

# Bridge Under Troubled Water

An Investigation into Sea Level  
Rise Scenarios for Nahant, MA

# Purpose

- Assess inundation risk level
  - Who is at risk?
  - What level of impact can be expected
- Why?
  - Hub-hub over Polar ice melt
  - Bring relevance to local region



# Methods

- Data Source(s)
  - MGIS
- Process
  - Data Gathering and Cleanup
  - Utilization of data within ARCmap

# IPCC Projections

(m at 2090-2099 relative to 1980-1999)

Case	Model-based range excluding future rapid dynamical Changes in Ice Flow
Constant Year 2000 Concentrations	N/A
B1 Scenario	.18-.38
A1T Scenario	.20-.45
B2 Scenario	.20-.43
A1B Scenario	.21-.48
A2 Scenario	.23-.51
A1FI Scenario	.26-.59



# Results

Nahant Inundation at 3 meters



1 inch = 0.52 miles  
1 0.5 0 1 Miles

Garth Retallack

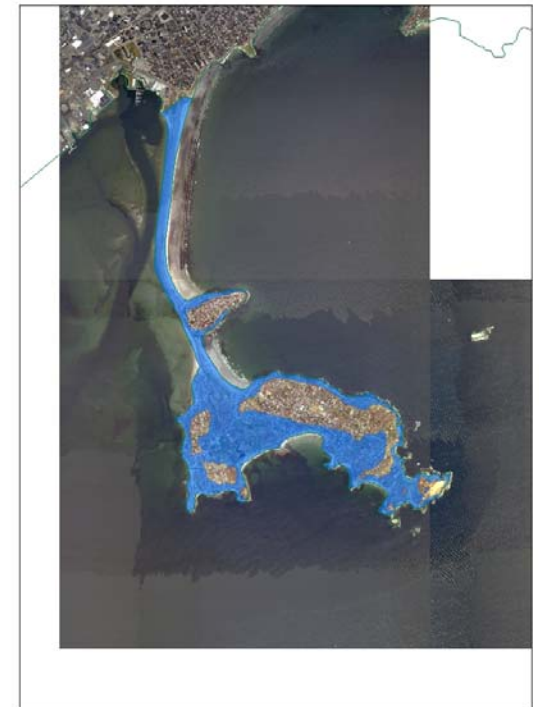
Nahant Inundation at 5 meters



1 inch = 0.51 miles  
1 0.5 0 1 Miles

Garth Retallack

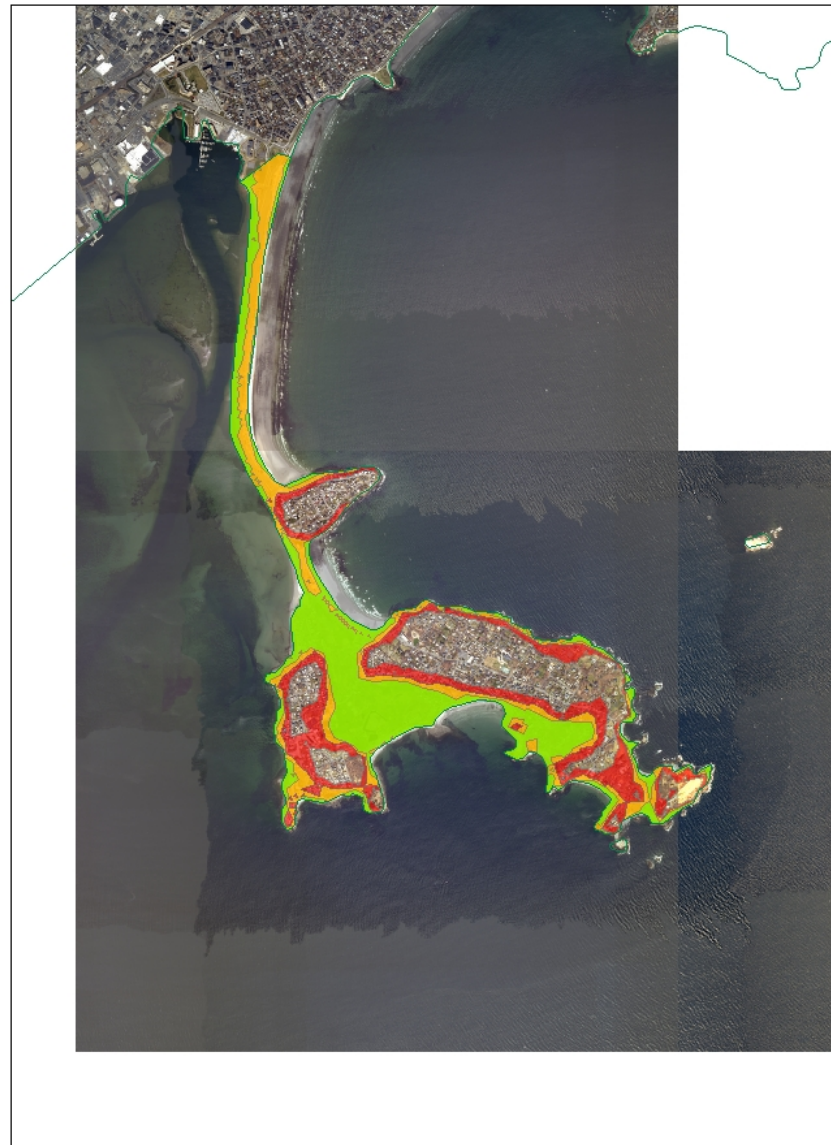
Nahant Inundation at 10 meters



1 inch = 0.52 miles  
1 0.5 0 1 Miles

Garth Retallack

## Nahant Inundation at 3, 5, 10 meters



1 inch = 0.52 miles  
1 0.5 0 1 Miles

Garth Retallack



# Discussion

- Interpret results
- Expectations vs. Surprises
- Implications

# Conclusion

- Sea level rise
  - Significance
  - Supporting results
  - Further research in support of data
- Different possibility of approaches



# References

- MGIS @ [mass.gov/mgis](http://mass.gov/mgis)
- IPCC @ <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf>