

# Waterside Security Barrier Protection for Ports, Strategic Facilities and Commercial Operations

## Waterside Security: The Case for Floating Port Security Barriers

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### **The Threat:**

Immediately after 9/11 our entire nation became acutely aware of a danger that many of us in the general public had not seriously considered prior to that horrific date. We could get it into our thinking well enough to comprehend the possibility of someone sending a bomb through the mail that was powerful enough to kill or badly injure a single targeted person. We could all easily imagine an attack by some rogue individual or small group such as occurred in the Oklahoma City bombing. The attack on the USS Cole alerted us to the existence of terrorists that wanted to harm our military vessels, but that incident occurred far away from our shores. What few of us could comprehend or even imagine was the possibility that airplanes could be hijacked and used to destroy two of the most prominent buildings in America and kill nearly 3,000 people. Since 9/11 there has been a collective urgency to prevent any re-occurrence of the kinds of events that took place on that day.

### **Now that we know:**

This effort to defend ourselves in many ways has been remarkable. The common thread of defending ourselves against the awful intent of Al Qaeda and similar organizations is perhaps without precedence. The combined efforts to secure our nation is seen everywhere. From our military bases to our public schools attention is given to

our security in a way that our current generation has never seen. Now that we know the threat exists, *and is determined*, we have an understood duty to respond by protecting ourselves however we can.

### **The Order of Action:**

It has been generally understood that the safety of our air transportation system was the first order of action for our national security. After all, airplanes were used effectively by terrorists on 9/11. The protection of our air transportation system seems to have been a successful effort. Those of us who fly have endured the inconvenience of slowly making our way through inspection lines, putting all the contents of your pockets into a tray and taking our shoes off. This ordeal has little objection from us because we know that it is now safe to fly. Concurrently, there have been many other increases in security measures throughout various other industries and strategic entities. Our marine and water front industries included. Though not as much in the focus of the public eye, marine related facilities, operations and industries have had the attention of great numbers of individuals and organizations. These individuals and organizations have great concern about protecting our nation's waterfront areas that include not only our major ports but also any facility with a waterside location such as a dam or power

plant. With 361 ports and 11,600 “likely” terrorist targets vulnerable to waterside attack it is clear that the work is at hand.

### **The Cost of Failure**

The consequence of a waterside attack at one of our ports, major terminal operations, nuclear power facilities, or even a major hydroelectric generation dam has the potential to eclipse the events of 9/11. An attack on a LNG terminal, major chemical plant, or power generation dam is an unimaginable catastrophe. The introduction of WMD’s raises the level of conceivable harm to an even higher precipice. In addition to the property, environmental damage and economic loss there is the specter of large loss of life and sense of vulnerability, not just here in America but around the world. We simply cannot allow ourselves to fail. The cost is too great.

### **Defense Efforts:**

Defense efforts against waterside attacks directed toward our waterfront facilities include administrative procedures such as requiring point of origin inspections in foreign countries and container custody control while in transit. Also included are ship boardings and inspections as well as crew identification before a vessel is allowed into port areas. Technology such as surveillance via radar and cameras in concert with very sophisticated communications systems give a vastly improved body of necessary security information to those tasked with assuring our waterfront defense. In addition to procedural and technological measures are added the continuance and increase of manned patrols on land, sea and air that are ever watchful.

### **The Case for Floating Port Security Barriers:**

Great improvements in all the previously noted defensive measures have been made since 9/11. The effectiveness of these efforts is profound when measured against the enormity of the task. Credit is due to many. One of the difficulties however, is that seeing a potential threat in the form of an ordinary pleasure boat or common commercial vessel is not the same as stopping that same vessel when it suddenly turns to action as a tool of destruction in the hands of a terrorist. The value of technology and increases in personnel and equipment is and has been clearly necessary. However, these efforts and commitments to the task cannot assure the highest reasonable levels of defense.

Immediately following the attack on the USS Cole, the U.S. Navy realized the vulnerability to attack of its’ vessels and began a search for ways to improve vessel security. Data collected by the Navy revealed that there are more than nine million pleasure boats in the U.S. capable of speeds of 30 knots or more that have potential for use in a terrorist attack. Navy studies determined that for waterside protection the best method was the deployment of a physical barrier capable of stopping a high speed attacking vessel. The need for a true physical barrier capable of stopping a high speed boat was considered most necessary with the realization that even with careful technological surveillance reaction times by security personnel are extremely short. For example: a vessel traveling 30 knots can transit 1,000 ft. in 20 seconds. This is precious little time even for the most highly trained and equipped security to execute an effective response.

The Navy conducted a study of the barriers then available commercially. Testing of the commercially available barriers determined

that virtually none were capable of stopping a high speed pleasure boat unless the barrier was very large and very expensive. Subsequently the Naval Facilities Engineering Service Center (NFESC) designed a barrier system that employs a net arrangement that collects attacking vessel energy forces and transfers this energy to a carefully engineered anchoring system. The process of “catching” the attacking vessel is similar in principle to catching an aircraft in an arresting net on a carrier deck. The significance of the Navy design is that it has been determined to have the calculated capability to stop 99.9% of the 9 million potential attack vessels in the US.

**Is there a Puzzle to protecting our waterfront areas?**

*What is not a puzzle is that every reasonable effort must be made to protect our nation.* The truth of the matter is that all the defensive tools and resources

available are needed if we are to establish complete and effective protection of our waterfront areas. For our waterfronts, including inland dams, nuclear plants and industrial facilities, floating barrier systems that provide true physical protection are an integral piece of the defense puzzle. Floating barriers capable of true physical protection add a very substantial layer of defense by their ability to stop attacking vessels and increase response time for authorities. In addition, especially with the Navy design, the barrier system serves as an excellent platform for high technology equipment for both surface and subsurface surveillance and is highly synergistic with waterborne patrol vessels and shore based security operations.

Finally, the floating barrier that has the look of a serious defense measure sends a signal to the potential terrorist: *we are prepared.*

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