

# Fire on the Water

■ LAFD's marine operations are an important part of City safety.

By LAFD Assistant Chief John D. Badgett

Many of you are aware that the City of Los Angeles recently spent nearly \$12 million to purchase four world-class fireboats as replacements for their aging predecessors.

One of these, new Fireboat 2, is recognized worldwide as the most powerful fireboat in service today. Later in this story, I'll address what the City got for its money, and why these boats are so uniquely capable to perform their duties.

However, before we get there, have you ever wondered why the City would spend this much money to replace four fireboats, especially in an era of declining tax revenue, and competing demands for funding?

Let's take a quick and somewhat broad look at the Port of Los Angeles, and what it means to the overall health of the City.

The Port of Los Angeles, known as POLA, covers a total of about 8,000 acres of area, including 43 miles of waterfront. It houses 27 terminals, numerous subsurface pipelines carrying various petrochemical products, recreational facilities, ecological preserves and even restricted areas for endangered bird species.

The terminals process a wide range of goods that arrive in diverse forms including containers of various sizes, liquid, dry and mixed (or break) bulk commodities, and many makes of automobiles. In addition, the cruise ship terminal services 12 cruise lines that carry approximately one million travelers per year, and there are slips for approximately 6,000 pleasure boats of various sizes.

The port is a global trading area, and it is the primary entry point in the United States for goods from the Pacific Rim. Ships from all areas of the world routinely call on the port including vessels from Denmark, Japan, Mexico, China, South America, South Korea, Southeast Asia, Taiwan, The United Kingdom and Vietnam.

As you can see, the port is a gateway to the world, and a major relay center for international cargoes. The Port of Los Angeles is the number one container port in the United States, handling

approximately six million TEUs (20-foot equivalent) annually. It is number eight in the world, and if combined with the neighboring Port of Long Beach, the two become the third busiest container port in the world behind Hong Kong and Singapore. With the advent of even larger container ships, and our port's ability to receive them, the volume through the port was projected to nearly double between 1998 and 2010, and it's on track to achieve those projections.

An incredible amount of infrastructure enhancement has taken place in the last few years to ensure that the port maintains its ability to attract commerce to this area.

Some of these may be familiar to you and others may not.

A few major examples are the construction of



"Piers" 300 and 400. Each site is a major landfill in the port. Pier 300 is approximately 300 acres in size, and pier 400 is approximately 600 acres in size. Both have created additional container terminals where there was once only water. Pier 400 by itself is the largest container terminal in the world, and it's smaller neighbor, pier 300, is the largest dedicated container terminal in North



America. In addition, the 20-mile long, \$2.4 billion Alameda Corridor Project was designed and built to provide enhanced train access directly to the ships and their cargoes, and terminates at the water's edge.

As a result of the combined efforts of the Port and its tenants, the Port's "economic engine" causes goods valued at more than \$104 billion dollars, to pass over the wharves of Los Angeles.

This port activity impacts nearly 260,000 jobs in Southern California, (that's one in 24), and nearly a million jobs nationwide.

Now, in perspective, the purchase of modern, highly capable fireboats to help keep the port operating and safe from fires, and other types of incidents starts to look like good business.

So, with your new port expertise, what kind of Fireboats would you buy to protect this unique infrastructure, and where would you go to get them?

Since August 1909, members of the LAFD have asked themselves this question. Back then, when the communities of Wilmington and San Pedro were annexed to the City, the LAFD inherited a new marine responsibility. The City and its Fire Department initially answered this question by contracting for the services of two tugboats that had a level of Firefighting capability. These boats were normally staffed by their civilian crews, but Firefighters were placed on board when needed.

In 1915, the LAFD purchased its first purpose built Fireboat; a 20-foot vessel called the *Aeolian*. As the challenges in the Port grew, and the LAFD became increasingly engaged in port fire protection, the types and capabilities of the fireboats also grew. Until April 12, 2003, our existing fleet of fireboats consisted of three 34 foot, 1000 gpm "small boats," and two large boats.

Fireboat 2, the venerable *Ralph J. Scott*, built in 1925 was our largest at 105 feet long, and capable of approximately 18,600 gpm.

Fireboat 4, the *Bethel F. Gifford*, built in 1962 and capable of approximately 9000 gpm was, and remains, our second largest boat at 76 feet long.

These vessels were all considered extremely capable when they were put in service, and due primarily to various ideas for ongoing improvement, and the high level of care that they received from their crews, they remained effective much longer than their designers could have anticipated. The *Ralph J. Scott* even became the oldest front line fireboat in the United States.

Fireboat 4, the *Bethel F. Gifford*, remains in service, highly capable, and is expected to continue as such for many years to come. In fact, in many ways it exemplifies the ongoing evolution of our fireboat fleet.

Fireboat 4 was built with a very limited firefighting foam capability, however after recent design modifications, it now carries a state-of-the-art foam system and 2,000 gallons of foam concentrate. The boat was also recently re-powered, which has added the muscle for it to continue in its place as an exceptionally capable marine firefighting tool.

However, as the recently retired fireboats once replaced others, our newest fireboats are taking the heights. The new boats are the result of a ten-year joint effort project between the Fire

Department and the Port of Los Angeles.

It began with a focused needs assessment. This process researched the current and projected future port protection role of the Fire Service in the port area, including the possibility of responding beyond the Port's limits as needed. The Port's hazards, potential, and expansion projects were studied in close detail. The entire port area was divided into hazard types, and then further refined into specific target hazards. The target hazards were then measured for fire flow, fire stream reach, potential firefighting foam requirements, alternate water source needs and a wide range of other criteria. Once this was accomplished, the data was compared against our existing fireboat capabilities, and the potential for enhancement, or reduction was carefully studied. On completion, a list of equipment and capabilities required to address the Port's needs was developed.

This list included items such as firefighting foam capacities and flow rates, on board EMS facilities, SCUBA program needs, towing capabilities, improvised water supply ability and many, many others.

Once all of these issues were addressed, the platform that would best carry the equipment and address our delivery requirements was researched. Among the top priorities for the new boat were overall strength, longevity, technological superiority, and a wide range of enhanced capabilities. Ultimately, marine architects and other specialists were hired to formally develop the Department's specifications, and the new large and small boats became a reality.

New Fireboat 2 was built at the Nichols Brothers Boat Yard in Washington State. This builder is one of the best in the country for vessels of this size, and was chosen because of their experience building large fireboats and tractor tugs. The tractor tug design was chosen due to its tried and true reputation in the workboat industry. The three new small fireboats are identical to each other, and were built by Kvichak Marine Industries in Seattle. This boat builder is also one of the best in the country, and has a great deal of experience building mid-sized patrol and fireboats.

The Department's new fleet of fireboats was built to proudly serve the citizens of Los Angeles, and the commercial port, for generations to come. We fully expect that firefighters who are yet to be hired by the LAFD will be long retired before these new fireboats are introduced to their replacements, many years in the future.

This essay was first distributed via the LAFD's online listserve. All photos with the exception of the photo of Fireboat 2 on the ground are copyright Don Winslow and are used here gratefully with his permission. The photo of Fireboat 2 on the ground is courtesy Nichols Shipbuilders, the company that built the boat.

Chief Badgett, a 31-year veteran of the Los Angeles Fire Department is presently Division Commander of Division II "A" Platoon, serving the Southern end of our City. Chief Badgett has had extensive experience in Harbor operations having been assigned as a Battalion Chief to the Harbor and San Pedro area of Los Angeles.

If you'd like to read more of Chief Badgett's overview of our 21st century marine operations, including photos and a side-by-side comparison of new and old LAFD Fireboats, please visit: <http://www.lafd.org/firewatch2004-3.pdf>

For a more historic look at LAFD's fireboats, please visit: <http://www.lafd.org/firewatch2004-2.pdf>

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