

From:

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1) Is there the potential for a Marine Highway Program in the United States?

There is definitely a potential for a marine highway program in the US.

Transportation has become an extremely important field of study in the early 21st century. The range of the field spans all mediums, land, air, and sea. Energy crisis and recessions have forced humans to really rethink how to consume energy and move about the planet. Citizens are contemplating the use of electric vehicles. Car makers are contemplating revolutionizing the type of cars manufactured, from super efficient gas vehicles, to hybrids, to fully electric cars. Air freight and passenger flights are changing. Airlines are cutting costs, reducing flights, and maximizing passenger count per flight. Air freight carriers have used lean methodologies to streamline their operations, reducing flights and filling planes fuller. Some prominent air freight carriers have disappeared. Trucking companies have been suffering from reduced cargo flow and increasing demands to move more cargo faster for less money. The roads trucks travel on are deteriorating by the day, with little tax influx for repairs. Despite high energy costs, traffic on roads remains high, since road capacity was surpassed years ago. Heavy traffic causes severe delays for trucking companies under pressure, not to mention low driver retention rates. Rail has not grown significantly in decades, but is being viewed as a viable alternative. But rail growth is all but impossible because as of today rail is overbooked, and no further capacity exists. On the flip side, transportation by sea, specifically domestically, has been declining or non-existent for decades, as the invention of trucks and roads all but made domestic sea trade extinct. With the different factors stated above, a paradigm shift is evolving. Although controversial, domestic sea trade shows great promise to transport more cargo, save energy, and free up roads, among other benefits. The potential could not be more clearly defined.

2) What are some of the barriers to making MH a reality on a larger scale?

The first Barrier is education! Many in the transportation sector are oblivious to the mode in general. Others are scared of taking such a leap, since operations of this magnitude have not been executed in almost 100 years. Because of this there is no recent data to indicate its potential for success. The next possible barrier is the Harbor Maintenance Tax. This is classified as strictly a barrier, and not a preventer. The actual cost adder is very minor. What is not minor is the paperwork required from the government, especially less than container or truck load. There is a negative aura created by HMT, and this in and of itself has created a mental barrier to AMH. Lastly, port infrastructure (lack thereof in smaller ports) and access to

economical vessels will continue to be barriers until AMH gets started or something is done about them immediately.

3) Is MH a part of a National Transportation System?

It is not yet, however with enough development, and as visible signs of success appear, it WILL be. It definitely should be. There is literally 100's of thousands of lane miles available to transport cargo over water, along the US coastline (as of yet there is not enough piers to process the traffic if all miles were utilized), but it illustrates that congestion during the transport component is almost impossible over water. Not using these lane miles is equivalent to wasting resources. As road congestion, and lack of building of new roads, other options will be forced upon the transportation communities in order to meet customer demands. Thus deductively AMH should be/is and certainly will be part of the National Transportation System.

Darshan's bio:

Darshan David Drescher Murphy was born November of 1973 in Chicago Ill. and lived in Colorado until college. He attended a college preparatory high school, in which he excelled in math and sciences. His interests were clearly in engineering subsequently attending Maine Maritime Academy in Maine. While attending he was very involved in ASME and SNAME, attending and participating in many conferences and engineering projects. There he received his B.S. in Marine Systems Engineering in 1997. He also received his US Coast Guard 3rd Asst Engineers License. Advanced B.S. research led to published papers and presentations at MIT.

His performance and activities led to many scholarships and awards, including the International Gas Turbine Institute, and SAMPE. Both recognitions circulated worldwide.

He joined the Naval ROTC program and was on scholarship for his academic performance. He was commissioned a Naval Officer and spent 5 years serving in various business and engineering leadership roles. His last assignment was the Officer In Charge of a small craft fleet of 12, including he engineering, maintenance and operations.

While in the Navy, he attended a satellite campus of Troy State University, and earned his Masters of Science degree in Management.

He moved to Orlando in the fall of 2001. He is now a gas turbine service engineer for Siemens Energy. In the summer of 2002 he started his Ph.D. in IE, Management Systems. Over the last 10 years he has been doing independent research on high speed craft and marine gas turbine propulsion. Harnessing power for high speed craft has been a primary focus. He has developed some conceptual designs for hull forms and machinery configurations. Significant marine engineering work included propulsion and auxiliary machinery layout and design for the Bathmax 1500, 1996 iteration, with Kvaerner Masa Marine, the World's fastest ship at the time.

His Dissertation is 75% complete. Short Sea Shipping is the main topic. Operations research, modeling, and concurrent engineering are the prime focuses of this document. The ultimate goal will be an academic and objective analysis of the viability of Short Sea Shipping.

For the last 6+ years Darshan has been extensively conducting research in Short Sea Shipping, attending several conferences, and communicating with the top experts in the field, including Sean Connaughton, Mark Yonge, Dr. Matt Tedesco, John Reeve and renowned maritime economist Martin Stopford.

Darshan is a member of SNAME's Marine Technology Committee peer review team, and a senior member of SNAME O-36 maritime economics panel.

Darshan currently lives in Easton Massachusetts, is happily married and has two young children, 6 and 8.