



Rhode Island Turnpike and Bridge Authority

LNG Transit through East Passage: Potential Impact on Aquidneck Island Development

June, 2006



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Data Sources Used in this Analysis

- ❑ Interviews & Discussions
 - RIMTA board members
 - Marina operators
 - US Coast Guard MSO
 - Newport Chamber
 - RIEDC
- ❑ Official Documents and Public Information Sources
 - Weavers' Cove EIS
 - KeySpan Providence EIS
 - FERC documents concerning Cove Point, MD and Elba Island, GA
 - AIPC West Side Master Plan
 - US DOT Maritime Administration reports
 - US DOC County Business Patterns
 - USCG Boating Safety Survey
- ❑ Secondary Source Material
 - National Sporting Goods Association Sports Participation Survey
 - Embassy Guides: Atlantic Coast
 - Captain SeaGulls SportFishing Charts
 - Northeast Guide to Saltwater Fishing
 - Inlet ChartBook: Southeastern U.S.
 - Intracoastal Waterways Facilities Guide
 - Google Earth Views



Findings

Finding

The present Weaver's Cove EIS insufficiently measures the potential impact on the use of the Bay as a recreational amenity and economic engine

The size and speed of the impact on the Aquidneck Island economy will depend on the number of transits that take place

Discussion

- Narragansett Bay is a recreational versus industrial waterway
 - Rhode Islanders are extremely active in pursuing water-based recreation
 - The Weaver's Cove EIS provides only a cursory review of the potential impact on recreational activities on the Bay
-
- The analysis suggests the potential for losses in two dimensions:
 - lost investment due to uncertainty
 - lost revenues due to the "hassle" factor
 - Transits will be the key driver
 - The more transits per year the graver the economic consequences



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Findings

Finding

Over time any impact on the Newport economy will likely have spillover effects on RITBA

Some of the negative impacts can be managed if proper focus and attention is placed on managing the “downside” risk

Discussion

- RITBA’s revenues are in part tied to the continued presence of Newport as a major destination
- To the degree that negative consequences result for Newport, some impact will be felt by RITBA if Newport becomes a less desirable location

- Aside from more economic diversification, different market focus for the tourism target in terms of longer visits, greater wallet-share, and extended season can offset any potential loss
 - This assumes that the higher frequency of transits does not take place



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Each 1% impact across a cross-section of the visitor market in Newport is worth over \$1.0 million

- Given the high seasonality factor to Newport, revenue-days under the present tourism model are a perishable commodity with nearly no “catch up” potential elsewhere in the year
- Each 1% loss is roughly equivalent to the sales performance of an “average” retail store or restaurant in Newport

Impact of 1% Revenue Change on Key Tourist Markets

Sector	Sector Revenue	Value of 1%	Value of 3%	Value of 5%
Transient Boaters Spending	\$ 3,321,267	\$ 33,213	\$ 99,638	\$ 166,063
Non Transient Boater Spending est	\$ 22,141,778	\$ 221,418	\$ 664,253	\$ 1,107,089
Bridge Traffic Peak Season Spending	\$ 38,730,625	\$ 387,306	\$ 1,161,919	\$ 1,936,531
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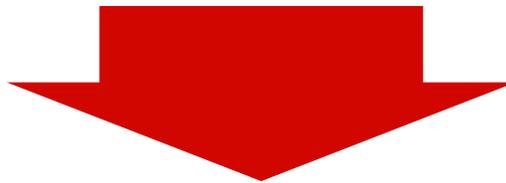
Note: this excludes race and event fees and sponsorships



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There are still a few opportunities to impact the formal decision-making process at the regulatory level

- The Coast Guard has no current public comment period regarding their ongoing review of the Weaver's Cove waterway suitability assessment, but letters can be sent.
- The FERC action called on the Coast Guard to review the matter of more, smaller ships. Their review should include not only the waterway plan but also a look at environmental impacts, such as the impacts to the economy of Newport County and the RITBA.



Any correspondence should emphasize the dramatic negative impact on navigation, bay access and recreational uses that more frequent LNG transits would have



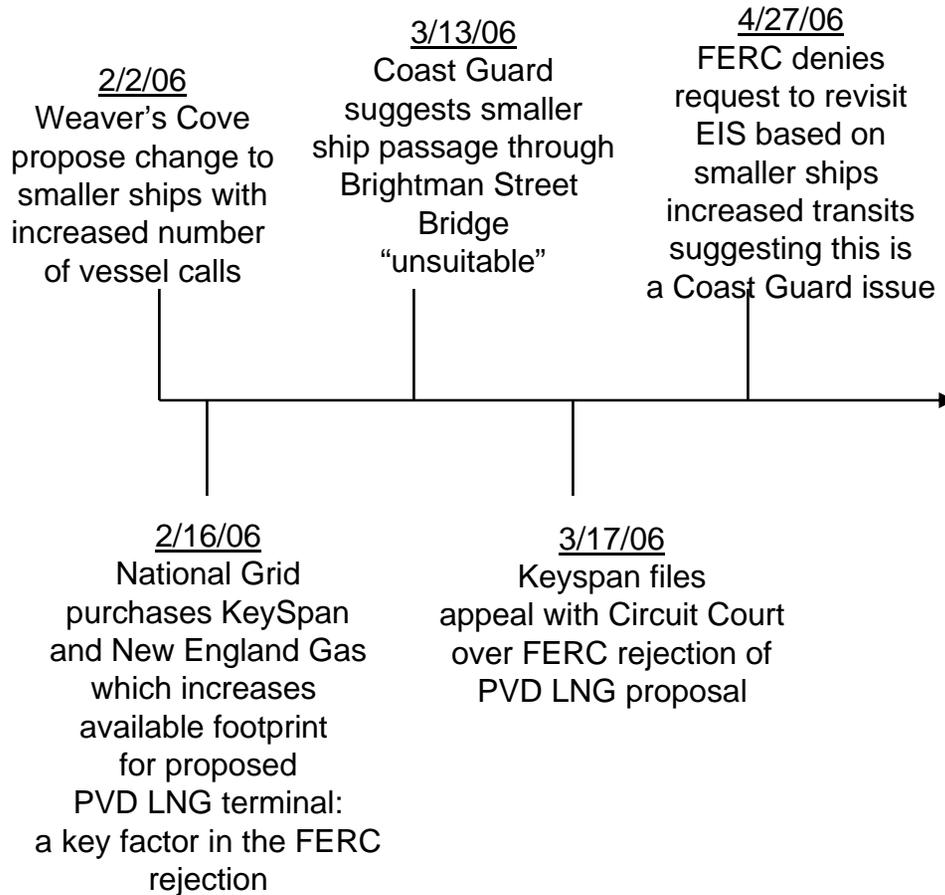
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Regulatory and Legal Status



Timeline of current events



- Outstanding Matters**
- Coast Guard determination on revised vessel plan and Letter of Recommendation
 - Circuit hearings on appeal of Weaver Cove decision and KeySpan decision



There are no timelines at present for these items



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What this means

- The KeySpan site in Providence is still alive
- The FERC did not debate if more, smaller ships has any new impacts or not, referring this issue to the Coast Guard
- FERC has ended its review of all matters relating to the proposed LNG facility at Fall River
- Any next steps will take place in the US Court of Appeals starting this summer

Without a successful court appeal regarding Weaver's Cove, there is no regulatory option available to force FERC to consider other options such as offshore terminals – that window has closed



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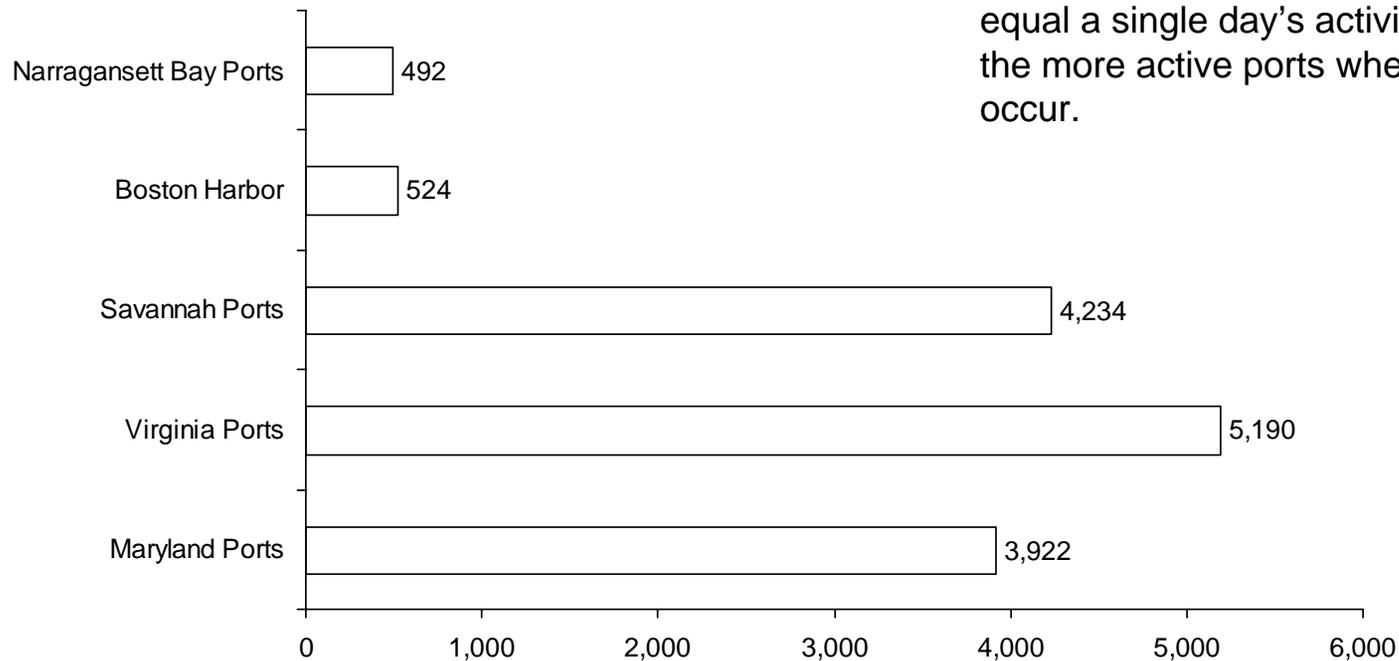
LNG Transit Operations



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LNG transit will take place in a waterway that has substantially fewer conflict opportunities with other cargo transits compared to other east coast LNG transit corridors

Cargo Vessel Transits



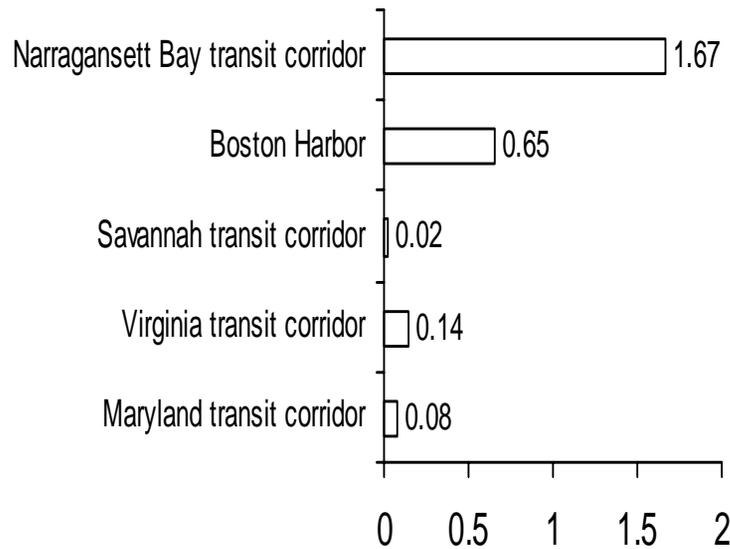
➤ To put this in perspective it takes roughly 10 days of activity in Narragansett Bay to equal a single day's activity in some of the more active ports where LNG transits occur.

Source: MARAD Vessel Call Data, transit calculations by NP



Narragansett Bay unlike other East Coast waterways which undergo LNG transit, is a recreational rather than industrial waterway...

Transient Slips/Moorings to Cargo Transits



Source: MARAD, USCG, Embassy Guides, NP analysis
(Includes only boats that are powered including sail boats with auxiliary power)

Discussion

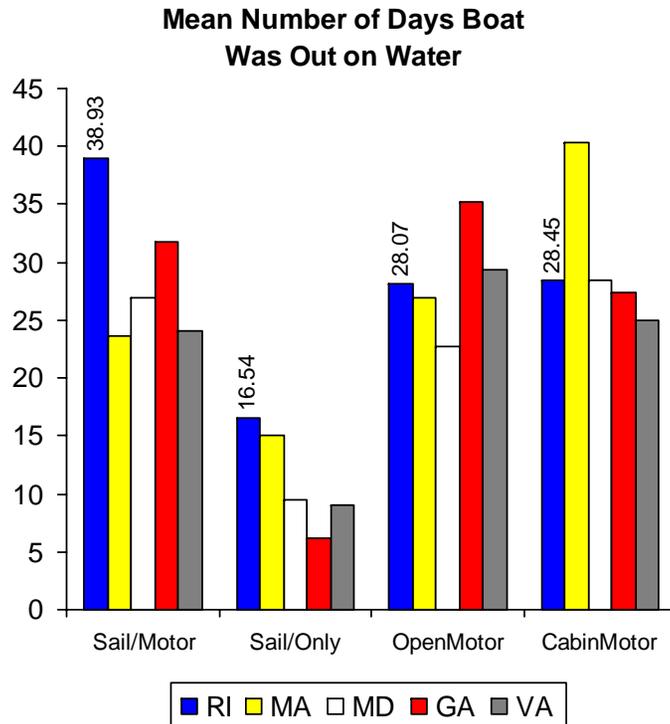
- Industrial intensity is an attempt to measure the conflict potential between cargo transits and recreational boating use within the LNG transit area
- Transient spots to cargo transits is an attempt to measure the potential destination activity of recreational boaters versus cargo activity
- There are some caveats to this analysis:
 - The lack of comparable activity data by waterway requires building extrapolations such as presented here
 - Comparable data regarding total slips and moorings is not readily available
 - This analysis excludes examining density of activity
 - This excludes analysis of navigation options and corridor width impacts on recreational boating



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... With RI recreational boaters among the most active boaters in the states with LNG transits



Source: USCG Survey, 2003

- A key difference between RI and the other East Coast LNG states is the limited impact LNG transit has on the overall boating geography in those states versus the very direct impact on boating geography in RI
- Therefore, a smaller boating geography coupled with a shorter season than other geographies and more intensive use in terms of “days on water” presents a unique challenge in managing access
- Based on an approximate 120 day boating season RI boaters are on the water somewhere between 1/3 to 1/4 of the available days – roughly equivalent to potential LNG transits



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LNG transit operations as proposed in the initial plan

Transit Operations

- ❑ LNG transit operations for the foreseeable future will occur during the day and timed for high tide in Fall River
- ❑ A more accurate measure of activity is transits (as opposed to vessels calls) because a level of security exists for LNG vessels entering and exiting Narragansett Bay
 - ❑ Transits will run from approximately 100 (one every 4 days) to 140 (1 every 3 days)
 - ❑ Given the proposed positioning of the LNG operation as a “peaking” facility it is anticipated that an increased level of transits occurs as heating season approaches
 - ❑ However, contract relationships could alter any actual “seasonality” if the primary customer base becomes electric power generation
 - ❑ LNG economics suggest significant motivation to move toward maximum planned capacity

Operational Impacts

- ❑ Impacts to the RITBA will be “determined” by the RITBA to a degree
 - ❑ Coast Guard has no formal authority to request closure of bridges
 - ❑ Review suggests that bridges are closed but tunnels remain in use
 - ❑ Closure will subject vehicle traffic to movement impacts between 20 to 45 minutes depending on time of day, day traveled and bridge crossed
- ❑ Newport Harbor could be dramatically affected
 - ❑ It may undergo complete “lockdown” depending on the security level
 - ❑ Boats will not be allowed within the security zone
 - ❑ It is not clear how cruise ships will be handled at this time
 - ❑ They could be forced to reposition
 - ❑ They could undergo complete lockdown
 - ❑ Shuttle operations would need to cease during LNG transits



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Since the initial February report Weaver's Cove has proposed smaller ships generating more transits

Timeline of Events

- 2/2/06: Weaver's Cove proposes change from letter of intent of May 12, 2004. Wants to use smaller vessels to deliver LNG more frequently to Fall River facility. 950 foot ships that are 145 feet wide with 60 annual port visits would change to 725 foot ships that are 82 feet wide with 120 port visits each year.
- 3/13/06: Coast Guard's Captain of the Port, Roy Nash, responds saying Brightman Street Bridge "appears unsuitable" for this proposal. Does not comment on any other impacts from increased transits. Welcomes additional work from Weaver's Cove.
- 4/27/06: FERC denied requests to reopen the record and redo the environmental review in light of proposed change to more, smaller ships.

Implications

- Vessels calls equate to 240 transits per year
 - This equals roughly 960 hours of daylight
- No change in operational issues just increased frequency of impacts
 - Bridge closures
 - Daylight, high tide transits
 - Security zones and Newport Harbor lock downs



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LNG Transit - Impact on Economic Sectors

There is likely to be some negative economic consequences but the size of impact is at question depending on what happens with the number of transits and when they begin

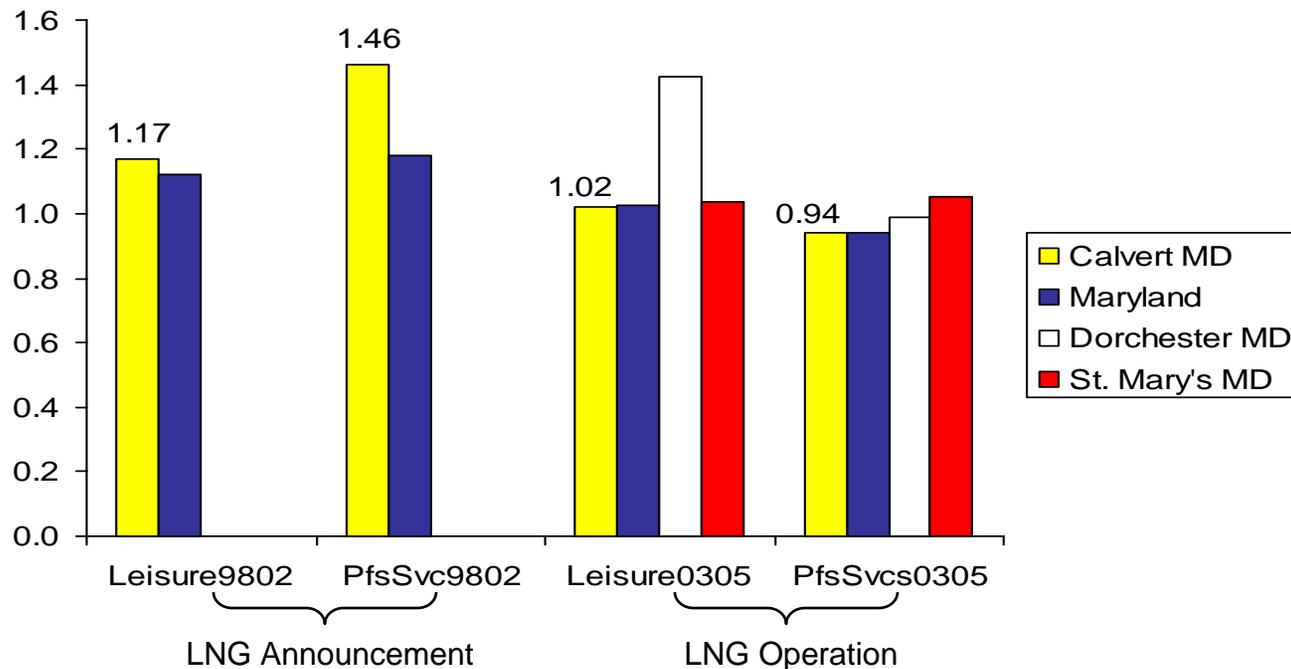
	Level of Economic Risk	Discussion
<i>Waterfront real estate development</i>		<ul style="list-style-type: none"> ▪ The primary risk factor in this sector is what happens to the level of investment based on the uncertainties surrounding impact on state's boating sector
<i>Recreational boating activity</i>		<ul style="list-style-type: none"> ▪ Impact will largely depend on boater & event sponsor response to nuisance factor caused by LNG transits
<i>Tourism & Retail</i>		<ul style="list-style-type: none"> ▪ Largely tied to resulting boating and cruise ship decision-making based on the nuisance factor ▪ Negative impact is based on inability to offset resulting losses during summer and "shoulder" seasons
<i>Defense</i>		<ul style="list-style-type: none"> ▪ Risk level is a function of defense activities requiring unfettered bay access versus mitigation measures to allow for the needed access



The actual economic impact of LNG transit is unclear based on benchmarks from communities where LNG transits presently occur

- Calvert County MD, home to Cove Point LNG, job creation performance has mirrored Maryland's but has lagged neighboring counties
- What role LNG has played in this is uncertain, but clearly economic performance is different

Comparative Job Performance in Maryland



Source: BLS data sets, County Business Patterns
 NP calculations
 NOTE: Other LNG areas were excluded due to their location in metropolitan areas

PfsSvc0305: Professional services 2003-2005, 2005 is based on a 6 month avg
 Leisure0305: Leisure employment 2003-2005, 2005 is based on a 6 month avg
 PfsSvc9802: Professional services 1998-2002
 Leisure9802: Leisure 1998-2002



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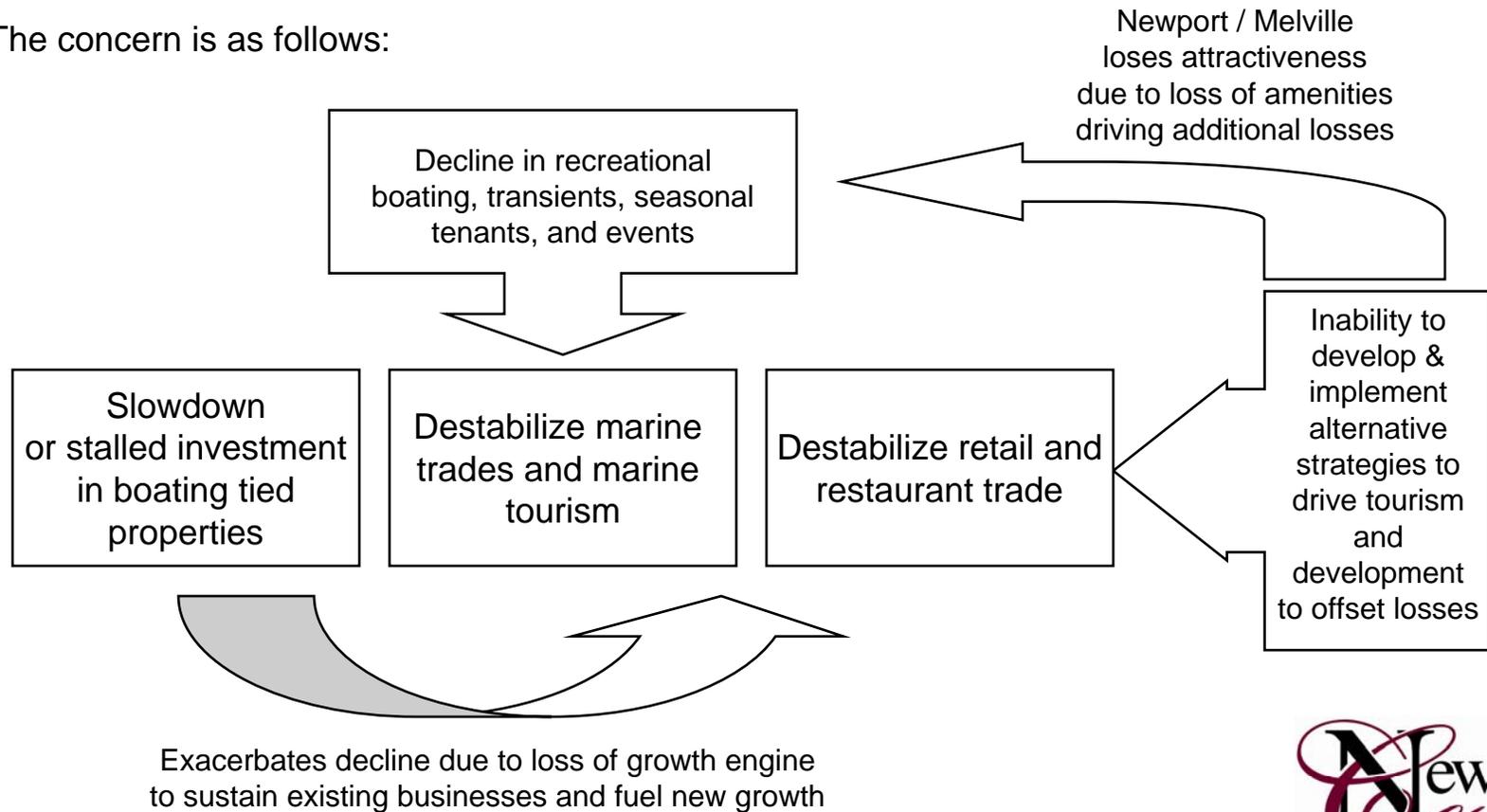
Moreover, NP performed a cursory check on the assertions made in the EIS regarding impact on real estate prices, development and demand

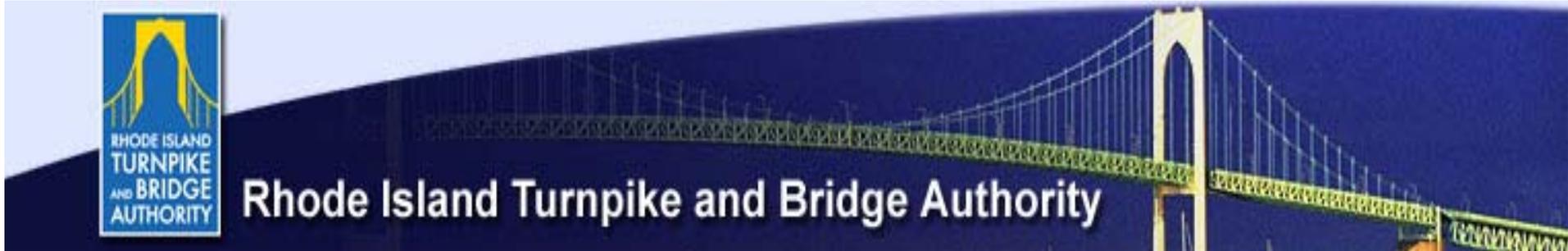
- This review found findings consistent with the EIS findings
- However, the EIS did not adjust for differences in prices, demand levels and target markets for developments



At issue is to what degree is recreational boating negatively affected and how that impact is cycles through the local economy

- The concern is as follows:





A very conservative economic estimate suggests that recreational boaters have a substantially greater impact than car-based day trippers on Newport

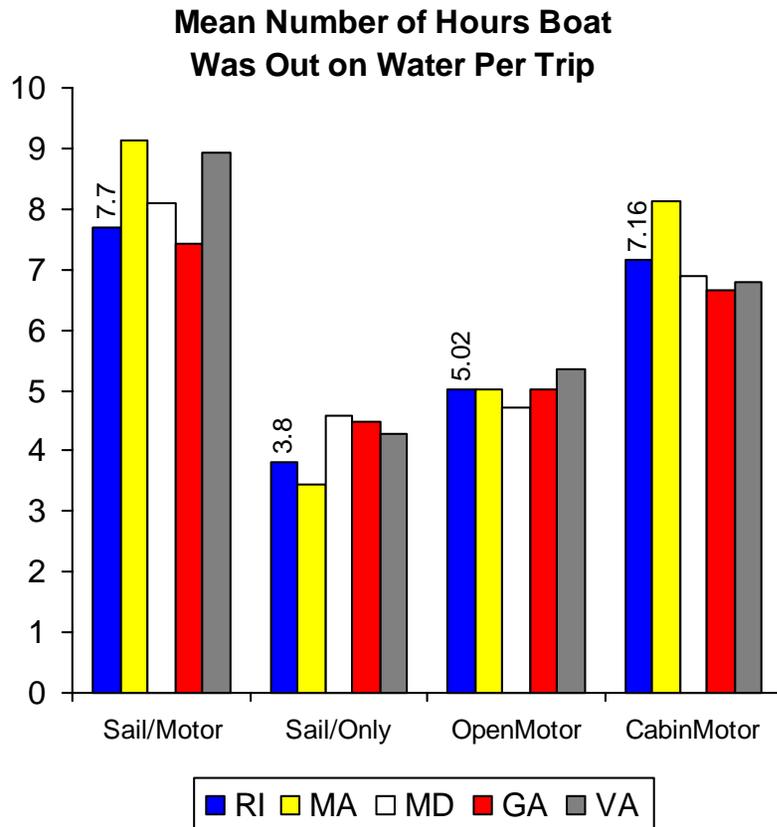
- Recreational boating and related activities may be more than 58% of economic activity during the key summer season in Newport
- And generate substantially fewer impacts such as traffic, congestion and overcrowding

Sector	Sector Revenue	Value of 1%	Value of 3%	Value of 5%
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Note: this excludes race and event fees and sponsorships. Also there is very little up-to-date comprehensive data about Newport visitors. Extrapolations were made based on previously issued reports and selected interviews.



Why “hassle/nuisance factor” may matter for boaters



Source: USCG Survey, 2003

- For RI boaters & transient boaters in RI waters the anticipated delays or lack of access to parts of the Bay equate to somewhere between 1/2 to 2/3 of the boating day
- In every customer situation there is always a market segment that has “buying” decisions influenced by “impatience” or degree of hassle
 - Depending on the industry 3-7% of customers are influenced by service delays or “hassles”
- How this will manifest itself given the delay caused by LNG transit and the boating and sailing options in the region is uncertain
 - But this should be monitored and consideration given to potential mitigation measures



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There may be an impact on sailing events

- There may be an impact on Newport's ability to attract major sailing races given the course location in the heart of the LNG transit corridor
 - These races can generate substantial revenues for the local economy – approximately \$1-2 million per racing vessel in local expenditures
 - Ancillary benefits include reinforcing Newport's position as the Nation's sailing capital
- However, competition for major sailing events has increased
 - A factor in determining whether Newport can continue to be a port may in part be a function of the level of "hassle" and risk of delay
- It needs to be noted that Annapolis is a major competitor to Newport as a stop or host for major sailing events
 - Cove Point LNG is passed on the way to Annapolis
 - However, the Annapolis race course is unfettered by LNG transit but subject to a more intensive cargo transit environment than sailing vessels in Newport
 - Annapolis is a stop over for the 2006 Volvo Ocean Race (the former Whitbread) as well as an "in port" race location for this race
 - Stop over is in April

Moreover, several major development opportunities in the area are tied directly or indirectly to marine trades and recreational boating unlike developments in other LNG locations

- Potential capital investments of at least \$75 million may not be realized if LNG transit tempers recreational boating activity with a resulting decline in demand for slips, moorings and vessel servicing





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...With those in Newport less likely to be directly impacted by LNG transit



Newport North End

Naval Hospital redevelopment may be impacted if marina component is major feature

Other North End developments may be impacted depending on bridge "hassle" and overall Newport business activity



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Cruise ships are likely to be severely impacted by LNG transits

Based on 2005 data, 68% of cruise ship anchorage days in Newport correspond to daytime high tides in Fall River; 22% of 2005 cruise ship arrivals also occur at likely LNG morning arrival times

2005 Newport Cruise Ship Activity and Fall River High Tides

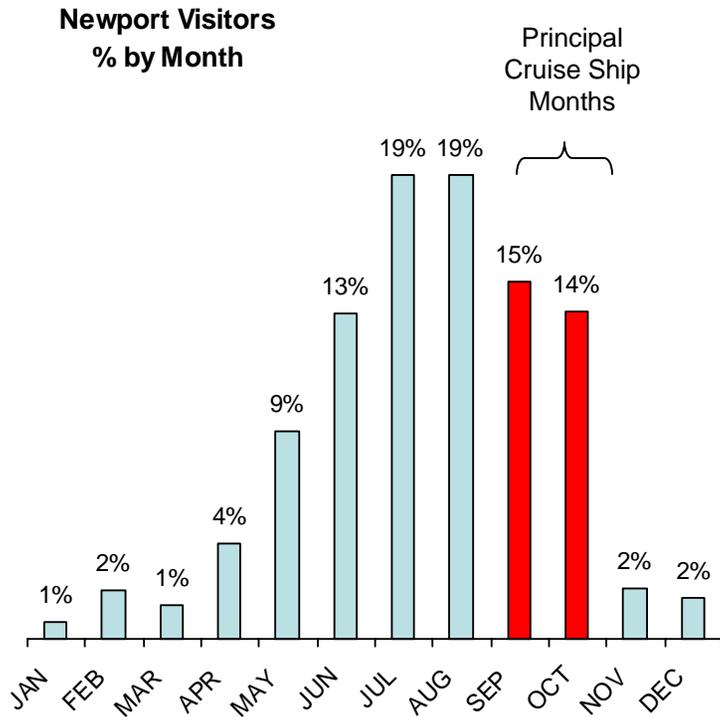
Newport Cruise Ship Presence	Daylight High Tide Fall River	Newport Harbor Passage Time	LNG Transit	Major Conflicts	
9-Sep	12:38 PM	8:38 AM	Possible	Conflicts with Arrival Time	
12-Sep	3:35 PM	11:35 AM	Possible		
13-Sep	4:45 PM	12:45 PM	Possible		
14-Sep	5:52 PM	1:52 PM	Possible		
16-Sep	7:44 PM	3:44 AM	Not Likely		
18-Sep	8:54 AM	4:54 AM	Unclear		
23-Sep	1:01 PM	9:01 AM	Possible		Near Arrival / Passenger Disembark
25-Sep	2:55 PM	11:55 AM	Possible		
30-Sep	7:23 PM	3:23 PM	Possible		
1-Oct	7:41 AM	3:41 AM	Not Likely		
7-Oct	11:51 AM	7:51 AM	Possible	Conflicts with Arrival Time	
8-Oct	12:17 PM	8:17 AM	Possible		
9-Oct	1:14 PM	9:14 AM	Possible	Near Arrival / Passenger Disembark	
13-Oct	5:34 PM	1:34 PM	Possible		
14-Oct	6:32 PM	2:32 PM	Possible		
15-Oct	6:56 AM	2:56 AM	Not Likely		
16-Oct	7:45 AM	3:45 AM	Not Likely		
17-Oct	8:32 AM	4:32 AM	Unclear		
24-Oct	2:19 PM	10:19 AM	Possible		
26-Oct	4:17 PM	12:17 PM	Possible		
30-Oct	6:17 PM	2:17 PM	Possible		
1-Nov	7:15 AM	3:15 AM	Not Likely		



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Cruise ships represent between 9% and 11% of Newport's visitor traffic during the fall shoulder season



Source: NP calculations based on GoNewport.com data

