



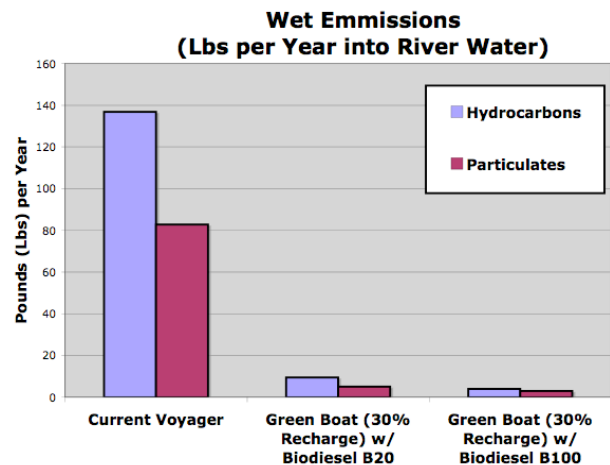
GREEN BOAT PROJECT *Air and Water Quality*

RiverQuest provides river-based environmental education and public programming to thousands of children and adults every year on the rivers of Western PA and beyond the region. In designing *Explorer*, we sought to significantly reduce our impact to the air and water as compared with our baseline fleet of traditional diesel powered vessels, *Voyager* and *Discovery*. The goals are to improve our environmental performance and demonstrate environmental stewardship to our students and customers.

In spite of our environmental mission, the limitations of our current aging fleet have hindered stewardship for the environment. The majority of inland coastal and ocean vessels burns marine diesel fuel which burns hundreds of times dirtier than US highway diesel.

Air emissions modeling in Allegheny County suggests that diesel emissions are amongst

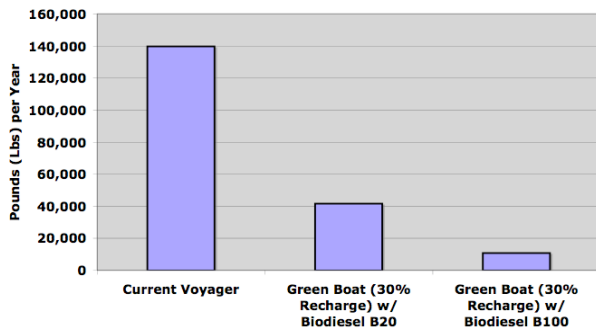
the worst in the US with human health risks over 500 times the US EPA acceptable levels. **Marine emissions from river commerce contribute as much as 30% of the overall diesel particulate matter in the region.**



Explorer will achieve significant reductions in both air and wet emissions, air emissions that are released underwater and captured by the river water, via:

- Hybrid diesel-electric propulsion system with state-of-the-art diesel engine technology.
- Use of biodiesel blended fuel.
- Future fuel cell, photovoltaic and micro wind turbine implementation.

**Carbon Dioxide Emissions
(Lbs per Year)**



Air and Water Quality Team:



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