his prior assignment landed the pilot many miles away from the next assignment, necessitating time on task to depart the ship for shore, land transportation to the next ship, and the effort to board the next ship, either at a land-based terminal, or in midstream at a mooring buoy or anchoring point. Given the lengthy time requirements of particular tasks, it is also common that a pilot will complete one assignment and have insufficient time remaining within reasonable watch-standing guidelines to complete a second assignment with a 24-hour period. The average time it takes to perform a river assignment is approximately nine hours. Two average trips would amount to 18 hours a day.

V. DEMAND VOLATILITY – THE CRITICAL ELEMENT TO DETERMINE THE NUMBER OF PILOTS REQUIRED

Ships are daily hire rates are measured in tens of thousands of dollars per day and the cargoes aboard them are worth many tens of millions of dollars and bear financing and inventory costs representing additional tens of thousands of dollars per day. Terminals and berths also have critical value because their availability to handle cargo or passengers reduces the costs of delay of ships and cargoes for passengers and cannot be recovered if their use is lost or disrupted. As a consequence, ships should not wait for pilots, pilots should

be available to pilot ships promptly. This means that sufficient pilots must be available to meet peak daily demand periods, year-round, and on short notice.

This requirement to meet peak demand all-day every-day means that fully qualified pilots must be available for every assignment. They must be sufficiently rested, alert, fit and in the proper location. The peak day of demand and sustained high levels of demand over consecutive days help to determine the qualified capacity of the pilots on duty. Only "Acts of God" under legal and contractual terms should excuse a service provider from meeting the required pace and capacity

The key factor in reducing the number of tasks that pilots can perform given their availability is the volatility of demand for pilot services. CRPPA provides pilot services as vessels on the river require them. This means that CRPPA cannot task pilots in a way that suits CRPPA's efficiency, but rather must task pilots in a way that best serves river traffic. No vessel should be delayed due to pilot availability. What this means from CRPPA's perspective is that pilots must be made available to serve, even if it is unlikely they will be called upon that day to pilot vessels. CRPPA must prepare for peaks in demand.

The day to day demand for CRPPA's river services varies considerably, as these charts of daily demand show. The number of daily river pilot jobs for the 8 year period 2005 (3,822 days) through 2012 is shown below in Exhibit V-1. The variation in peak demand can be summarized as follows:

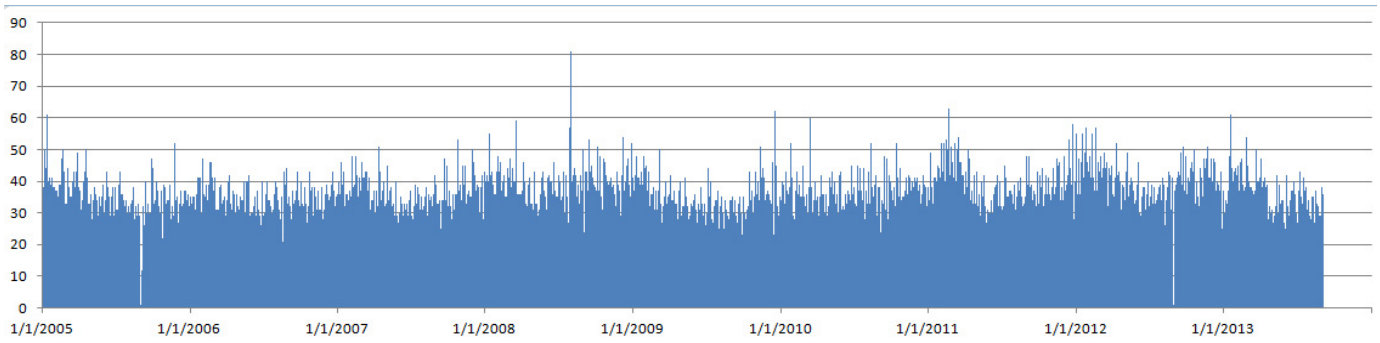
- An absolute peak occurred in 2008 at 75 jobs during one day[3]
- 60 to 65 river jobs in a 24-hour period occurred four times
- 55 to 60 river jobs occurred four times
- 50 to 59 river jobs occurred 16 times
- The average number of river jobs per day over the 8-year period was 47

River jobs for the more than 102 month period from January 1, 2005 through August 30th, 2013 are plotted in Exhibit V-1 below. The daily activity ranges from more than 70 jobs per day to fewer than 30. In general demand tends to rise towards the autumn and during the winter, with the export of autumn harvest of corn, soybeans, wheat and other grains. Some increases in oil refinery activity and coal exports also occur to meet seasonal heating and lighting demands. The average number of river jobs per day between 2005 and 2012 was 32 and in 2012 the average was 35.

[3] DMA found the reported number of pilot jobs to be 81, but this was corrected by DMA to 75 because CRPPA had coded six lightman repositionings as river jobs on that day.

Exhibit V-1

Daily River Jobs (2005 thru Aug. 2013)



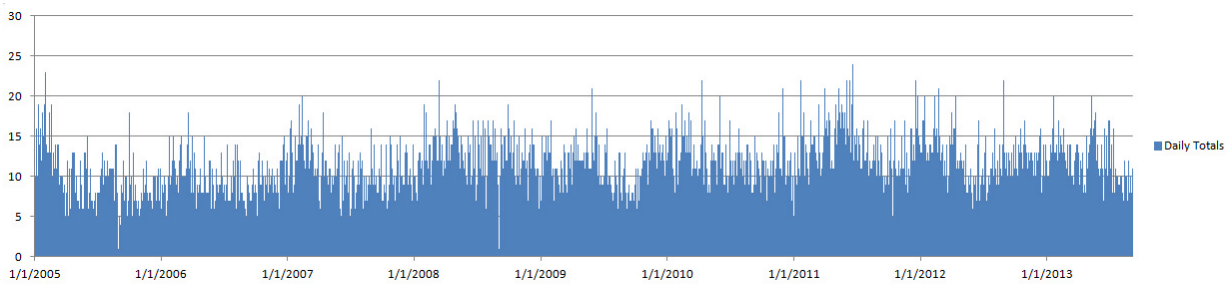
Source: CRPPA statistics, DMA analysis

The CRPPA met their busiest day in 8 years by calling in off-duty pilots and raising its number from approximately 43 ship-handling pilots to 51. Approximately nine off duty pilots were called in. Only one river pilot had to handle 3 river jobs. Approximately 15 pilots handled two jobs, typically performing one long trip, then taking a rest period of 8 or more hours, then performing one short trip.

The number of harbor jobs for the eight-year period is depicted below in Exhibit V-2. The CRPPA usually assigns 5 pilots to harbor work and will increase this to 6 when necessary. This cadre of pilots can be augmented by more pilots, or pilots can perform more than 2 jobs per day. During the 8-year period thru 2012, the average number of harbor jobs per day was 9.1 jobs. This means that the average number of jobs performed daily by 5 pilots would be approximately 1.8. The greatest number of jobs was 24, which occurred once during the 2005 to 2012 period.

Exhibit V-2

Daily Harbor Jobs (2005 thru Aug. 2013)



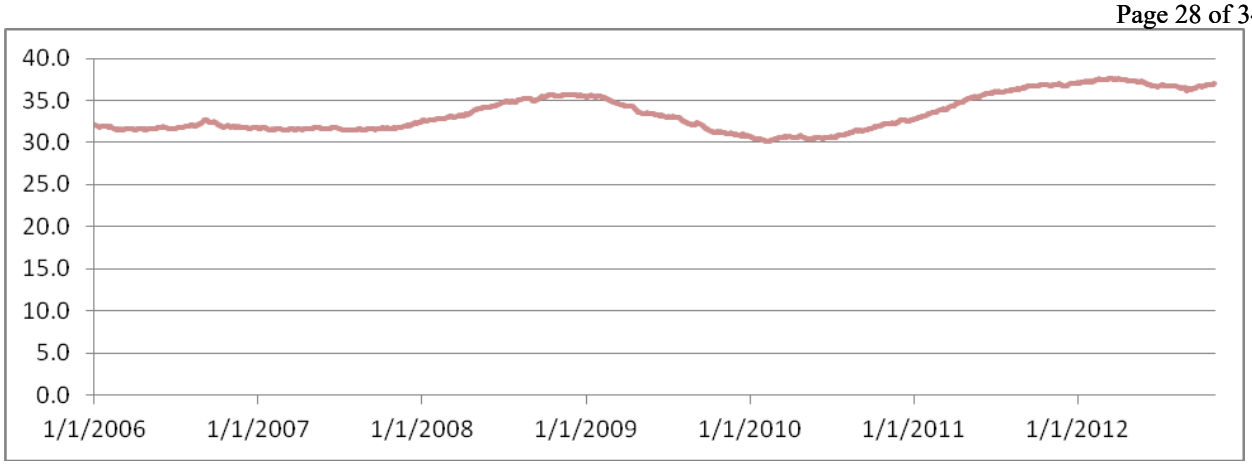
During 2012, pilot days above the approximate available pilot count of 44 ("on the ladders") occurred with the following distribution:

- 2 days with 60 or more assignments per day (both 62)
- 7 days with 55 to 59 assignments
- 28 days with 50 to 54 assignments
- 18 days with 45 to 49 assignments
- 36 days with 40 to 46 assignments

The average number of daily pilot trips has increased from 32 to approximately 36 over a seven year period, which is approximately 2% per year. This is shown below. The recession during late 2009 and early 2010 resulted in a loss of approximately five trips per day, which began to recover in mid-2010. Peak activity occurred in early 2012 at approximately 37.5 trips per day.

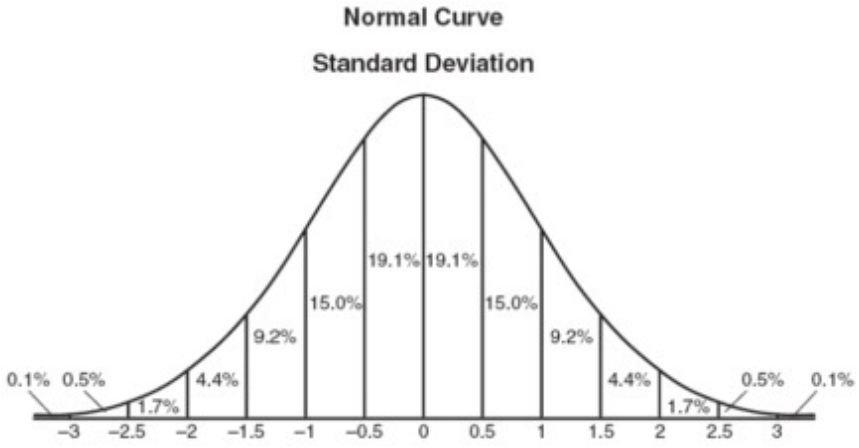
Exhibit V-3

Running Daily Average of River Trips 2006 to 2012



Standard deviation is a calculation of distributions and the average deviation from averages that encompasses approximately two-thirds (68.5%) of all outcomes, including two-thirds of the activity exceeding the average (and two-thirds of the activity below the average). Two standard deviations encompasses 95.4% of all outcomes and three standard deviations encompasses 99.5% of all outcomes. A typical distribution is shown in Exhibit V-4.

Exhibit V-4



DETERMINATION OF AN APPROPRIATE NUMBER OF CRPPA PILOTS

DMA has considered the nature and variation of CRPPA pilot demand and the challenge of providing rested and restored pilots to meet its needs. It has spoken with CRPPA pilots and evaluated the patterns and activities of pilots on a broad high level and also on a narrow pilot and situation-specific basis, including day-by-day analysis. It has also tracked the manner by which the CRPPA has managed days of peak demand. It has also considered the 31-47%

higher number of bridge hours per pilot per year performed by the CRPPA relative to other Louisiana organizations and its higher bridge hours per year relative to the vast majority of Texas state pilots. Based on these considerations, it has observed that:

- The nature of the great majority of CRPPA pilot days involve long trips with task durations of 7-11 hours and pilots are frequently initiating more than one such task within a 24-hour period. The rest and restorative break between these jobs is of varying lengths and typically begins within the 12 hours of awaking. The 8 to 12 hours of rest therefore typically falls during a time when the pilot should be "awake". Should the pilot then begin a second assignment (15 to 23 hours after waking for the first job), the pilot is likely to be beginning work at a time when he would be prone to begin a "normal" sleep..

- Ironically, if a pilot can rest well approximately 12 hours into their work day, it is because they were more tired (and perhaps exhausted) from poor rest and restoration the previous day.

- This exposure to being un-rested raises the risks of a mishap due to this stress and strain and should not be perpetuated as the status quo

- The nature of the CRPPA work is very different from the durations of most pilot jobs.

As a consequence, DMA created a careful examination of criteria to better staff the CRPPA. This is based on these principles:

- No pilot should perform more than one river trip per calendar day Each river job entails 5-8 hours of intense focus, plus 3-5 hours of additional task time, plus the need to restore (eat, wash, relax and recreate) and to sleep at a time when the pilot feels more ready to sleep. Thus after the 8 to 13 hours of the task time, the pilot should have 2 or 3 hours to wind-down , and the opportunity for 8 hours of sleep, These cycles are 18 to 24 hours long – and should be respected.

- Harbor pilots should not perform more than three harbor jobs or 7 hours of bridge time per 24-hour period or calendar day. The rationale is similar in nature, and recognizes that jobs do not always fit together in succession. Their days may extend from 10-12 hours of total task time, and thus ample rest must be provided

- To respect the above work/rest guidelines, the CRPPA must be able to meet approximately 98% of all high-side days of demand with an appropriate number of pilots.

The basis of the determination of these numbers appears in Exhibit V-5. This model:

- Provides a rigid, rigorous analysis of river and harbor daily jobs activity

- Establishes the magnitude of standard deviation above and below it (averaged during the past three years) and two standard deviations to cover more than 98% of all annual activity

- Ensures that pilot activity is limited to these guidelines, while recognizing that both river and harbor pilots can occasionally accommodate more than three harbor jobs or one river job per day

- Adds the requirements for VTS pilots providing 24/7/365 coverage

- Allows for vacation, training time away from New Orleans, an allowance for un-expected illness, injury, or family emergencies of more than a few days

- Allows for 1.5 managing pilot positions

- Is conservative in that it is based upon a three –year average which was approximately 1-2 pilots lower in average daily demand

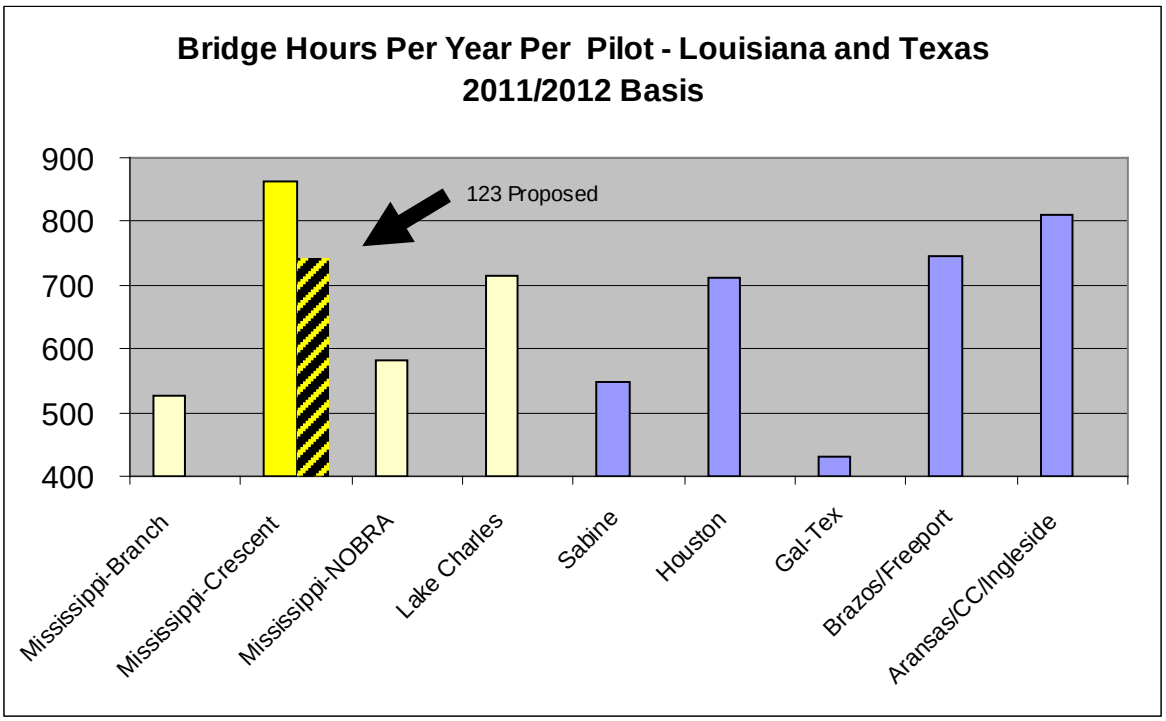
Exhibit V-5

CRPPA Pilot Requirements Model		
Operating Factor		
Peak Moves per Day Observed 8.68 years	72.0	Multi-day peak observed
Peak Moves under proposed model	66.6	per day - 98.5% of days accommodated
Harbor Trips Per Day - Average 3 yrs	10.0	Intra day
Harbor Trips Per Day @+2 std deviations	17.2	Intra day
Harbor Trips Per Pilot Per Day Maximum	3.14	assumes that once per week, harbor pilot can perform a fourth trip
Harbor Pilots Required Per Day	5.5	(versus 5 or 6 at present)
River Trips Per Day - Average	33.6	Intra day
River Trips Per Day @+2 std deviations	49.4	Intra day
River Trips Per Pilot Per Day Maximum	1.07	assumes that pilots with short trips can perform extra short trip or harbor job once per 14 days
River Pilots Required Per Day	46.2	(versus 37 or 38 at present)
CRPPA Pilots Required Per Watch	51.6	harbor pilot plus river pilot requirements added
VTS Pilots Required	6.0	on two watches (3 shifts/day for 365 days, on and off duty weeks)
Vacation Days	8%	2 weeks over 26 weeks on duty
Training Days	1%	1 week per 130 weeks on duty
Allowance for Leave	2%	for illness, injury, family crisis
Executive Officer Equivalents	1.5	pilot equivalents
Total Pilots Required	**122.5**	
2011/2011 Hours Worked	91,400	as per Exhibit III-4
Bridge Hours Per 106 Pilots	862	
Bridge Hours Per 120 Pilots	743	
Bridge Hours Per Other Louisiana Pilots		
Bridge Hours Per All Other US Pilots (628)		
Formula to determine Total Pilots Required:	2 x pilots required per watch+ 6 VTS pilots x (1 + allowance for leave)*(1+pct allowance for training)*(1+pct allowance for illness, injury, and family crisis) + (1.5 executive officer equivalents)	

As shown above, the total requirement is 122.5 pilots. It does not round up for the 5.5 harbor and 46.2 river pilots, or the fact that 122.5 pilots are required. In this way and others, it allows for the probability that peak river and peak harbor demands are unlikely to fall on the same day. Thus pilots can be shifted from river to harbor or vice versa.

Even despite this proposed increase in CRPPA from 106 to 122 authorized pilots, the CRPPA's bridge hours will remain higher than any other Louisiana state pilotage organization, and higher than all Texas state pilot organizations with the exception of one. The impact on CRPPA bridge hours from 106 to 123 and relative bridge hours is shown in Exhibit V-6.

Exhibit V-6



QUALIFICATIONS OF DIBNER MARITIME ASSOCIATES LLC

Dibner Maritime Associates LLC ("DMA") is a management consulting firm specializing in service to the maritime industry. DMA assists a wide range of clients in developing effective strategies and operational programs to compete and grow in global and domestic transportation, logistics, and commodity-based marketplaces. DMA was founded by, and its principal continues to be Brent Dibner. He is supported by associates based in the US and Latin America who have formal graduate educations in management, logistics, and ocean systems management as well practical experience and merchant marine officers and managers.

During a 25-year consulting career at Mercer Management Consulting, Inc., Mr. Dibner directed all consulting activities to the maritime industry and served the bulk marine transportation, cruise, materials processing, ship building/repair and bulk logistics industries. Mr. Dibner's clients include many of the world's largest integrated energy companies, leading independent ship owners, shipyards, coastal and inland ship and tug-barge operators and the financial institutions that serve marine transportation industries. DMA is a management consulting firm which provides a range of services to the maritime industry, including ship owners, cargo interests, shipyards, and government agencies (www.dibmar.com). Mr. Dibner founded Dibner Maritime Associates LLC in 2002 and continues to be of counsel to Oliver Wyman Inc., the successor to Mercer Management Consulting.

Mr. Dibner has presented analyses and reports on pilot compensation and other operational issues before pilotage commissions in the states of Florida, Louisiana, Texas and Washington, and has served pilot organizations in those states. He has also participated in international pilotage compensation studies for the Panama Canal Commission. He has been involved with pilotage compensation and operations matters since the 1980's.

Mr. Dibner's commercial clients have included: Arco Petroleum, BP Amoco, Caltex (Thailand), Chevron, Citicorp, Clipper Group (Denmark), Conoco, Exxon, Florida Fuels, Lehman Brothers, Leif Hoegh (Norway), Liberty Maritime, Lisnave (Portugal), Maersk Lines (Denmark), Mobil Oil, Moran Towing, Occidental Petroleum, Overseas Shipholding Group, Orient Overseas Container Line (Hong Kong), PDVSA (Venezuela), Pemex (Mexico), Phillips Petroleum, Royal Caribbean Cruise Line, Seacor Holdings, Shell Oil Company, SK Shipping (Korea), Stolt-Nielsen (chemical tankers), TECO Shipping and Texaco, UBS (Germany), Weyerhauser/Westwood Shipping and many others.

Mr. Dibner has also provided consulting services to governments and industry organizations including Intertanko (The International Association of Independent Tanker Owners), the United States Navy, the United States Coast Guard, the American Bureau of Shipping, the American Waterways Operators, the US Maritime Administration, the Royal Navy (UK), the Panama Canal Commission, the American Petroleum Institute, the American Bureau of Shipping, and many industry associations throughout the world. He has testified before the United States Senate, the Federal Maritime Commission, and in various admiralty and civil marine proceedings.

Prior to his consulting career, Mr. Dibner designed merchant and naval ships in the United States, the United Kingdom, and Israel.

Mr. Dibner earned a B.S. in naval architecture and marine engineering from the University of Michigan and an M.B.A. from the Harvard Graduate School of Business Administration. He has served as a trustee, chairman, president and officer and overseer of several educational, historic and philanthropic institutions.

Mr. Dibner testified as an expert on several occasions before the United States Senate, the Federal Maritime Commission, State Regulatory authorities, and various admiralty and civil marine proceedings in federal and state courts.

BEFORE THE
LOUISIANA PILOTAGE FEE COMMISSION

RIVER PORT PILOTS FOR THE PORT OF NEW ORLEANS, DULY ORGANIZED AS THE CRESCENT RIVER PORT PILOTS' ASSOCIATION, EX PARTE

DOCKET NO. P14-001

In Re: Request for Increase in Approved Pilot Complement; Increased Funding for Necessary Additional Manpower; Upward Adjustment of Target Average Annual Pilot Compensation; Upward Adjustment of Transportation Tariff Rates; and Related Relief Pursuant to La. R.S. 34: 1122.

AFFIDAVIT

STATE OF MASSACHUSETTS
COUNTY OF MIDDLESEX

I, Brent Dibner, being duly sworn, state that the above and foregoing report, and the facts, data, assumptions, and conclusions contained therein are true, reliable and accurate to the best of my knowledge, information, and belief.

Brent Dibner

SWORN TO AND SUBSCRIBED before me this 7 day of April, 2014.

Notary Public

DAVID R SHEAFFER
Notary Public, Commonwealth of Massachusetts
My Commission Expires August 07, 2020