

R.I. TRANSPORTATION ASSETS VULNERABLE TO SEA LEVEL RISE

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Executive Climate Change Council
March 27, 2014



Background & Project Purpose



All numbers reported in this presentation are draft findings. Please do not cite without permission. The final report will be available later in 2014.

Background & Project Purpose



Two Phases

- EXPOSURE phase: the potential future exposure of the transportation assets to sea level rise
 - ▣ 1, 3, 5-foot scenarios to match other RI projects
- VULNERABILITY phase: prioritizing state-owned assets to determine which will flood soonest, have the greatest impact (*next step*)

Final Products

- EXPOSURE PHASE
 - Statewide map
 - Municipal map books
 - Calculations, e.g. linear feet of road exposed
 - Inventory of roads exposed to SLR

- VULNERABILITY PHASE
 - Results of vulnerability prioritization

- FINAL REPORT
 - All of above, plus general adaptation strategies, with case studies

Overall Findings



- Impacts in every coastal community
- Three and five feet of SLR much greater impact than one foot

Preliminary Findings - Roads

	Flooded at 1 foot SLR (feet)	Flooded at 3 feet SLR (additional feet)	Flooded at 5 feet SLR (additional feet)
ALL ROADS	8,792	136,310	297,346
Local Roads	6,896	97,350	213,443

Preliminary Findings - Roads

□ Basin Road, Narragansett



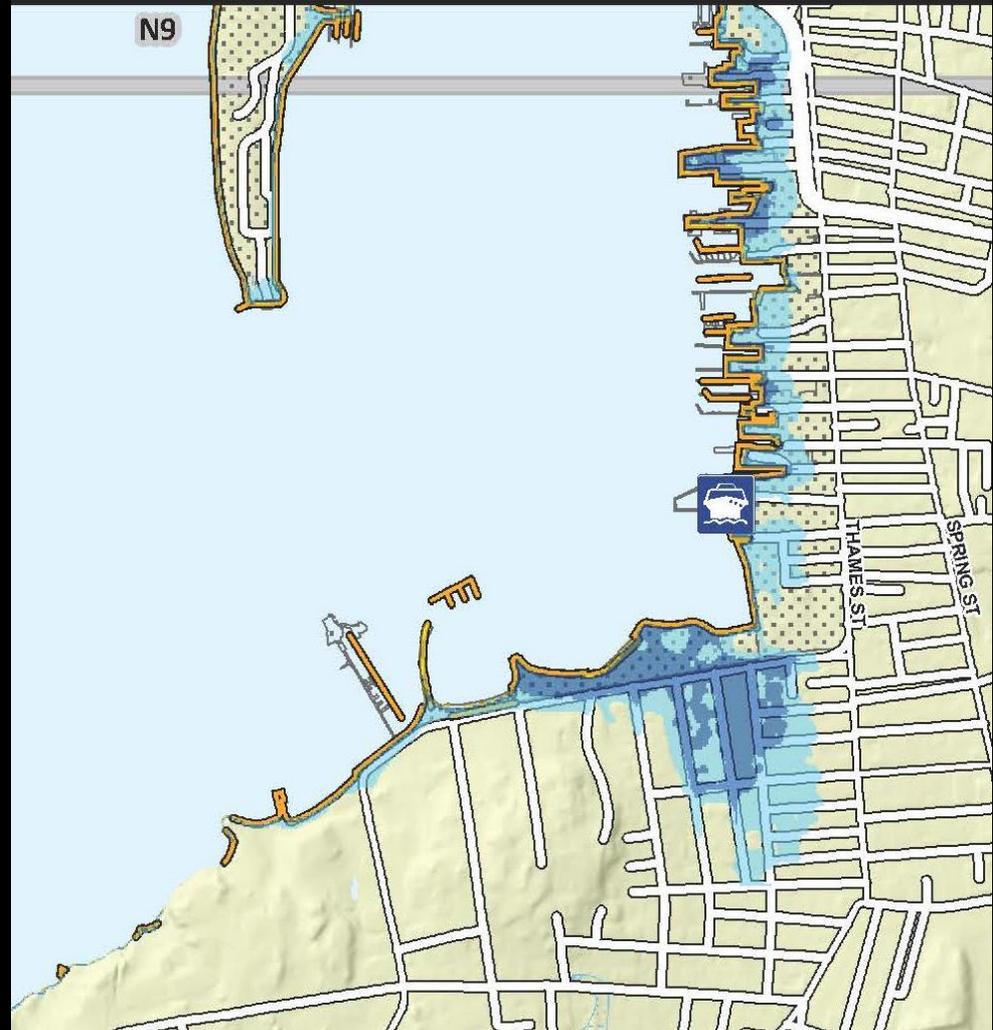
Preliminary Findings - Roads

□ Mackerel Cove, Jamestown



Preliminary Findings - Roads

- Lower Thames St., Newport

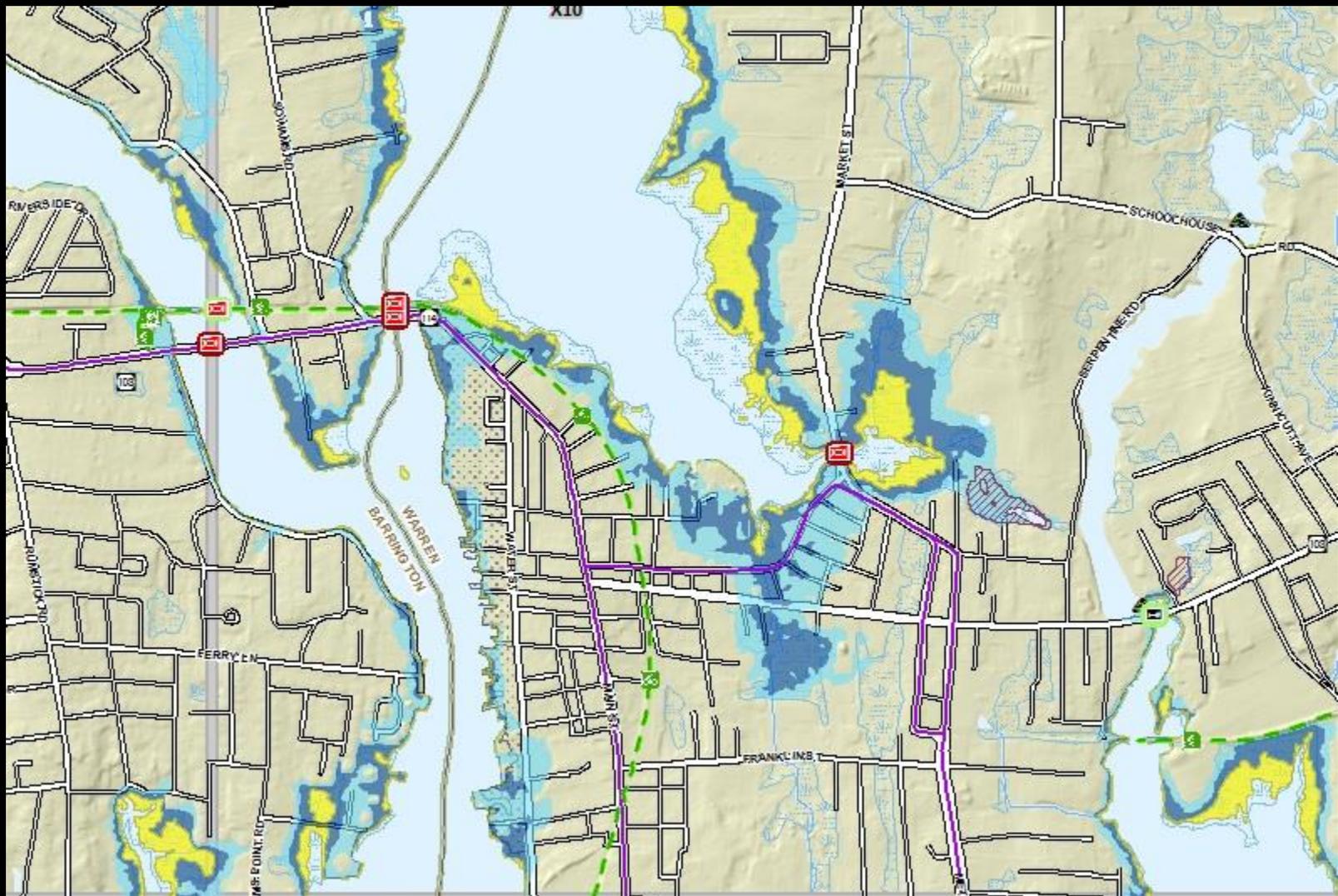


Preliminary Findings - Bridges

- 66 bridges cause concern with 5 feet or less SLR
 - 49 bridges have low freeboard heights
 - 46 bridges will have accessibility issues



Preliminary Findings

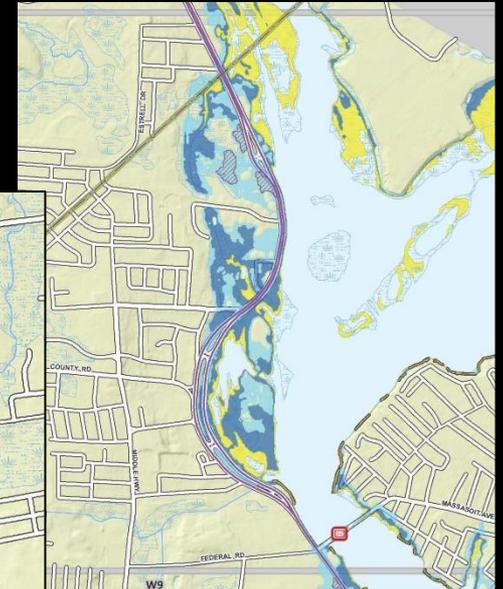
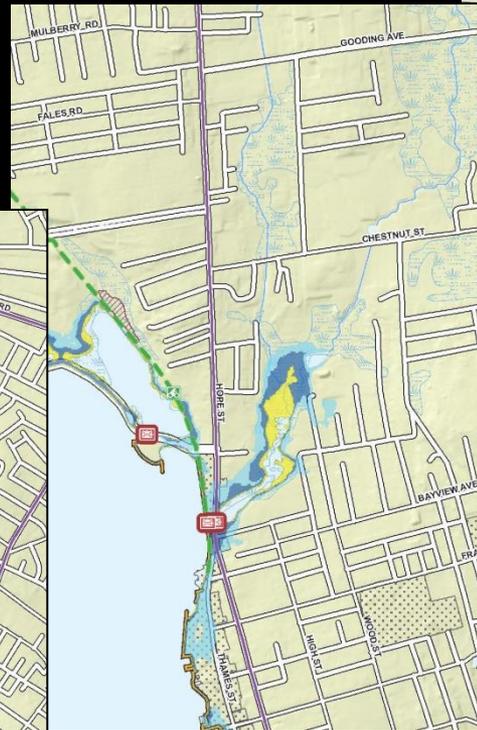


Preliminary Findings - Other Assets

	Flooded at 1 foot SLR	Flooded at 3 feet SLR (add. feet)	Flooded at 5 feet SLR (add. feet)
RIPTA routes	639	13,097	49,293
Rail	17	274	3,644

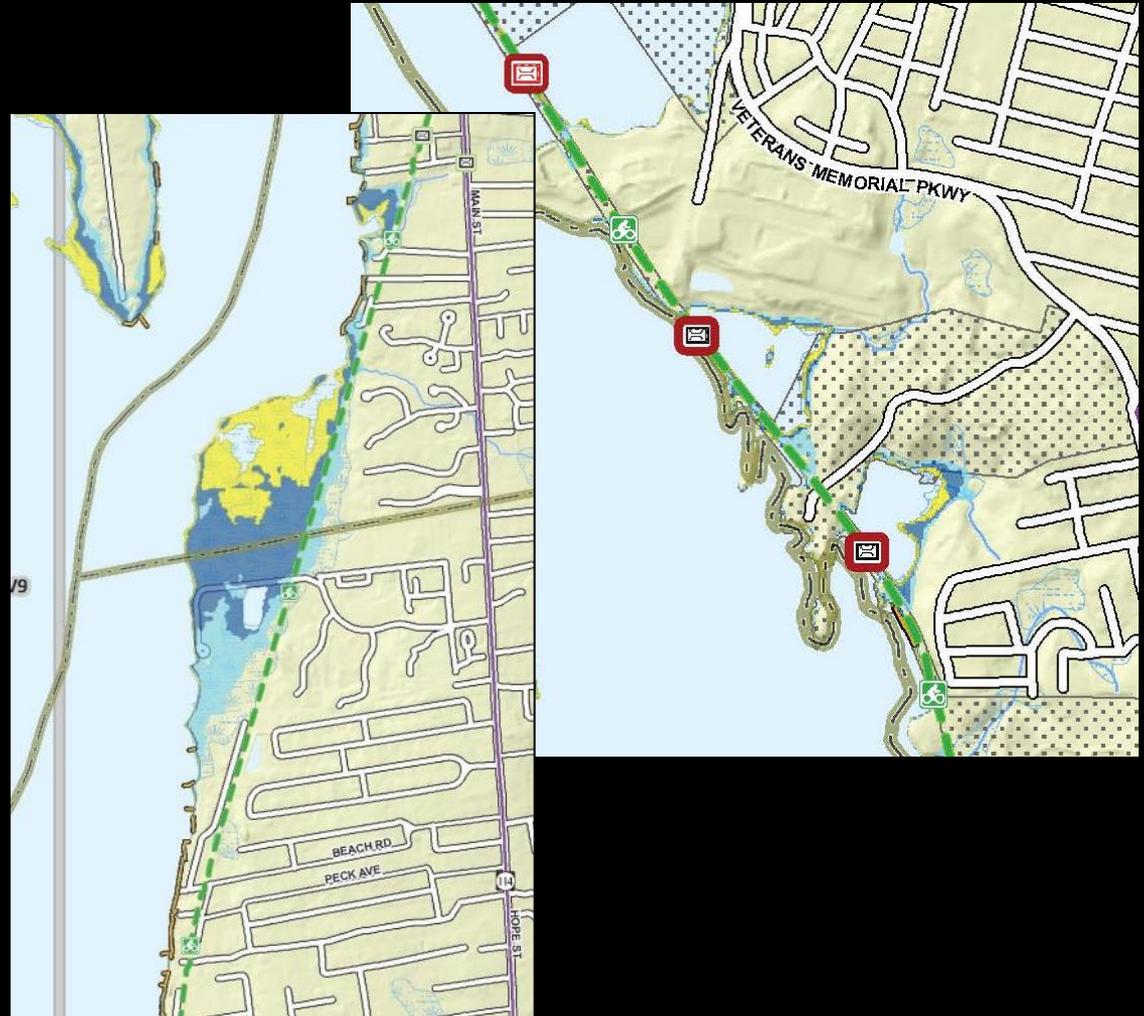
Preliminary Findings – RIPTA

- RIPTA 60 Bus
- Nearly 3,000 passengers per day

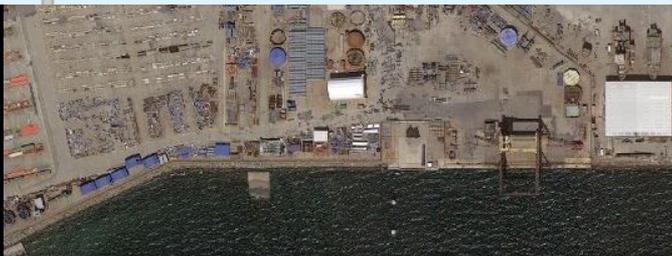
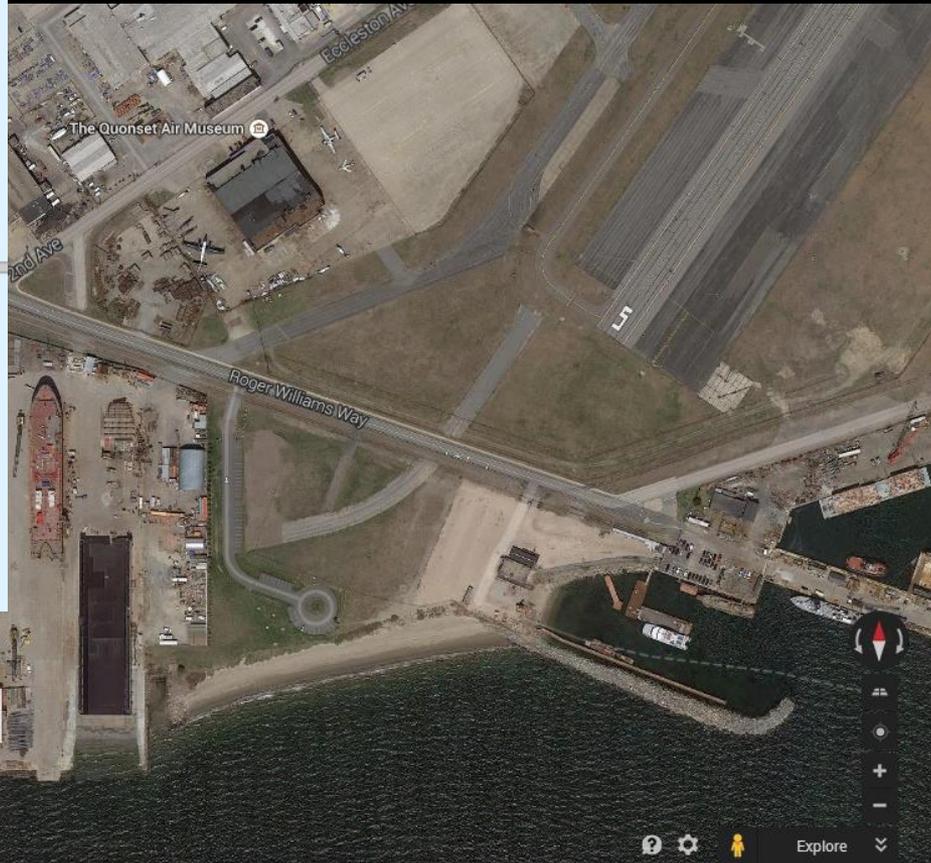


Preliminary Findings - Bike

- East Bay Bike Path
- Many on-street bike routes



Preliminary Findings – Ports & Harbors



Next Step – Prioritization Exercise

- Key Questions
 - ▣ IMPACT Which are most crucial to our transportation network?
 - ▣ URGENCY Which will flood first?
- End result: understanding of where to start with more technical work

How Will This Project Be Useful?



- Overall understanding of key transportation system exposures
- Resources for state DOT and local DPWs
- Move conversation on how we prioritize efforts to manage sea level rise

Questions?

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