



**City of Newport, Rhode Island
Newport Fire Department
Office of the Fire Chief**



M E M O R A N D U M

Date: 9 August 2016

To: Joseph J. Nicholson Jr., Esq.
City Manager

From: Peter D. Connerton Sr. PDC
Chief of Department

Subject: **PSGP – NFD Fire/Rescue Boat Maintenance Costs & other Questions**

1. Projected Maintenance Costs:

Many agencies budget in the area of \$10,000.00 annually for maintenance, but those departments do not perform any of those upkeeps themselves, opting for it to be carried out by a contractor which greatly inflates the cost. With minimal training our personnel can continue to carry out many of these duties on the new vessel thus eliminating those extra fees.

Most of the maintenance, routine or otherwise, is based on engine hours. The department would likely put about 250 hours on the engine the first year and well below a 100 hours annually thereafter. (Our current boat, after 15 years, has only 802 hours on the motor). However, we would still carry out some upkeep yearly or earlier as a preventative measure. See below:

| Engine Hours/Timeframe | Recommended Maintenance | Materials Costs | Work Performed By | Labor Costs | Total Costs |
|---------------------------|--|-----------------|-------------------|-----------------|-------------|
| 250 Hours (Annually) | Engine: Motor Oil, Oil Filter & Fuel Filter | \$400.00 | NFD Personnel | None | \$400.00 |
| 100 Hours (Annually) | Jet Drive: Inspect/Replace Zinc Anodes & Greasing | \$450.00 | NFD Personnel | None | \$450.00 |
| Annually (as needed) | Hauling & Storage of Boat for Maintenance/Service | None | Newport Shipyard | None (Donation) | None |
| 500 Hours (4 to 5 years) | Transmission Oil | \$200.00 | NFD Personnel | None | \$200.00 |
| Annually | Hull/Bottom Paint | \$400.00 | NFD Personnel | None | \$400.00 |

| | | | | | |
|---|------------------------------------|------------|---|--|-------------|
| 1000 Hours (9 to 10 years) | Checking Engine Valve Clearance | | Outside Vendor | \$3,000.00 (Materials Included) | \$3,000.00 |
| 7000 Hours (15 to 20 years or more) | Engine Rebuild | | Outside Vendor | \$60,000.00 (Materials Included) | \$60,000.00 |
| 7000 Hours (15 to 20 years or more) | Jet Drive Impellers Replacement | \$2,000.00 | Outside Vendor & NFD Personnel | None | \$2,000.00 |

Early Annual Maintenance Costs identified, barring any issues outside of the warranty timeframe and those listed at the aforementioned intervals, are estimated to be in the area of \$1,400.00. We will request \$5,000.00 in next budget cycle to safeguard against unforeseen repairs and additional fuel costs.

The department can apply to the PSGP annually for up to \$25,000.00, with no cost match, for training and maintenance. Additionally, in discussion with the Director of RIEMA funds are made available to members of the PPMST for maintenance and training. This year's allocation is in the area of \$187,000.00. Lastly, local marine related groups have indicated the possibility of reaching out to the boating community for donations for this purpose. We did not want to pursue the matter any further until we had Council approval for the acceptance of the PSGP. These monies could be placed in a restricted gift account earmarked for these expenditures.

2. Warranties:

Engine:

Typical warranty for this equipment is 3 years or 1500 hours, whichever comes first. The comprehensive guarantee covers engine and all attachments. Extended warranties are available, but are not considered worth the cost. We have not yet decided what engines will be installed, as there are various options.

Jet Drive:

Typical warranty for this equipment is 2 years and covers all components. Our personnel can be trained in the maintenance and general repair of this equipment.

3. United States Coast Guard (USCG) Firefighting:

See submissions of Support Letter from CWO Roberts & USCG Firefighting Policies. While the USCG responds to all waterborne emergencies they do not actively take part in Firefighting on vessels other than their own.

4. Frequency of Marine Firefighting and Rescue calls:

The department has averaged over twenty-three (23) water related responses per year (past seven calendar years), with thirty-five (35) in 2015 and twelve (12) so far this year. This number would be somewhat higher if not for the fact that we did not respond in some instances due to the lack of firefighting capabilities or the necessary safety considerations (enclosed crew cabin) for the environment encountered. Additionally, depending upon what

was met in the response the Incident Report may not come up as Marine related in our Computer Aided Dispatch System and there could be a few unidentified calls.

The breakdown of Water Vehicle Fires (not necessarily including docks or marinas) is as follows:

| | |
|------|---|
| 2010 | 3 |
| 2012 | 1 |
| 2013 | 2 |

I want to stress the Firefighting capabilities are just a portion of the total competences this vessel will provide.

5. Process for responding to boat fires or other Marine related calls:

Along with the USCG there are two groups that respond to water related emergencies in Narragansett Bay and its surrounding waters. They are the Port of Providence Marine Strike Team (PPMST) and the Narragansett Bay Marine Task Force (NBMTF). The members of the PPMST are the Providence, Cranston, Warwick and East Providence Fire Departments. These agencies are equipped with the vessels purchased with funds from the PSGP and have significant Firefighting capabilities. They are also part of the NBMTF of which Newport and ten other RI and three Massachusetts Fire Departments are also members.

The multi-jurisdictional areas are divided up into Marine Districts designated from A to S with subsectors with numerical identifiers. Each department has their own area of immediate operation, as well as assignments to respond to adjacent zones depending upon the emergency and their capabilities. These sectors are demonstrated on a map of Narragansett Bay.

These Marine assets are listed in the Southern New England Fire Emergency Assistance (Mutual Aid) Plan. Depending upon the nature of the call for service anywhere from two to five vessels are dispatched and in all but three categories a PPMST craft is part of that initial response.

When a call is received that is Marine related the Fire Department having primary responsibility for that area will send its apparatus/boat and establish a Command Post for the incident. That Fire Department's Dispatch or Fire Alarm will then notify Metro Control (Cranston Fire Alarm) and the USCG. Metro Control will then contact the other assets listed for the area of operations and manage the communications for the incident.

In Newport's primary area (Marine District M) the responding municipalities are as follows; Newport, Jamestown, North Kingstown, Middletown, Portsmouth and if needed Warwick. Of the five initial agencies committed North Kingstown is the only boat with significant Firefighting capabilities.

These reciprocal services are part of the Southern New England Fire Emergency Assistance plan and thus we are not able to recoup funds for these endeavors. However, in the instance

of a large scale event or those that have a great impact there is the possibility for recompenses from the insurance company of the entities involved. This may require language to be placed into the City Ordinances to facilitate this ability.

While the USCG responds to all Marine related calls they do not perform any Firefighting. This was demonstrated most recently at the Hog Island boat fire where they set up the perimeter and it was North Kingstown's boat that extinguished the fire.

6. Operational costs for current Water Rescue Boat & motor which is almost 16 years old.

FY 14-15:

| | |
|---|-----------------|
| General Maintenance | \$1,234.99 |
| Replacement/upgrading of original electronics | \$6,723.18 |
| Fuel Costs | <u>\$560.57</u> |
| Total: | \$8,518.74 |

FY 15-16:

| | |
|---------------------|-----------------|
| General Maintenance | \$320.48 |
| Fuel Costs | <u>\$775.82</u> |
| Total: | \$1,096.30 |

FY 16-17 to date:

| | |
|---------------------|----------------|
| General Maintenance | \$26.26 |
| Fuel Costs | <u>\$85.01</u> |
| Total | \$111.27 |

Projected Annual Costs for new vessel:

| | |
|---|-------------------|
| General Maintenance | \$1,400.00 |
| Fuel (outside of that covered by the grant) | <u>\$4,935.00</u> |
| Total | \$6,335.00 |

We will not have any costs for the hauling and storage of the boat for maintenance, as Newport Shipyard has committed to providing these services at no charge.

7. Benchmark length of service for other communities who have received the PSGP and purchased Moose Boats.

North Kingstown Fire Department: Moose Boat M2 37' went into service in the Spring of 2014

FY 15-16:

| | |
|---------------------|------------|
| General Maintenance | \$2,347.77 |
|---------------------|------------|

FY 16-17:

| | |
|---------------------|------------|
| General Maintenance | \$2,377.21 |
|---------------------|------------|

These annual costs also include the stocking of certain parts for future needs and paying three Fire Department personnel a combined total of nearly \$1,000.00 to perform the work. Our personnel would carry out the upkeeps on duty and therefore there would be no labor costs.

North Kingstown has not reported any engine issues to date.

Tiburon Fire Protection District, Tiburon California: Moose Boat M2 35' delivered in September of 2006

- Annual Budget of \$6,000.00
- Preventative Maintenance performed by department personnel
- 150 hours on engine a year
- 1500 hours on engine as of now
- No major issues reported
- Boat is fully functional & up for sale, reason for selling was to obtain a vessel with greater water flow capability
- Received a new Moose Boat M2 37 three months ago with the ability to deliver 3000 Gallons Per Minute (paid for by municipality or Fire District)

Mass Port Fire/Rescue, Boston Massachusetts: Moose Boat M2 37' delivered in June of 2009

- Annual Budget \$10,000.00 to \$15,000.00 (oil, filters, haul-outs, etc.)
- All work performed by outside vendors
- 500 plus hours on engine a year
- 4000 hours on the engine as of now
- Early issues: (1) water pump, (1) idler pulley, both replaced under warranty
- Boat goes through zinc anodes very quickly; likely due to large amount of stray voltage from Logan Airport.
- Paint issues mostly above the waterline; likely caused by the aforementioned

Bridgeport Police Department, Bridge Port Connecticut: Moose Boat M1 44' delivered in November of 2013

- Annual Budget of \$11,600.00 (oil changes, filters, haul-outs, etc.)
- All work performed by outside vendors
- 600 hours on engine as of now
- Early issues: Minor oil leak at cooler covers, gasket replaced under warranty
- No other issue reported

Sandwich Fire Department, Sandwich Massachusetts: Moose Boat M2 38' delivered in June of 2013

- Annual Budget of \$10,000.00 (oil changes, filters, haul-outs, etc.)
- All work performed by outside vendors
- 200 hours on the engine as of now
- Significant Issues:
 - Hale Fire Pump failure due to intake strainer with oversized perforations.
 - Engine failures about 1 year apart

- Manufacturer replaced the first engine under warranty with no questions
- From Sandwich FD the manufacturer did not cover the second engine failure blaming Moose Boats exhaust design. Moose Boat attributed the failure operator error and too much weight in the aft causing the exhaust to go under water. They are all still in the process of resolving the matter.
- The second engine was replaced through the towns insurer

New Bedford Fire Department, New Bedford Massachusetts: Moose Boat M2 38'
delivered in August of 2016

- The boat was just delivered this week so I do not have any maintenance or experience data

Moose Boats Incorporated has been constructing these types of vessels since the early 2000s. In total they have built ninety-seven (97) boats with sixty-five (65) being delivered to the US Navy and Public Safety agencies across the country. The oldest of which is a 33' Patrol Boat delivered to the US Park Police of New York in 2003 which is used to patrol Staten Island. That craft is still in service.

I have attached a three page reference list demonstrating agencies that have purchased their vessels and I have contacted some of them to supply the information above.

8. Staffing/Overtime:

Just like our current vessel, the new Fire/Rescue Boat will be staffed with personnel from the on duty compliment. As is the practice now, depending upon the location, the nature of the response and its expected duration the department will decide whether any backfill is necessary. Any increase in overtime costs would be merely coincidental and not related to its purchase.

9. Training/Certification/Qualifications of Personnel:

Presently there are approximately eleven (11) Firefighters with experience with boats of this size, in addition to another six (6) to eight (8) who are owners of lesser sized vessels. They and others would be trained on duty in the operation of the boat by in-house instructors at the set rate Instructor's Rate (\$37.50). This model will allow for the most efficient use of the monies provided in the grant and to educate the greatest number of members. The ultimate goal is to have six (6) to eight (8) personnel trained to the Coxswain level per platoon. Additional training will be delivered to personnel in Navigation and the use of the electronics. Most of our members have already been educated to the Boat Crew Member level through our existing training budget line.

Future trainings could be funded through additional PSGPs and or monies from RIEMA.

10. Storage:

There will be no cost for the storage of the boat, as just like our current vessel it will be in the water year round. As previously mentioned, when it is hauled for service the Newport Shipyard has agreed to store it on their property at no charge.

11. United States Coast Guard (USCG) fighting the fire at Hog Island:

The USCG from Castle Hill did not actively fight the fire. They set up a perimeter for the NBMTF vessels and North Kingstown's boat extinguished the blaze.

12. Procurement:

If we so choose we have the ability to purchase the Moose Boat via a General Service Agreement. While it is the vessel of choice its acquisition is not set in stone.

There have been some questions or statements as to why we would not employ a local boat builder. Our concern is that there has not been a native company that has constructed boats of this nature in the last ten to twenty years. We want to ensure that whatever manufacturer is chosen has the experience and a proven track record to hopefully head off any problems.

13. What if the City is dissatisfied or no longer wants to retain the vessel:

In discussion with the Director of RIEMA the City would not have to keep the vessel, but could not sell it. It would have to be turned over to FEMA or the representing authority, in this case the USCG Southeast Sector where it would be reallocated to a community/agency that wishes to take part. It should be noted that as a regional asset the PSGP would likely approve funding for any catastrophic repairs to keep the vessel in service. This was demonstrated with some of the earlier boats in RI that had design and maintenance issues.