

Submission to Zoning Board – Captain Eric Knott, State Appointed Harbor Master

Presented by Harbor Management Commissioner Robert Karp

Mr. Chairman, Members of the Zoning Board. Thank you for the opportunity to make this presentation. ~~Please excuse my absence, but I am presently in Savannah, GA performing safety audits and analysis on a large tug operation. Harbor Management Commissioner Robert Karp has kindly agreed to present on my behalf.~~

- I am Eric Knott and have been appointed State Harbor Master for Stamford. I hold sea going Masters' Certificates of Competence from both the US and UK administrations. I have 40 years' experience of commercial and recreational boat operation and currently serve as a safety manager for a large US tug boat Company. I specialize in incident investigation and risk assessment. My full credentials and experience are attached to this presentation and have been submitted to you electronically.

My authority and responsibilities for Stamford Harbor derive from CT General Statute 15-1 and include, *"... general care and supervision of the harbors and navigable waters ..."* and responsibility *"... for the safe and efficient operation of such waters ..."*

- In my recent submission to the planning board (copy attached and submitted electronically), I expressed surprise and concern that no input from either myself or the Police Harbor Unit had been sought concerning navigational risk, or mitigation of those risks, as they related to the proposed boatyard development in the west branch of the harbor. A full and detailed risk assessment cannot be properly completed in a few days, but I now intend to identify some of the obvious risks for your consideration.
- Three circumstances must be considered when assessing the navigational risk in the west branch; how things were when the Brewers Yacht Haven West Marina was in operation, how things are now, and what would happen if the proposed boatyard were to be built and fully operational.

There is one very basic difference between the former Yacht Haven West marina and the one designed for the proposed Davenport boatyard which is fundamental to navigational risk. Previously, tugs and barges servicing the commercial operations in the west branch transited past the Yacht Haven docks in a straight line. At the proposed boatyard, however, the docks would be in close proximity to the area where the tugs/barges maneuver and dock. This is where the loss of tug/barge control is potentially at its greatest.

- This year, barge operators in the west branch have begun using substantially larger barges than have traditionally been seen in the harbor. This has allowed a more efficient operation with modern barges. Regardless of barge size, tugs must commit to travelling the west branch when they make the turn to port at the junction of the east and west branches, almost half a mile south and out of sight of the proposed boatyard. From this point, the tugs are committed heading to their destination and/or turning basin at the north end of the west branch. They have no room to stop, wait or turn and nowhere else to dock. While operation of the larger barges is safe, clearance distance between vessel and structure in the upper portion of the west branch is squeezed.
- The developer's proposal places docks for recreational boats in very close vicinity to commercial barge docks in an area that is presently available for barge maneuvering. The submitted plans omit details of the commercial docks and do not fully represent their actual proximity. This can be misleading. Placing the boatyard docks as proposed increases the possibility of collision. Only a detailed assessment can quantify the risk. This has not been done.

- The proposed dock at the northeast corner of the development is intended to accommodate both fuel (diesel and gasoline) and a sewage pump-out station and is closest to maneuvering tugs and barges. This dock can accommodate 1 boat up to approximately 30 feet long, more boats if a neighboring dock is vacant. Other boats waiting for service would have to station themselves nearby while waiting their turn at the dock. The only place this could occur is within the approach zone of the barge docking and maneuvering area. The risk of collision with tugs and barges, and the risk of the tugs or barges running aground or into waterside structures while trying to avoid the recreational boats there is very real and could result in property damage – and worst case scenario - injury and even loss of life. For comparison, it should be noted that Harbor Point’s temporary fuel dock can safely accommodate more than 12 boats queuing for fuel, thus substantially mitigating risk of conflict between them and passing commercial traffic at this location.

The proposed Davenport fueling and pump-out dock, on the other hand, potentially places recreational boaters at the end of a marine cul-de-sac with nowhere to go to avoid transiting and maneuvering tugs and barges.

- In the event of a maneuvering tug/barge losing full or partial control, the most exposed structure would be the fuel/pump out dock. If impacted, the possibility therefore exists of resulting pollution from a gasoline or diesel spill or untreated biological waste. While fuel storage tanks can be expected to be land based with automatic pressure shut-off valves intended to minimize pollution, the sewage pump-out normally stores waste in tanks on the dock posing an even greater environmental risk in the event of a tug/barge interaction.
- Over the past two winters, the harbor has partially frozen over, fully frozen in the more northern sections. There have been 4 documented incidents in the west branch of serious ice damage to boats, docks and structures resulting from transiting oil barges. The location of the proposed boatyard docks and the exposed position of the fuel and pump out dock increases the likelihood of damage being caused by commercial traffic “pushing” the ice.

The existing fuel dock at Harbor Point, and that of the now defunct Yacht Haven West marina, is exposed to a similar risk although at a much lower level. This is due to their location being further downstream in the west branch where ice does not form so quickly; and when it does, the ice has space to “move” at the passage of a barge rather than piling up against and damaging nearby docks or structures.

- There is no evidence that a thorough risk assessment and mitigation plan has been undertaken for these so-called on-the-water activities resulting from the proposed boatyard. While the proposal recognizes the potential for increased interaction between recreational vessels and commercial traffic, the proposed mitigation (in Marine Tec’s peer review) advises “... *boatyards and marina operators* ...” to “... *develop a communication channel with the harbor master that keeps them informed of tug and barge schedules.*” This recommendation is flawed.

Although this idea would work for a harbor with a full time harbor master or marine office, Stamford has neither. The positions of harbor master and deputy harbor master are part time and effectively unpaid. The collection and dissemination of traffic information regarding tug/barge movements - subject to constant weather and operational updates – is beyond the present capabilities of the harbor master or the City. Similarly, the Police Harbor Unit does not have the resources to assume this responsibility. Although such a system could be developed at significant expense to the City, the suggestion by Marine Tec to establish a harbor communications command and control shows a fundamental lack of understanding of the actual circumstances existing in Stamford harbor.

This submission is not intended to be a full navigational risk assessment. My intention is to highlight some apparent and so far ignored risks so that you, members and staff of the Zoning Board, are able to better assess the proposal before you.

Since my submission to the planning board, I have been contacted by representatives of the developers and proposed boatyard operator to assist them with identifying, assessing and mitigating the navigational risks. I have also been advised that it is inappropriate for a state appointed official to actively assist an applicant at this late stage in the application process. That said, the developer's apparent lack of knowledge of marine operations in our harbor and seemingly inattention to the potential risks as enumerated is of great concern to the harbor master.

To conclude, it is my professional opinion as Harbor Master that the actual risks posed by the boatyard docks where located have not been fully assessed or mitigated and thus present an unacceptable risk to people, property and the marine environment. ~~Should there be any questions, Harbor Management Commissioner Karp has a cellphone number (203 258 6103) via which I can be reached at any time.~~

Respectfully submitted,

Captain Eric Knott MSO

Associate Fellow of the Royal Institute of Navigation

Member of the Nautical Institute

State Harbor Master for Stamford CT

203 219 2334

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Captain Eric Knott *MSc*

Associate Fellow of the Royal Institute of Navigation
Member of the Nautical Institute

Qualifications, Certifications and Experience

INVESTIGATION TRAINING and QUALIFICATIONS

Certificate, License or Training	Date of Issue	Issuing Authority
Accident Investigation Course and Certificate	11/1/1978	City and Guilds Institute of London
Legal Course - Maritime Expert Witness	12/7/1999	Thomas Sands Training, London
Certificate of Units Credits - Competencies in Training & Development / Vocational Assessor	8/1/2002	City and Guilds Institute of London
Daubert Challenge Louisiana State Court	2006	Nelson Faye, Attorneys at Law
Lead Auditor ISO 9001:2000	4/28/2006	Georgia Technical Institute
BP Contactor's Safety Seminar	5/12/2006	British Petroleum, Chicago
Incident Command System (ICS) for Single Resources and Initial Action Incidents	7/14/2006	Emergency Management Institute / FEMA
Introduction to National Emergency Management Systems (NIMS)	7/19/2006	Emergency Management Institute / FEMA
Decision Making and Problem Solving	7/19/2006	Emergency Management Institute / FEMA
IS-00242 Effective Communication	8/8/2006	Emergency Management Institute / FEMA
IS-00240 Leadership and Influence	8/8/2006	Emergency Management Institute / FEMA
IS-00240 Principals of Emergency Management	8/8/2006	Emergency Management Institute / FEMA
Marine Surveying - Diploma with Merit (Accreditation in ISM code)	9/2006	Lloyd's Maritime Academy, London and North West Kent College
Auditor Orientation - Responsible Carrier Program (RCP) Orientation and Examination	2/13/2007	American Waterways Operators
RCP Auditor Re-Certification course and exam.	2/14/2007	American Waterways Operators
Maritime Security Implementation, Drills, Exercises and Audits	5/9/2008	American Bureau of Shipping (Consulting)
Accident Investigation Orientation for Marine Professionals	10/8/2008	National Transportation Safety Board (NTSB)
Marine Accident Investigation	1/30/2009	NTSB
Auditor Examination and Certification - Responsible Carrier Program	2/7/2009	American Waterways Operators
Auditor Familiarization - Responsible Care Management System	2/19/2009	American Chemistry Council
Cognitive Interview Series	2/2010	National Transportation Safety Board (NTSB)
OSHA 2011 Update for the Maritime Industry	2/24/2011	Signal Insurance / OSHA
Marine Investigation - Diploma with Distinction	3/29/2011	Lloyd's Maritime Academy, London and North West Kent College
Certificate in Naval Architecture	9/1/2011	Lloyd's Maritime Academy, London and North West Kent College
Uninspected Towing Vessel Examiner Course (02-12) and Certificate	3/2/2012	USCG Marine Safety Branch
AWO RCP Auditor Certification # 2014-12-165	11/5/2014	Towing Vessel Inspection Bureau
Master's Degree (with honors) Marine Surveying	3/9/2015	Middlesex University and Lloyds Maritime Academy of London

MARITIME CERTIFICATION and QUALIFICATION

Certificate, License or Training	Date of Issue	Issuing Authority
VHF (Marine) Radio Operator	10/23/1985	UK Home Office
Boat Master's License (Class 2)	2/19/1986	UK Department of Transport (Marine Office)
Offshore Navigation	7/15/1988	UK Department of Transport (Marine Office)
Basic Sea Survival	2/17/1991	Sea Fish Industry Training Association
Basic Fire Fighting and Prevention	5/16/1992	Sea Fish Industry Training Association
Yachtmaster (Offshore) 200T Certificate of Service (Commercial Vessels)	9/22/1993	UK Maritime and Coastguard Agency
Basic Marine Diesel Engine Maintenance	11/15/1994	Royal Yachting Association
International Operator's Certificate (Pleasure Craft) up to 24 meters / 80T (CEVNI endorsed)	3/23/1995	Royal Yachting Association
Examiner for International Operator's Certificate	3/23/1995	Royal Yachting Association
Yachtmaster (Offshore) 200T Certificate of Competence (Commercial Vessels) (endorsed as "Instructor")	9/20/1995	UK Maritime and Coastguard Agency
Maritime Meteorology Course	11/25/1995	UK Meteorology College, Shinfield
Long Range Radio Operator's Certificate (incl. vhf, HF,MF,InMarSat, GMDSS)	3/12/1997	UK Radio Communications Agency
Radar Instructor	3/20/1999	Royal Yachting Association
National Power Boat Certificate (Coastal Endorsement)	3/11/2001	Royal Yachting Association
Risk Assessment / Safety Awareness Instructor	11/19/2001	UK Maritime and Coastguard Agency and Sea Fish Industry Training Association
Sea Survival Instructor (STCW / MNTB compliant)	12/6/2001	UK Maritime and Coastguard Agency and Sea Fish Industry Training Association
Fundamentals of Instructor Training - Instructor First Aid, CPR, Professional Rescuer	7/10/2003	American Red Cross
USCG Operator of Uninspected Passenger Vessels (UK citizen at time of issue)	8/5/2003	United States Coast Guard
USCG Authority to Instruct; OUPV, Master 100T, Deck License Renewal, Sail, Towing, First Aid/CPR	9/11/2003	United States Coast Guard
FCC vhf License	10/3/2003	Federal Communication Commission
Connecticut State Safe Boating Instructor and Examiner	4/4/2004	Secretary of State, Hartford CT.
Crew Endurance Management Training (CEMs)	6/6/2006	Moran Towing Corporation
Markey DESF-48 Winch Function/Operation	7/12/2006	Markey Engineering / Moran Towing Corporation
Crew Endurance Management Coach	8/18/2006	United States Coast Guard

MARITIME CERTIFICATION and QUALIFICATION

Certificate, License or Training	Date of Issue	Issuing Authority
Drug and Alcohol Training for Supervisory Personnel	12/29/2006	Moran Towing Corporation
Slip, Trip and Fall Avoidance in the Oil, Offshore Oil and Maritime Industries	11/14/2007	Moran Towing Corporation
Slips, Trips and Falls Prevention for Inland Waterways and Maritime Personnel	11/14/2007	Moran Towing Corporation
Medical Clearance for Voluntary Respirator Use	11/14/2007	3M Health and Safety Services
Vessel Security Training (Moran)	11/26/2007	Moran Towing Corporation
Instructor, Supervisor and Assessor Qualification Course (Train-the-Trainer)	5/9/2008	RTM Star Center (USCG/STCW/IMO accepted)
Merchant Mariner's Document	7/17/2008	United States Coast Guard
Master's License (US flag)	7/17/2008	United States Coast Guard
Lock-Out / Tag-Out	8/7/2008	Fleet Environmental Services
Confined Spaces for General Industry	8/7/2008	Fleet Environmental Services
Hazard Communication	8/13/2008	Fleet Environmental Services
Means of Egress and Fire Protection	8/13/2008	Fleet Environmental Services
Crew Endurance Management Training and Certification as "Expert"	4/9/2009	United States Coast Guard
Drug and Alcohol Specimen Collection	5/27/2010	American Maritime Services / United States Coast Guard
Coastal Safety at Sea Seminar (attendee / presenter)	2/7/2015	US Sailing
Professional Practices and Responsibilities	9/4/2015	Royal Yachting Association

MEMBERSHIPS

Certificate, License or Training	Date of Issue	Issuing Authority
Elected - Member of the Royal Institute of Navigation	9/22/1994	Royal Institute of Navigation
Elected - Associate Fellow of the Royal Institute of Navigation	8/1/2002	Royal Institute of Navigation
Elected - Companion of the Nautical Institute	1/21/2004	Nautical Institute
Notary Public, Connecticut	3/9/2004	Secretary of State, Hartford CT.
Elected - Full Member of the Nautical Institute	7/1/2010	Nautical Institute
Qualified and Elected - Member of Towing Vessel Inspection Bureau	11/12/2014	Towing Vessel Inspection Bureau (TVIB)

EXPERIENCE and POSITIONS

Maritime

Dates	Vessel / Company	Position	Responsibilities
1973-	"Patricia D " Fishing Vessel # LI.226	Deckhand	Learning the trade.
1984-	"Dawn Star " Fishing Vessel # PW.367	Owner / Master	All aspects of operation and maintenance
1986-	"Gerry's I" Fishing Vessel # NN.98	Owner / Master	All aspects of operation and maintenance
1989- 1993	"Jenifer's Pride" Fishing Vessel # LI.118	Owner / Master	Contract with shipyard for new build. All aspects of operation and maintenance
1993	"Lady Marina" Fishing Vessel # LI.80	Mate	Deck operations and Relief Master

Safety and Training

1994- 2003	Peter's Sea Tech PLC (Sea training Establishment) Chichester UK	Training Manager, Principal Instructor,	Operation of 2 owned and (up to) 12 contract/fleet vessels operating throughout Northern Europe. Responsible for crewing and training, routine and preventative maintenance (incl. shipyard periods) as well as 'at sea' and classroom training.
2003- 2006	Landfall Navigation -Stamford CT. USA	Training and Commercial Safety Manager	Set up and run marine training center, supply safety and navigation equipment to shipping companies, state and federal agencies and approved foreign agencies.
2006 - to date	Moran Towing Corporation	Assistant Manager - Quality, Health, Safety, Security and Environmental Department	Responsibilities include, but not limited to; conducting internal audits against company SMS, ISM, RCP and applicable CFR's. Internal /external audits on 3rd party/partner companies as above and ISO 9000. Investigations of incidents and casualties involving company personnel or equipment and the presentation of such reports to the board with safety recommendations. Developing company safety and operating policy. Developing, delivering and evaluating crew training programs to meet company, industry and regulatory requirements.

Consulting

1974- 1990		Accident investigation	Assist UK Police Force with accident investigations
1993 - to date	JP Services Maritime Safety and Training LLC (also d.b.a . Admiralty Consulting)	Partner	UK, Europe (incl. Mediterranean) and North America. Consult with law firms, businesses and industry bodies regarding training, safety risk assessment and accidents. Conduct investigation, prepare and deliver reports to courts, industry bodies and others. Prepare and deliver training ashore and at sea. Contract as Master on vessels for delivery, charter or other purposes.

2014 July 1st	State of Connecticut. Appointed by Governor Dannel Malloy	Harbor Master Stamford CT	... general care and supervision of the harbors and navigable waterways ..., subject to the direction and control of the Commissioner of Transportation, ... responsible ... for the safe and efficient operation of such harbors and navigable waterways ... Connecticut General Statute 15-1
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Presentation to Planning Board by Harbor Master 2015 10 14

Madam Chairman

I am the State appointed Harbor Master for Stamford. I hold sea-going Master's Certificates of Competence from both the US and UK administrations. I have 40 years' experience of commercial and recreational boating and am now safety manager for a large US tug boat company and specialize in incident investigation and risk assessment.

My authority and responsibilities for Stamford Harbor derive from CT general Statute 15-1 and include, *"... general care and supervision of the harbors and navigable waters ..."* and *"shall be responsible to the commissioner (State Commissioner for Transportation) for the safe and efficient operation of such waters and navigable waterways."*

It is therefore reasonable to conclude that I should be consulted on matters that relate to navigation based risks within the harbor. Marine Tec have not contacted me or sought input from me concerning navigational risks or risk mitigation and as a result have expressed inappropriate opinions and flawed mitigating actions in their peer review report.

Their errors are as follows;

Methodology

2. Make a list of people with knowledge and information regarding Connecticut's local and state regulations that come into play regarding recreational boating industry and the proposed plan.

They failed to identify the local harbor master or the requirements of federal navigation regulations.

19. Examine navigation in channel, conditions along the channel, commercial and recreational channel traffic and safety of the boating public.

They failed to consult with local harbor master or marine police unit with regards to actual conditions and events within the harbor or note the navigation requirements of the USCG inland Navigation Rules.

Assessment of Navigational Access to the Proposed Boatyard/Marina (P.10)

While the report recognizes the potential for increased interaction between recreational vessels and commercial traffic, the proposed mitigation which advises *"... boatyards and marina operators ..."* to *"... develop a communication channel with the harbor master that keeps them informed of tug and barge schedules."* Is flawed.

While this would work in a harbor with a full time harbor master or marine office, Stamford has neither. The positions of harbor master and deputy harbor master are very much part time and effectively unpaid. The collation and dissemination of the suggested information regarding tug/barge movements subject as it is to constant weather and operational updates is beyond the present capabilities of the harbor master or city. Although such a system could be developed, (but at a cost to who?), it shows a fundamental lack of understanding of the actual circumstances existing in Stamford harbor.

Assessment of Navigational Access to the Proposed Boatyard/Marina (P.19)

The report further states with regards to the tug Captains, *"The Captains are focused on time efficiency and expect boat traffic with better mobility to work around them."* This is both incorrect and insulting.

The tug Captains are professional mariners who do everything in their power (and sometimes more) to avoid incidents with recreational craft. They often request assistance from the marine Police or harbor master's boat to ease passage through the harbor on busy weekends. They do not expect others to "... *work around them.*" but comply with the USCG Navigation Rules (as should all recreational vessels), in particular Rule 9 *Narrow Channels* which states, *A vessel of less than 20 meters (65 feet) or a sailing vessel shall not impede the passage of a vessel that can navigate only within a narrow channel or fairway.* To this end, the tugs are required to (and do) broadcast *Sécurité* (safety) messages on marine VHF radio before commencing any in/out bound transit or movement within the harbor.

I believe that the presentation of this part of the peer review report indicates either a lack of competent input to those compiling the report or a lack of understanding by those compiling the report of actual marine operations.

The report also states "*Tug boats have less control of the barges when they are towed as opposed to being pushed. O&G has stated that their barges are always pushed which makes sense in a narrow channel.*" This is misleading on several points;

1. While generally correct, depending on a variety of weather, tide, current, topographical and operational conditions, towing a barge (on the wire) can be the most appropriate means of transit.
2. While the majority of barges in the west branch (of the harbor) may be under the control of O&G there have been at least three (3) instances this year (two witnessed by the harbor master, one of which involved a barge carrying hazardous/explosive cargo) where control was lost of barges being towed resulting in allision/near allision with existing marina docks and structures. In fact, the barge containing hazardous cargo had to be set free by the tug before being re-acquired.

I therefore believe that the potential for greater risk resulting from increased interaction between recreational and commercial traffic in the west branch and the possibility of practical and effective risk management and mitigation strategies have not been properly assessed or presented in the peer review report.

As the State appointed Harbor Master, it is not appropriate for me to comment on previous or proposed boat yards/marinas in this forum. My intent in this short presentation is to identify and highlight some informational gaps in the preparation and presentation of the Marine Tec peer review report that you may feel represent a weakness in its conclusions.

Madam Chairman, Thank you for your time.

Captain Eric Knott MSc. AFRIN, MNI

State Appointed Harbor Master, Stamford CT.