

# Seattle Fireboat Duwamish

The Seattle Fireboat Duwamish served the City of Seattle for 75 years, from 1909 to 1985. The M/V Duwamish was a fixture on the Seattle waterfront at Station 5 (between Coleman dock and Ivar's restaurant) for ¾ of a century. The M/V Duwamish was retired in 1985 and at this time it was moved to the Hiram Chittenden Locks on the Lake Union ship canal where it sat until 1994 when it was purchased by the Shipping and Railway Heritage Trust. The Fireboat now resides at the Historic Ships Wharf at South Lake Union. The M/V Duwamish is where it belongs, back on the Seattle Waterfront, only in a different environment.

The Historic Ships Wharf is the perfect home for the Fireboat Duwamish since the boat is now classified as a National Historic Landmark, as well as a City of Seattle Landmark. The Historic Ships Wharf is home to the one of the largest collections of historic vessels in the United States. Each is significant and they include the Tugboat Author Foss (1889), The M/V Lotus (1909), The Lightship Swiftsure (1904), the S/S Virginia V, and the Fireboat Duwamish (1909)

The Fireboat Duwamish is significant because the M/V Duwamish is associated with an important aspect of the maritime economic heritage of Seattle. The M/V Duwamish was designed, built, and operated during an historical period when large wooden warehouses, wharfs, and docks, loaded with high value cargo, sprawled along Seattle's waterfront.

The Fireboat Duwamish is an excellent example of a typical fireboat. Built and operated exclusively for use in Seattle, the Fireboat Duwamish is representative of most early 20th century fireboats which could be found in any major American port city throughout the United States. Tugboats that were modified for fireboat use and employed as auxiliary fireboats may still exist, but the Duwamish is one of the last examples of a "true" fireboat from this time. The M/V Duwamish is the second oldest surviving fireboat, built specifically as a firefighting vessel in the U.S. Other fireboats that are known to exist in major American cities date to the 1940s, 1950s, and 1960s.

The 1909 Fireboat Duwamish, possessing a high degree of integrity, is of national significance because it is the best preserved, largely unchanged example of the historic American fireboat.

The 1909 Motor Vessel Fireboat  
Duwamish

A City of Seattle Landmark and a National Historic Landmark

# Seattle Fireboat Duwamish

The Fireboat Duwamish was built in 1909 By the Richmond Beach Shipbuilding Co. at Wells Point (Richmond Beach, Washington) for a cost of \$78,257.00. The Steam powered fireboat was designed by the firm of McAllaster and Bennett, naval architects, consulting engineers and marine surveyors located in Seattle, Washington.

Eugene L. McAllaster, arriving in Seattle in 1894, was a famous Puget Sound naval architect specializing in power and pumping plants, marine engines and boilers. He designed many area vessels including the passenger steamer "Mainlander" for the Western Steam Navigation Company.

When built, the Fireboat Duwamish was the most powerful fireboat in the world, and today the M/V Duwamish is still one of the top five "most powerful" (putting out 22,800 gpm)

The powerful pumping capacity of the Fireboat Duwamish is its most treasured and unique quality. The MV Duwamish's beautiful and spectacular water displays embody the distinctive visible characteristics of a historic period. The "world's most powerful" fireboat, the MV Duwamish, has remained a part of Seattle's marine and waterfront legacy for over 115 years. The Fireboat Duwamish holds one of the longest continuous original commissions and also has one of the oldest active registered hulls of any vessel on the west coast of the United States being commissioned and active since 1909.

The Fireboat Duwamish's pilothouse and it's interior are still original. Most of its equipment like gauges, binnacle, brass work and engine order telegraph's are of 1909 vintage. The most noticeable features on the deck are the eight large monitors (aka nozzles or water cannons)

The Fireboat was modified after being built and rebuilt in 1949. The changes that have taken place over the course of time are evidence of the history of development of the Fireboat Duwamish. These changes have acquired significance in their own right, and this significance is recognized and respected.

The 1909 Fireboat Duwamish is a significant part of Seattle's maritime history and is a national historic landmark because of its historical significance as a well-preserved, highly decorated example of the historic American fireboat.

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# FIREBOAT DUWAMISH STATISTICAL INFORMATION

Build Date: (launched) July 3rd, 1909

Hull # 231092

Designed by: Eugene L. McAllister of Eugene McAllister & Samuel Bennett

Shipyard: Puget Sound Shipbuilding Co. (1909 -1911) owned by Albert A. Kelly  
aka Richmond Beach Shipbuilding

Cost new: \$128,400 {\$123,112.00 plus architect fee of \$6,000}

Actual Contract Let \$117,586.62

Rebuilt: Nov 10<sup>th</sup> 1949

Shipyard: Commercial Ship Repair of Winslow (closed in 1959)

Cost of rebuild: \$149,257 Machinery cost: \$

Navel Architect:

Length \*: 113' (as built with "ram bow")

Length Over All: 122.8' (after 1949 rebuild) bow reconfigured to conventional

Beam: 28' (molded) Beam on Deck molded 26' 10"

Draft: 9'6" {FWD 7' AFT 9'}

Freeboard: 7' 5"

Draught: 450 tons

Mast Height: 58'

Turning Radius: 250' { thruster assisted }

Tonnage: Gross Ton 322, Short Ton 292, Net Ton 219 ( as built)

Displacement: 222 Tons {17'11"}

Total Horse Power: 1800hp

Anchor: 700# Danforth style

Anchor Windlass: Arms-Franklin designed by Hyde Windlass Co.

Hull: Riveted ¼", 3/8", and ½" wrought Iron Steel Plate with transverse "T" bar  
5"x5"x ½" and 12"x6"x ½", 3"x3"x4" angle, and 3"x1/4" flat bar framing with an all  
riveted steel deck

Main Engines:

{3} **Cooper Bessemer GSB 8** supercharged 900 hp @ 750 rpm

Bore: 10 ½"

Stroke: 13 ½"

Compression: 13.2 to 1

Displacement: 9351.72 Cubic In, right hand rotation

Eng Weight: 36,000 lbs Dry,

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12/1/22

# FIREBOAT DUWAMISH STATISTICAL INFORMATION

## Monitor Details

### Generators:

{3}:1944 General Electric, 500 Volt DC, 610kw, 1220 amp  
Weight: 11,000 lbs

### Drive Motors:

{2} 1945 GE 500 Volt, 765hp, 1200 amp kw DC  
Reduction gears: {2} Farrel-Birmingham {6.74 to 1}  
Propellers: {2} 82" 4 Blade 6' Diameter 8' Pitch  
Shaft: 5"  
Steering: Cable with Sperry power assist with  
{4} hydraulically operated valves for underwater maneuvering jets (thrusters)  
Fuel Consumption: between 100 to 138 gallons per hour  
Max Speed: 10.5 knots steam 14 knots diesel  
Fuel Capacity: 8,203 gallons {FWD 4,358, AFT 3,684}

### Auxiliary Engines:

194? {2} Detroit Diesel 671 with  
**Westinghouse** 50 kw 125 volt motors

### Fire Pumps:

{2} **Delaval** centrifugal pumps rated at 11,400 gallons per min @ 150 psi

### Pump Motors:

{2} 1945 **GE** 500 Volt kw 765 hp 1200 amp DC

Crew: Officers and Firefighters: 7 (steam) 5 (diesel)

Total Horse Power 2700hp {Main Engines #2 and#3 were used for propulsion or fire pumps. #1 Main Engine was used for fire pumps only}

### Armament:

{8} monitors aka water cannons, 3 on each side with one on each tower fore and aft.

Two discharge ports in fo'c'sle for under dock fires (one port, one starboard)

16 discharge ports on deck six 3 1/2" and two 4" (8 on each side)

{1} Salvage educator 4"x 6"x 6"

# FIREBOAT DUWAMISH

## STATISTICAL INFORMATION

### Monitor Details

- {1} Pilot House 7,000 to 10,000 gpm 6" Barrel 4 1/2" Tip Spare Tip 3 1/2"
- {1} Aft Platform 5,000 to 7,000 gpm 5" Barrel 3 1/2" Tip
- {6} Trunk Deck Monitors 2,000 gpm 2" to 3" Tips

Monitors were built by A.J.Morse and Sons of Boston. The monitors can shoot 1.7 tons a second. The Pilothouse Water Cannon could punch out 7,000 to 10,000 gpm, shoot water the length of a football field (320') destroy (wooden) box cars and snap telephone pole thick pilings like matchsticks and move the Fireboat backwards

The Fireboat DUWAMISH was originally powered by steam.

Steam Plant: 1909 to 1949

{2} Fulton Machine Works  
Compound expansion marine  
14" X 16" double vertical steam engines 1,100 hp

{4} Mosher 3 drum water tube boilers  
with 9,000 Sq Ft of heating surface

Water pressure was provided by  
{3} American-LaFrance double (duplex) vertical steam piston pumps each producing 3,000 gpm for a total of 9,000 gpm.  
1915 monitor test stats: {1} 8" monitor 6000 gpm {1} 6" monitor 3000 gpm  
{6} 4" monitors 2000 gpm @ 150# (psi)

### Modifications:

- Wheelhouse Port lights changed from round to rectangle
- Rectangle port lights enlarged.
- Towers built on wheelhouse and aft cabin
- Platform built around wheelhouse
- Water trunk moved from inside engine room to main deck
- Sprinkler system installed around outside of pilothouse

# FIREBOAT DUWAMISH STATISTICAL INFORMATION

19?? Port light installed in pilot house door  
Dutch door replaced  
1949 Rebuilt by Commercial Ship Repair of Winslow, WA.  
Major rebuild converted from steam to diesel.  
Bow reconfigured adding 9.8 feet to overall length  
Hydraulic valve system added for water valves  
1963 Portholes installed in fo'c'sel for under dock fog nozzle

### Assignments:

Feb. 1910: Placed in service  
Feb. 1910 to Dec.10<sup>th</sup> 1928: Engine # 5, Boat # 1  
Dec. 10<sup>th</sup> 1928 to Mar 10<sup>th</sup> 1950: Engine # 31, Boat # 2  
Sept. 3<sup>rd</sup> 1942: Harbor Island  
March 23<sup>rd</sup> 1943: Laid up due to lack of manpower  
April 1<sup>st</sup> 1943: Transfer to USCG  
Sept 30<sup>th</sup> 1945: returned to Seattle Fire Dept Station 31  
Nov 1946: moved to Station #5  
1947: Cold Ship  
Jan. 12<sup>th</sup> 1949 ? Moved to Commercial Ship Repair of Winslow for rebuild as well  
Nov.10<sup>th</sup> 1949 (sea trails) Returned to Seattle Fire Department  
Mar.10<sup>th</sup> 1950 to Oct 6<sup>th</sup> 1984 , Engine # 4  
moved to Harbor Is. 1973 { Station #4}  
Oct. 6<sup>th</sup> 1984 to Dec 29<sup>th</sup> 1994 In storage  
Oct. 8<sup>th</sup> 1986 City of Seattle Landmark  
June 30<sup>th</sup> 1989 National Historic Landmark  
Dec. 29<sup>th</sup> 1994 SOLD to Shipping and Railway Heritage Trust  
{Foundation renamed Seattle Fireboat Duwamish}

### Major Fires Fought

Independent Asphalt Co: May 20<sup>th</sup> 1910  
June 10<sup>th</sup> 1910  
Montana Street Mill: Dec. 30<sup>th</sup>,1911  
Grand Trunk Pier: July 30<sup>th</sup>, 1914  
Pier 14: Oct. 28<sup>th</sup>, 1915  
Great Northern Grain & Ore Dock: Nov. 6<sup>th</sup>,1925

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- Colman Dock: Sept 7<sup>th</sup> 1928
- Union Pacific Dock: July 17<sup>th</sup>,1929
- S.S. Alameda: Nov. 18<sup>th</sup> 1931
- Pankrats (Duwamish River)
- Government Pier, Connecticut St.: 1937
- Oceanic Building:
- Sidlers Mill:
- Blackstock Lumber Co: August 28<sup>th</sup>,1941
- Luckenbach Steamship Co. Pier D {pier 46}: April 26<sup>th</sup>,1944
- Navy Cargo Pier: June 18<sup>th</sup> 1945 {last fire before rebuild}
- Seattle Cedar Manufacturing: May 20<sup>th</sup>,1958 {1<sup>st</sup> fire after rebuild}
- Todd Pacific Shipyard: Oct. 21<sup>st</sup>,1964
- Todd Pacific Shipyard: Aug. 13<sup>th</sup>,1968
- Todd Pacific Shipyard: Nov. 28<sup>th</sup>, 1968
- SS Cygnus { Oil Tanker } July 1<sup>st</sup>,1973 {on station 27hrs}
- West Marginal Way: Sept. 8<sup>th</sup>,1984 { last known fire fought }

Seattle Fireboats put on a water display May through September at noon as well as water displays on special events and visits

\*The original bow was a projecting "ram bow". The Fireboat Duwamish is the only know fireboat built with such a bow. The bow was designed to sink a burning (wooden) vessel in shallow water for later salvage, but by 1949 most ships were built of steel and ramming to sink a vessel was no longer feasible. So in the 1949 rebuild the bow was reconfigured to a traditional style giving the MV Duwamish its new look.

1949 Hydraulic System designed and built by Seattle Fire Department

Prior to WWI the Fireboat Duwamish responded to about 100 calls per year

Strokes: 13 W  
 Compression: 13.2 Psi  
 Displacement: 4350 cu ft  
 Eng Weight: 36,000 lbs Dry

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