

Photo credit:WMTW video

# TIDES, TAXES, & NEW TACTICS

PLANNING FOR ADAPTATION AND IMPACTS OF SEA LEVEL RISE AND STORM SURGE THROUGH GIS-DRIVEN VULNERABILITY ASSESSMENTS AND COMMUNITY DIALOGUES

Annie Cox for Wells Reserve Climate Stewards Lecture Series, May 26, 2021

*This presentation was prepared by SMPDC under award CZM NA18NOS4097419 to the Maine Coastal Program from the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of SMPDC and do not necessarily reflect the views of NOAA or the Department of Commerce.*



WELLS NATIONAL ESTUARINE RESEARCH  
RESERVE, WELLS, MAINE



Laudholm Beach, Wells Reserve

## SOUTHERN MAINE COAST: ATTRACTIVE & VULNERABLE

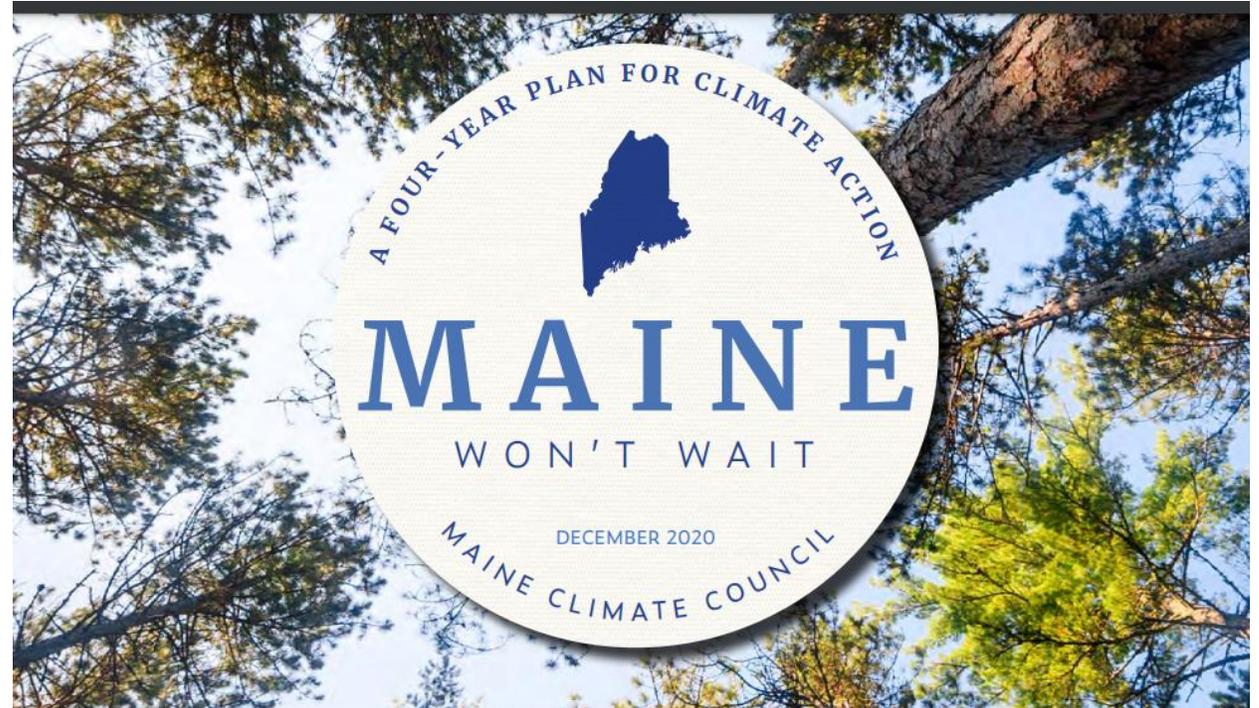
A photograph showing a road completely submerged in water. The road has two yellow lines running down the center. The water is calm and reflects the overcast sky. In the background, there are several houses and trees, some of which appear to be partially submerged. The overall scene is one of significant flooding.

FURBISH RD  
WELLS, ME

## Scientific Assessment of Climate Change and Its Effects in Maine

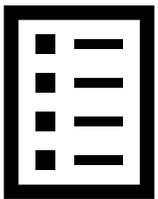
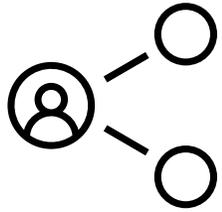


MAINE CLIMATE COUNCIL  
SCIENTIFIC AND TECHNICAL SUBCOMMITTEE



### Resources

- Maine Won't Wait: A Four-Year Plan for Climate Action
- Scientific Assessment of Climate Change and Its Effects in Maine
  - [climatecouncil.maine.gov](https://climatecouncil.maine.gov)
- Summary Workshop Documents:
  - [wellsreserve.org/project/tides-taxes-and-new-tactics](https://wellsreserve.org/project/tides-taxes-and-new-tactics)



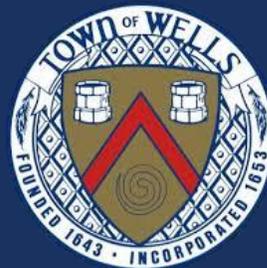
COMMUNITIES ARE WORKING TOWARDS RESILIENCE

# PROJECT PARTNERS

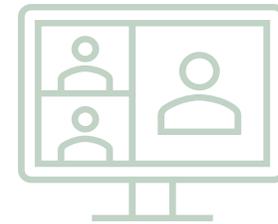
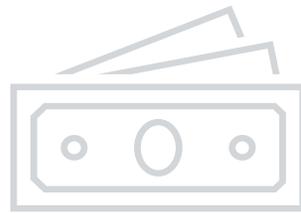


wellsreserve  
at laudholm

Wells National Estuarine  
Research Reserve



# PROJECT OVERVIEW



**Advisory  
Committee**

**Vulnerability  
Assessment**

**Socio-  
Economic  
Analysis**

**Municipal  
Resilience  
Strategies**

**Community  
Workshops**

**Regional  
Assessment  
Report**

November '19

June '21

# How vulnerable are Kennebunk, Wells and York to sea level rise?

Shawn P. Sullivan Portsmouth Herald

Published 5:54 a.m. ET Feb. 11, 2021 | Updated 1:59 p.m. ET Feb. 11, 2021

[View Comments](#)



Damage to the seawall on Gooch's Beach in Kennebunk, Maine, is seen after a nor'easter battered the coast in early March 2018. Jonathan Bryant

KENNEBUNK, Maine – Selectperson Edward Karytko on Tuesday mentioned some recorded footage he had seen that showed large waves crashing on the town's shores during the snow storm earlier this month.

"If we get a direct hit from a hurricane, it's probably going to be 10 times as worse," he said.

Karytko made his remark during the Kennebunk Select Board's discussion on rising sea levels as a result of climate change, the impacts that could have on the community, and what the town is doing to take action.

To that end, Community Development Director Chris Osterrieder updated the board on the Tides, Taxes and New Tactics Project, an ongoing effort led by the Southern Maine Planning and Development Commission in collaboration with the towns of Kennebunk, Wells and York.

**More:** [Kennebunk Select Board awards bid for improving Beach Avenue shoreline](#)

The project is focusing on the impacts rising sea levels will have on these coastal communities, as well as on local vulnerabilities and strategies for protecting people, property and natural resources from the impacts of coastal flooding.

Osterrieder said the project's analysis of Kennebunk is finished, so now is the time for the town to begin to understand what the analysis means and discuss strategies for the future.

**March 2018 Nor'easter:** [FEMA surveys storm damage in Kennebunk](#)

The town will hold a virtual workshop on Tuesday, March 2, to share the local assessment results with municipal staff. The workshop is expected to start at 6:30 p.m. and last about one hour, Osterrieder said.

"This step here is really important," he added.

Osterrieder said that the project team has determined a sea level rise of about 3.9 feet over time would affect at least 700 properties on the Kennebunk coast.

**Tides, Taxes, & New Tactics: Planning for Sea Level Rise and Coastal Adaptation in Southern Maine**  
Community Spotlight: Town of Kennebunk

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**PROJECT OVERVIEW**  
Sea level rise and coastal flooding pose significant threats to southern Maine communities. Marked by picturesque seaside neighborhoods, ecologically significant coastal habitat, and a robust economy driven by coastal tourism, the region is a highly desirable place to live, work, and visit. Many of these characteristics that make Kennebunk so desirable also make it exceptionally vulnerable to coastal storms and rising seas. A highly developed coastline, low-lying coastal areas, sandy beaches, and development pressure further compound that vulnerability. Kennebunk's coastal development provides a substantial portion of the municipal tax base, generating vital funds that sustain community operations, services, and programs. However, it is that same development that is most susceptible to coastal flooding, placing residents, visitors, and municipal funding at greatest risk. The coastal areas and resources that drive the economy are also vulnerable to rising seas. In order for towns like Kennebunk to address these vulnerabilities and prepare for coastal hazards, locally specific information about how sea level rise and storm flooding could impact the community is needed.

**KEY PROJECT**  
The Tides, Taxes, & New Tactics project is addressing that need by providing Kennebunk with vital information about sea level rise impacts, local vulnerabilities, and tailored strategies for protecting people, property, and natural resources from the impacts of coastal flooding. Led by the Southern Maine Planning and Development Commission (SMPDC) and funded by the Maine Coastal Communities Grant program, the project involves the towns of Kennebunk, Wells, and York. The project team is working in partnership with the three towns to investigate municipal level economic and social impacts of 1.6, 3.0, and 6.1 feet of sea level rise and develop adaptation and resilience planning strategies that address those impacts. Municipal staff from each community serve on a Project Advisory Committee (PAC) to guide the project and ensure that the methodology, findings, and recommendations are tailored to and suit the needs of each town.

**SEA LEVEL RISE VULNERABILITY ASSESSMENT**  
Using municipal geospatial data, parcel information, Census data, and sea level rise projections developed by the Maine Geological Survey, a GIS-based vulnerability assessment was completed for Kennebunk. For each of the three sea level rise scenarios, polygons depicting the inundation extent of each scenario were overlaid with municipal geospatial data layers of parcel, land use, and infrastructure information to assess what was impacted by inundation and to what degree. In instances where detailed data were not available, the assessment relied on certain assumptions to assess impacts. For each sea level rise scenario, the assessment generated the following information:

- Number of parcels impacted (e.g., touched by inundation zone polygons)
- Total assessed value of buildings and values impacted
- Demographic information within impacted area
- Zoning districts of impacted parcels

The following impacts of sea level rise on the local economy and municipal tax revenue were also analyzed:

- Number and type of businesses impacted
- Employee numbers and annual wages impacted
- Impacts to economic activity
- Municipal fiscal impacts

Recreation and tourism areas like Mothers Beach and the municipal infrastructure located along it are vulnerable to coastal flooding.

**KEY PROJECT ACTIVITIES**

Vulnerability Assessment

Development of Adaptation Strategies

Community Engagement Workshops

Regional Plan and Municipal Strategies

**SEA LEVEL RISE VULNERABILITY ASSESSMENT**

The total number of parcels in Kennebunk impacted by 3.9 ft of sea level rise is **719**.

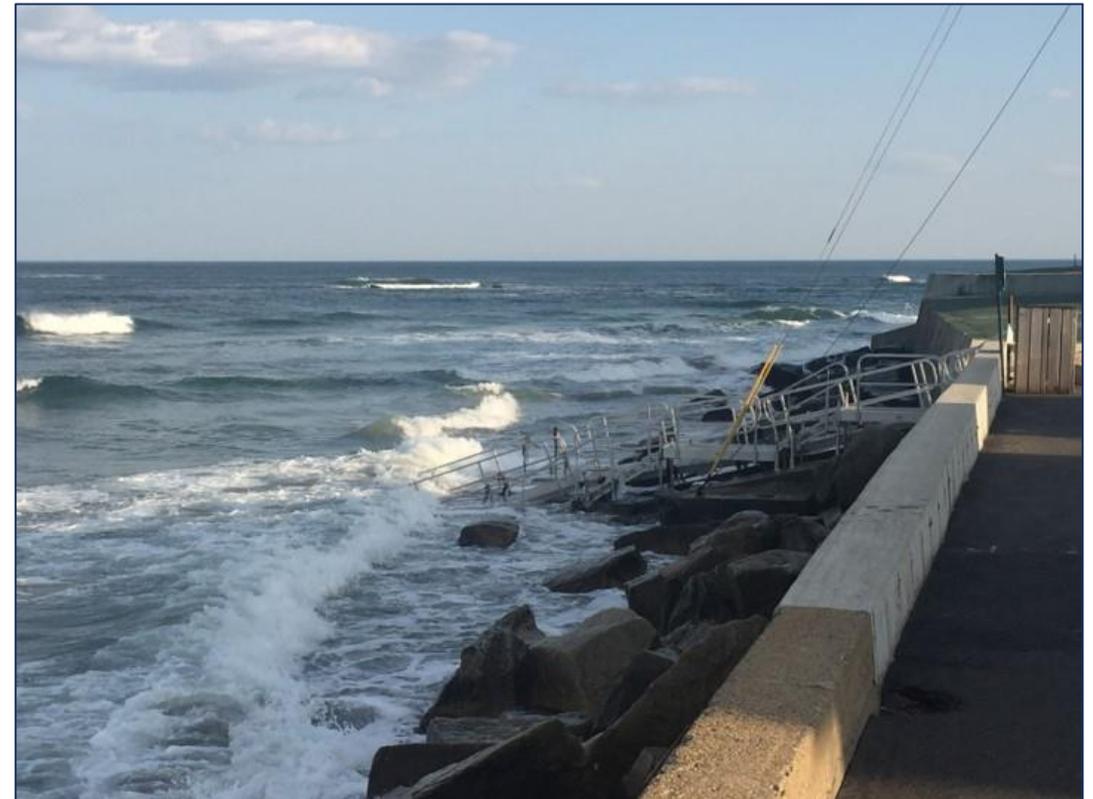
The assessed value of those impacted parcels, as a percentage of the Town's 2020 budget, is **35.6%**.

This fact sheet was prepared by SMPDC under award CCM 16L0004000100 for the Maine Coastal Program from the National Oceanic and Atmospheric Administration. It does not necessarily reflect the views of NOAA or the Department of Commerce.

Town	Town Staff Departments	Board Members	Committee members	other
Kennebunk 40 participants	Manager, Community Development, Planning, Clerk's Office, Public Service, Library, RSU 21	selectboard, site plan review board	Lower Village, River, Energy Efficiency, Conservation Commission	Community members
York 34 participants	Planning Department, Parks and Recreation, Department of Public Works	Board of Selectmen, Planning Board, Harbor Board	Budget Committee, Conservation Commission, Energy Steering Committee, Soheir Park and Nubble Lighthouse Committee, Bicycle and Pedestrian Committee	York Water District; York Sewer District; and community members
Wells 25 participants	Manager, Assistant Clerk, Assessor, Planner/Engineer, Code Enforcement Officer	Board of Selectmen, Board of Assessment, Zoning Board of Appeals, Planning Board, Budget Committee	Hospitality Committee, Wells Energy Advisory Committee, Comprehensive Plan Update Committee	Community members

# WORKSHOP AGENDA

- I. Welcome & introduction
- II. Project overview
- III. Sea level rise assessment
  - GIS vulnerability assessment: overview & results
  - Socio-economic analysis: overview & results
- IV. Discussion, Q&A
- V. Flood resilience strategies
- VI. Community engagement



# COASTAL FLOODING: FUTURE PROJECTIONS

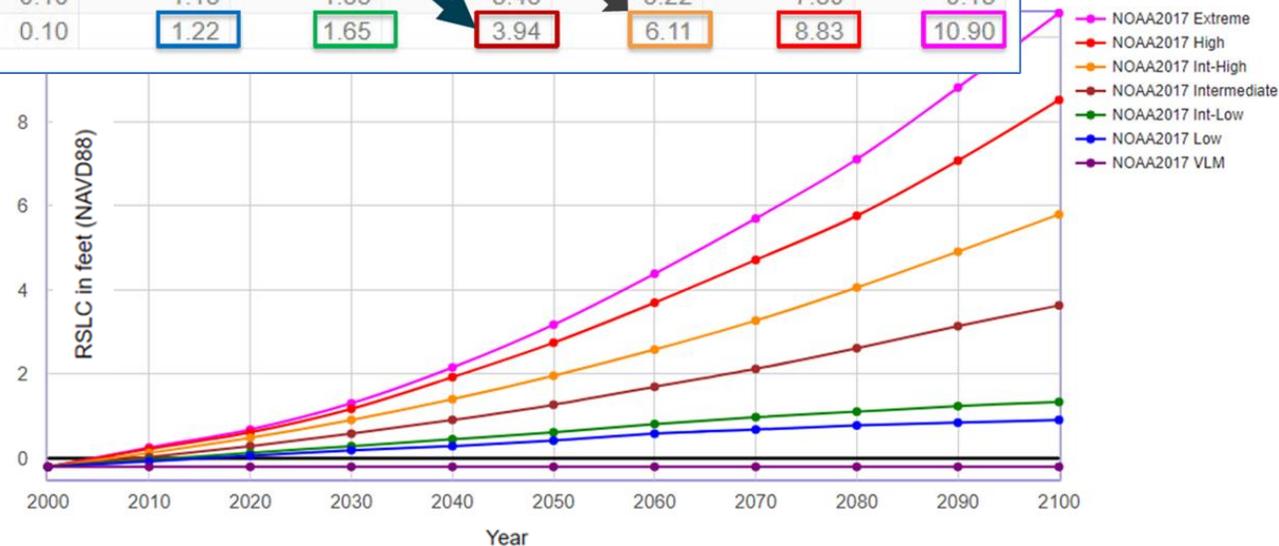
## SEA LEVEL RISE IN MAINE

- State Climate Action Plan:
  - 1.5 ft (3.0 ft) by 2050
  - 3.9 ft (8.8 ft) by 2100
- Sea level will likely continue to rise between **3 and 5 ft** by the end of **2100**, though higher scenarios are possible
- 1 ft of sea level rise will increase the frequency of nuisance flooding by **15-fold**

Scenarios for PORTLAND  
NOAA2017 VLM: 0.00000 feet/yr  
All values are expressed in feet

Year	NOAA2017 VLM	NOAA2017 Low	NOAA2017 Int-Low	NOAA2017 Intermediate	NOAA2017 Int-High	NOAA2017 High	NOAA2017 Extreme
2000	0.10	0.10	0.10	0.10	0.10	0.10	0.10
2010	0.10	0.24	0.27	0.33	0.43	0.53	0.56
2020	0.10	0.37	0.43	0.60	0.79	0.93	0.99
2030	0.10	0.50	0.60	0.89	1.22	1.48	1.61
2040	0.10	0.60	0.76	1.22	1.71	2.24	2.47
2050	0.10	0.73	0.93	1.58	2.27	3.06	3.48
2060	0.10	0.89	1.12	2.01	2.89	4.01	4.70
2070	0.10	0.99	1.29	2.43	3.58	5.03	6.01
2080	0.10	1.09	1.42	2.93	4.37	6.08	7.42
2090	0.10	1.15	1.55	3.45	5.22	7.39	9.13
2100	0.10	1.22	1.65	3.94	6.11	8.83	10.90

- Project assessment scenarios: **1.6 ft, 3.9 ft, and 6.1 ft**
- Source: Maine Geological Survey
  - Regionalized, specific to ME coast
  - Bathtub model - does NOT include wave action
  - Highest Astronomical Tide (HAT) as starting point



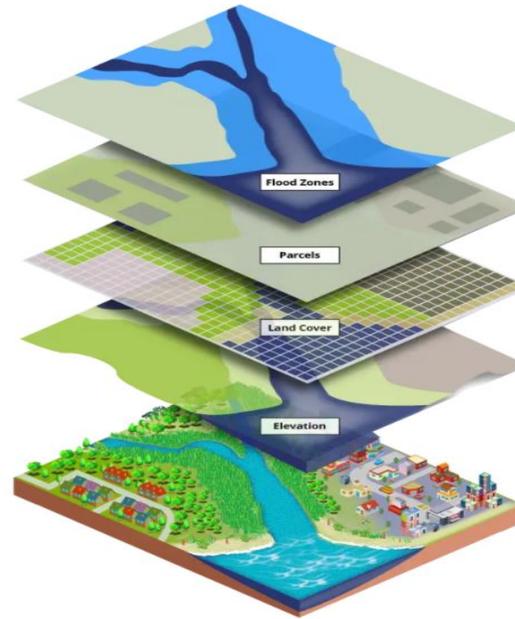
# GIS VULNERABILITY ASSESSMENT

## Inputs

- Sea level rise and storm surge projection
- Municipal geospatial and assessor's data
- Census data

## Outputs

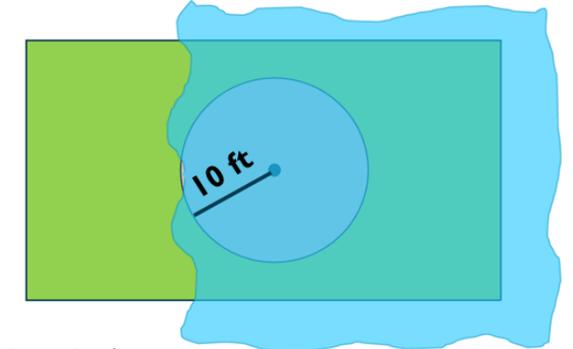
- Number of parcels impacted
  - Land & building vs. land only
  - Building footprints estimated
- Assessed value of impacted buildings and land
  - Residential, businesses, municipal
- Population and demographic information within impacted area
  - Census block group: people, households, median income, age
- Impacts by zoning district



“Impacted” means  
‘touched’ by water

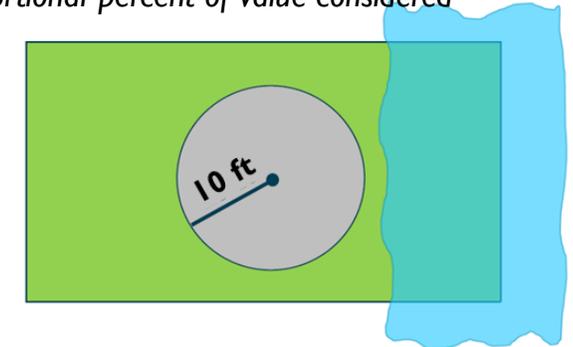
## Building & land impacted

Total parcel value considered

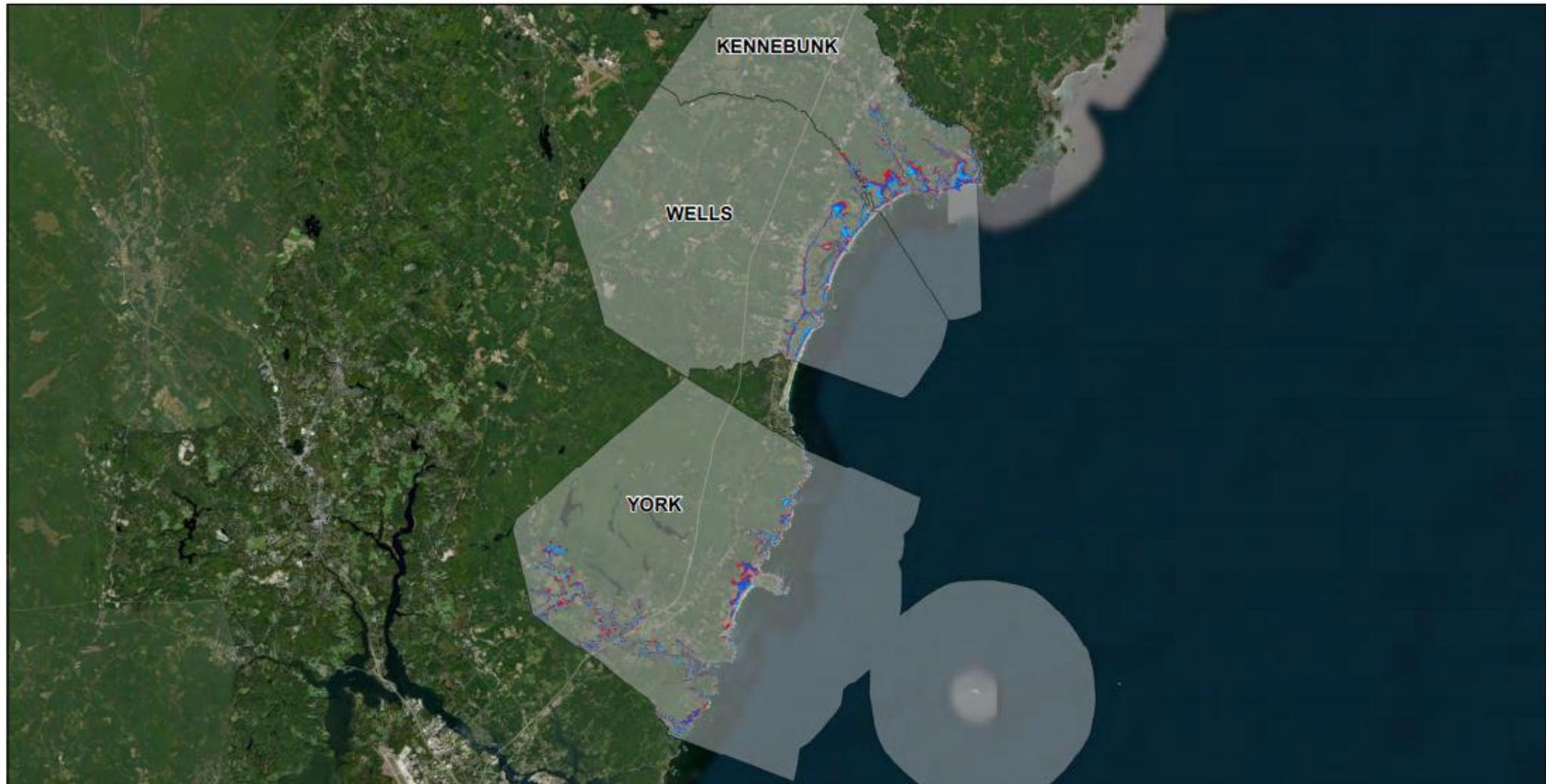


## Land only impacted

Proportional percent of value considered



Building footprints were represented using the parcel center buffered by 10 ft

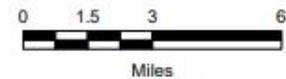


**LEGEND:**

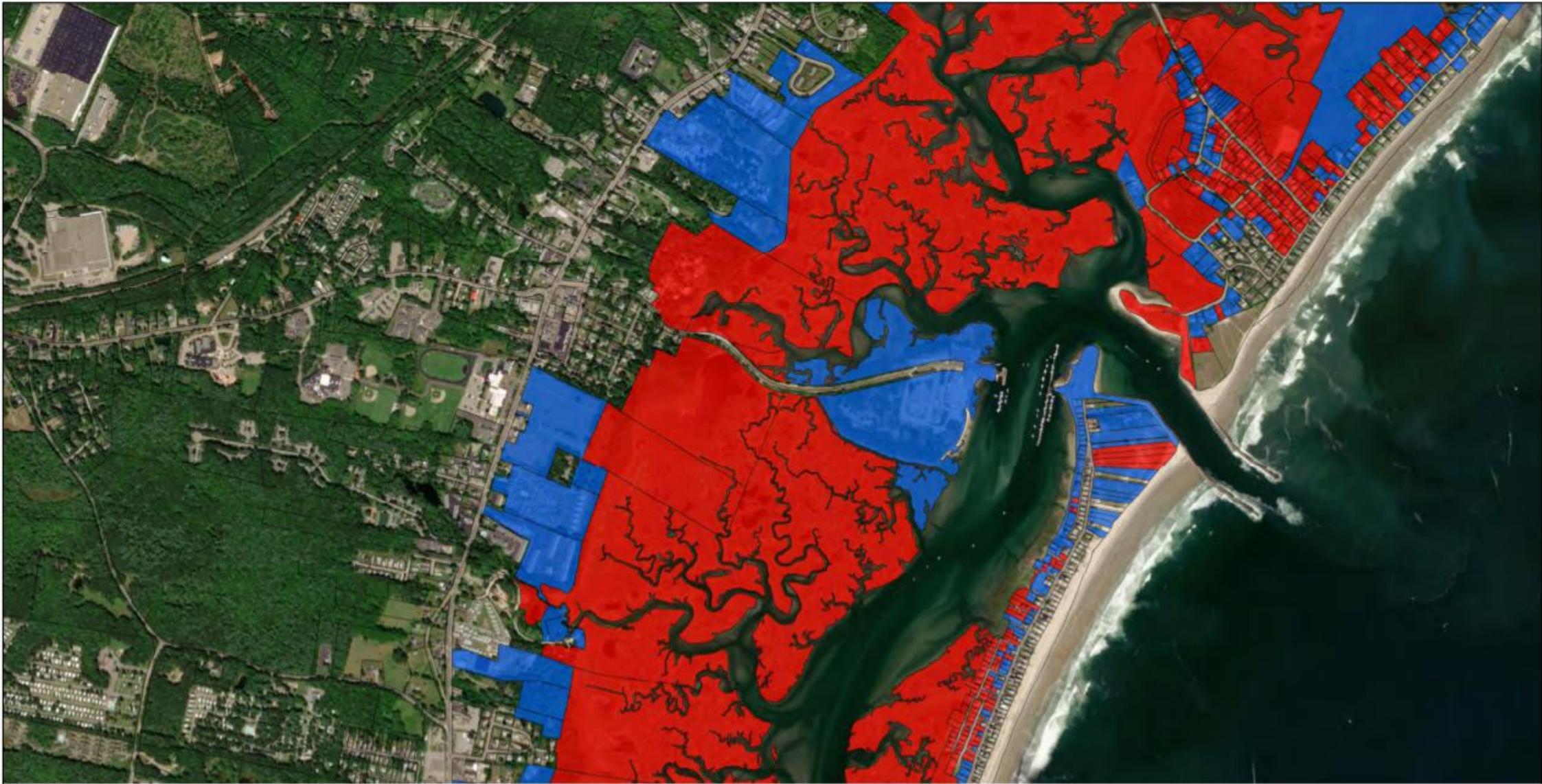
-  1.6 FT SEA LEVEL RISE
-  3.9 FT SEA LEVEL RISE
-  6.1 FT SEA LEVEL RISE
-  TOWN BOUNDARY

**NOTES:**

1. SEA LEVEL RISE INUNDATION DEVELOPED BY MAINE GEOLOGICAL SURVEY AND REPRESENTS INUNDATION FROM SEA LEVEL RISE ON TOP OF HIGHEST ASTRONOMICAL TIDE.
2. ESRI ARCGIS ONLINE AERIAL IMAGERY.



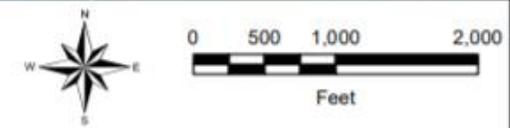
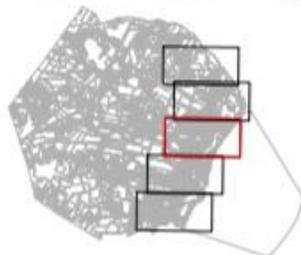
Vulnerability Assessment for the Towns of York, Wells, and Kennebunk, Maine		SEA LEVEL RISE OVERVIEW MAP
Southern Maine Planning & Development Commission Saco, Maine	Project 2000925	September 2020 <span style="float: right;">Fig. 1</span>



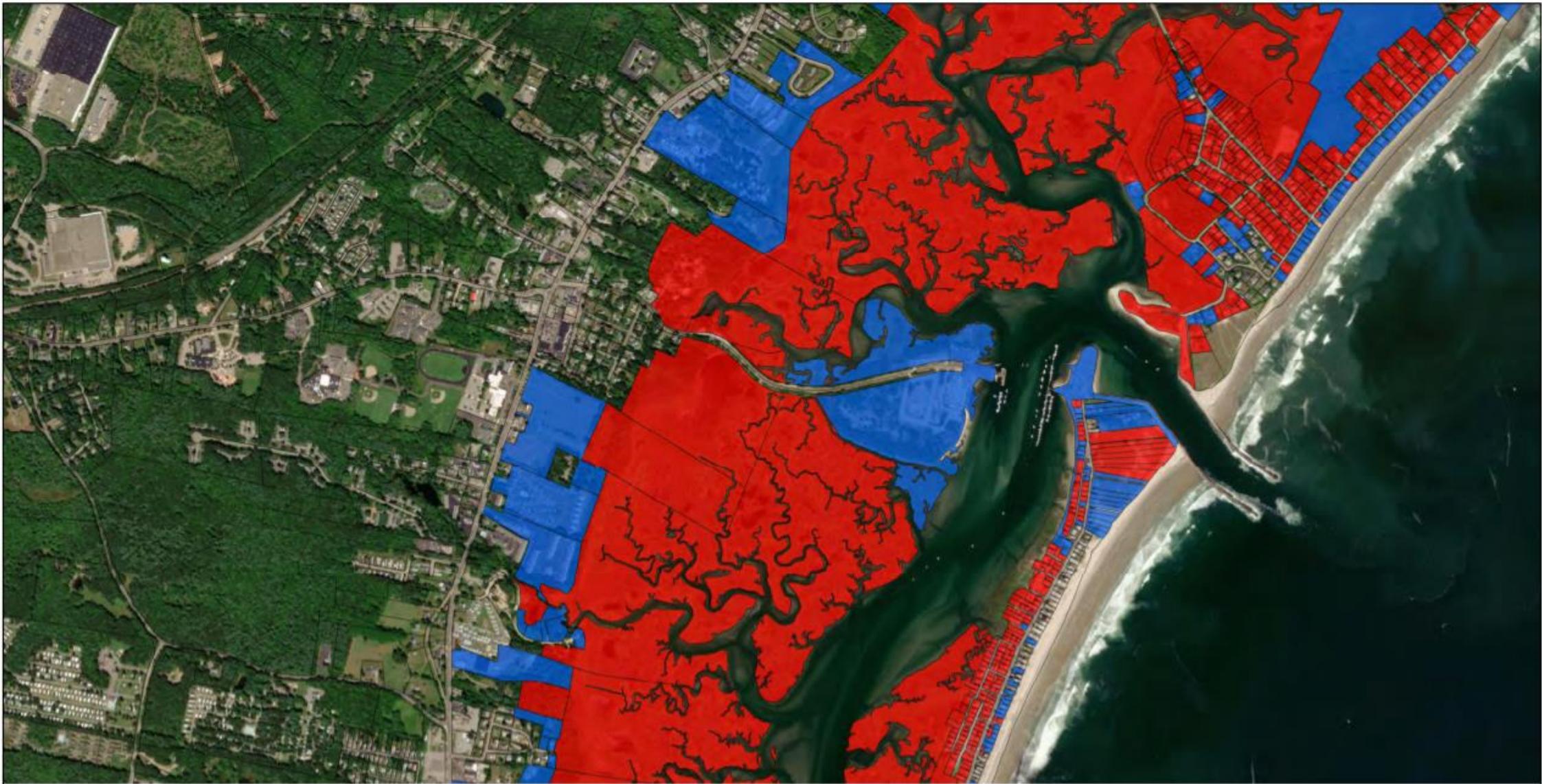
**LEGEND:**

1.6 FT SEA LEVEL RISE

- NO IMPACT
- BUILDING AND LAND
- LAND ONLY



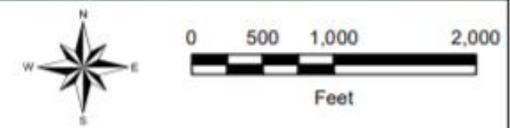
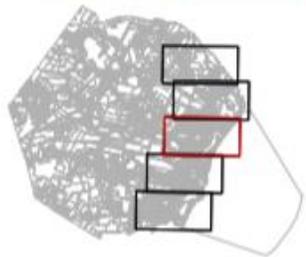
<p>Vulnerability Assessment for the Towns of York, Wells, and Kennebunk, Maine</p>		<p>PARCEL IMPACTS FROM 1.6 FT SEA LEVEL RISE TOWN OF WELLS</p>
<p>Southern Maine Planning &amp; Development Commission Saco, Maine</p>	<p>Project 2000925</p>	<p>September 2020 <span style="float: right;">Fig. 44</span></p>



**LEGEND:**

3.9 FT SEA LEVEL RISE

- NO IMPACT
- BUILDING AND LAND
- LAND ONLY



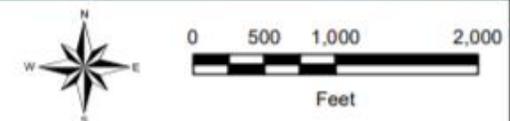
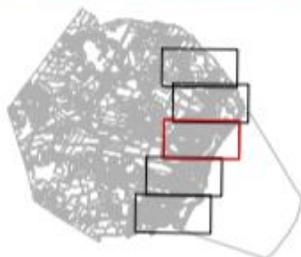
<p>Vulnerability Assessment for the Towns of York, Wells, and Kennebunk, Maine</p>		<p>PARCEL IMPACTS FROM 3.9 FT SEA LEVEL RISE TOWN OF WELLS</p>
<p>Southern Maine Planning &amp; Development Commission Saco, Maine</p>	<p>Project 2000925</p>	<p>September 2020 <span style="float: right;">Fig. 49</span></p>



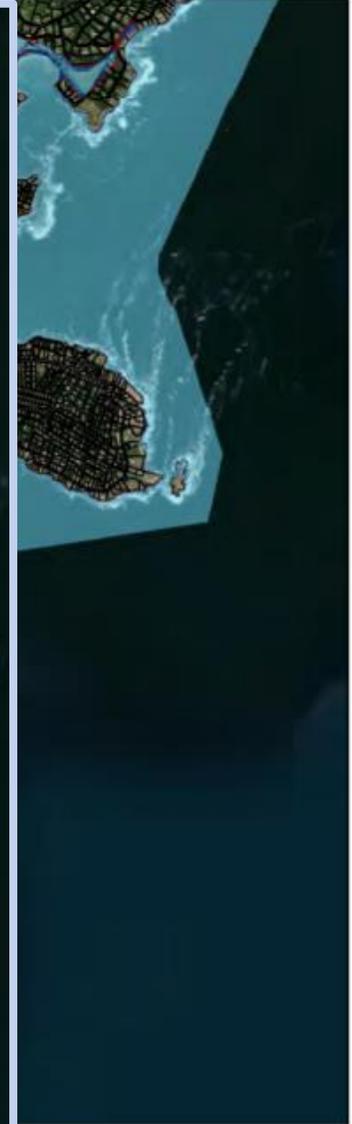
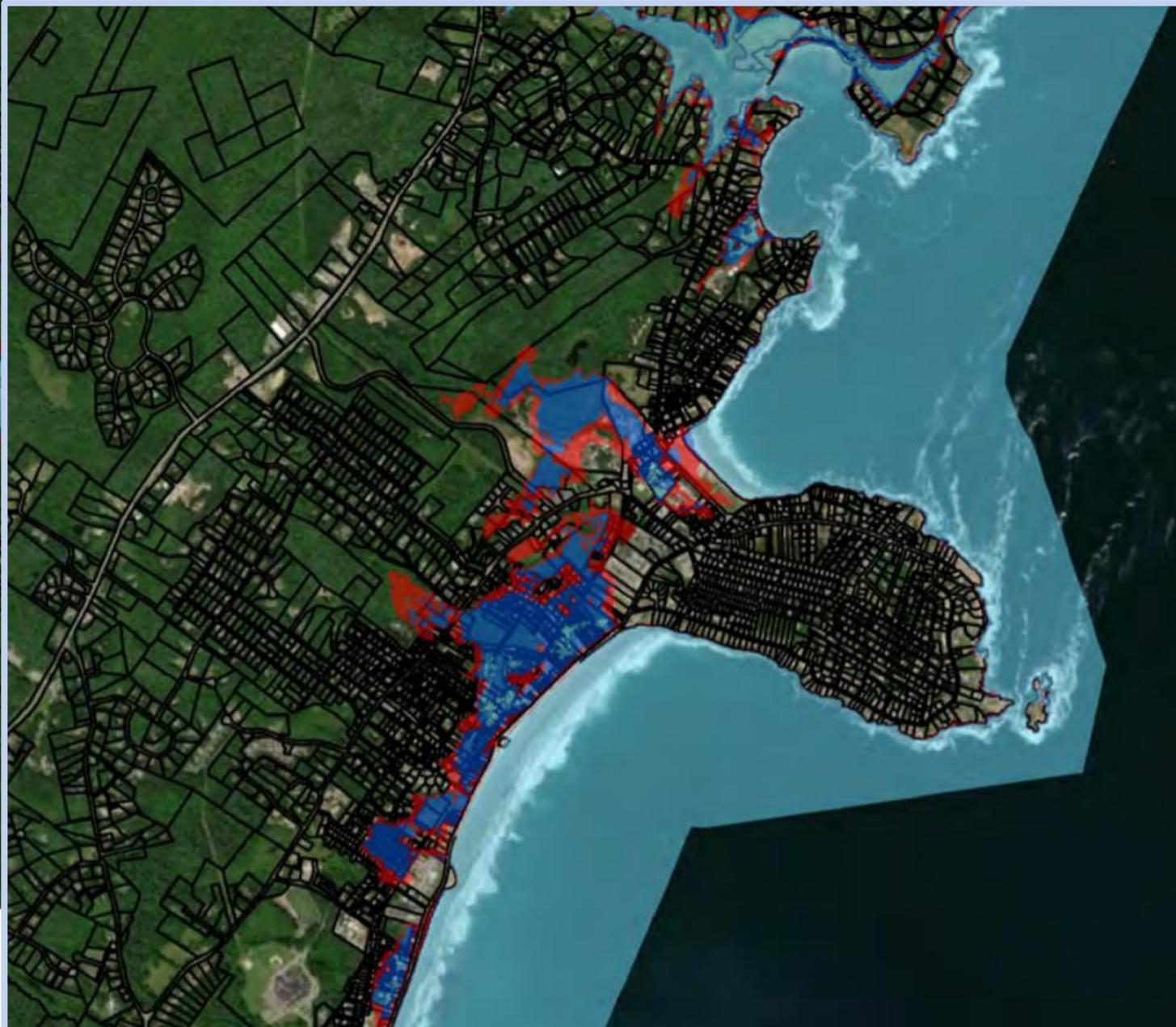
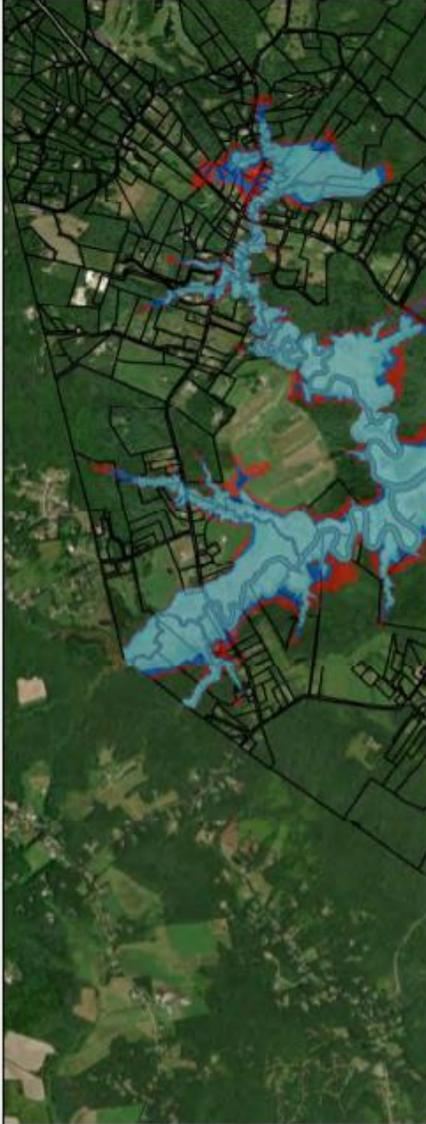
**LEGEND:**

6.1 FT SEA LEVEL RISE

- NO IMPACT
- BUILDING AND LAND
- LAND ONLY

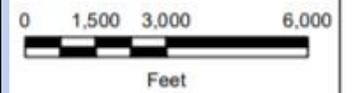


<p>Vulnerability Assessment for the Towns of York, Wells, and Kennebunk, Maine</p>	 <p><b>GEI</b> Consultants</p>	<p>PARCEL IMPACTS FROM 6.1 FT SEA LEVEL RISE TOWN OF WELLS</p>
<p>Southern Maine Planning &amp; Development Commission Saco, Maine</p>	<p>Project 2000925</p>	<p>September 2020 <span style="float: right;">Fig. 54</span></p>



**LEGEND:**

-  1.6 FT SEA LEVEL RISE
-  3.9 FT SEA LEVEL RISE
-  6.1 FT SEA LEVEL RISE
-  PARCELS



Vulnerability Assessment for the Towns of  
York, Wells, and Kennebunk,  
Maine

Southern Maine Planning & Development Commission  
Saco, Maine



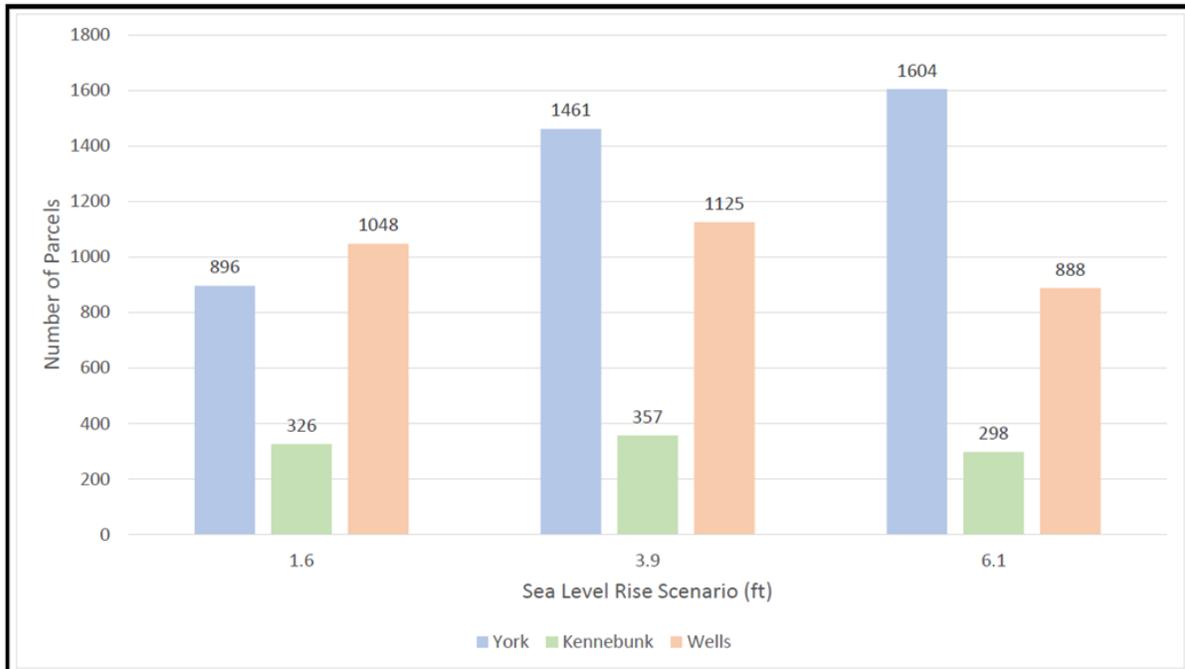
Project 2000925

SEA LEVEL RISE  
AND PARCEL MAP  
TOWN OF YORK

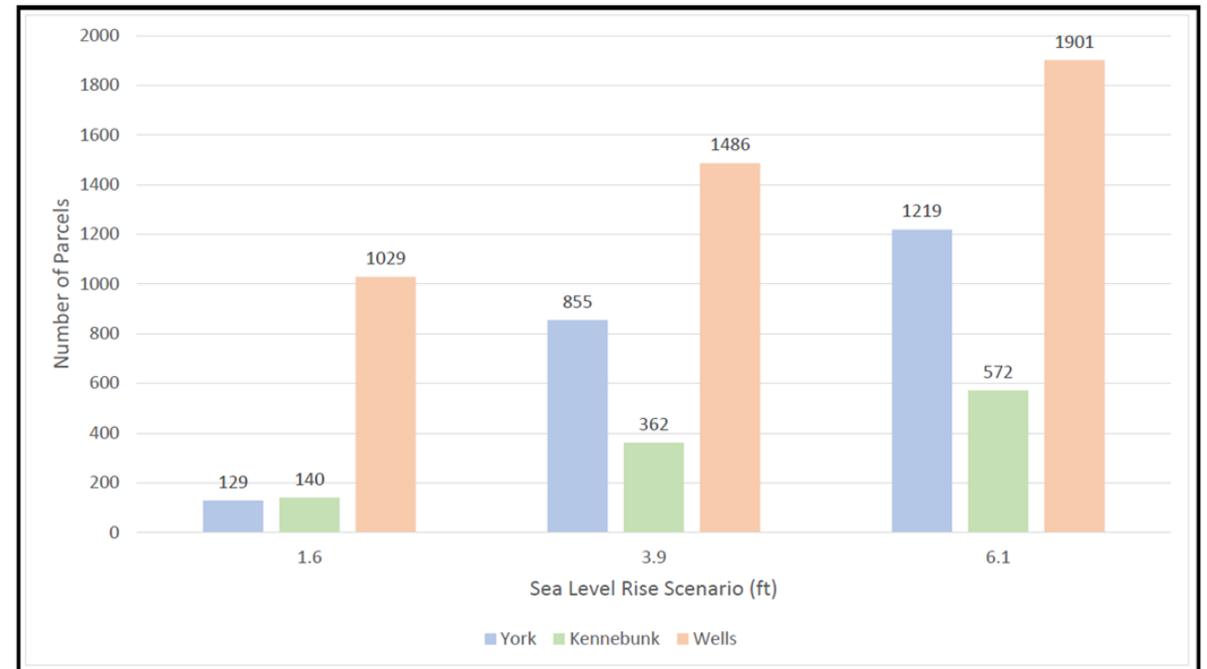
September 2020

Fig. 4

# RESULTS: NUMBER OF IMPACTED PARCELS



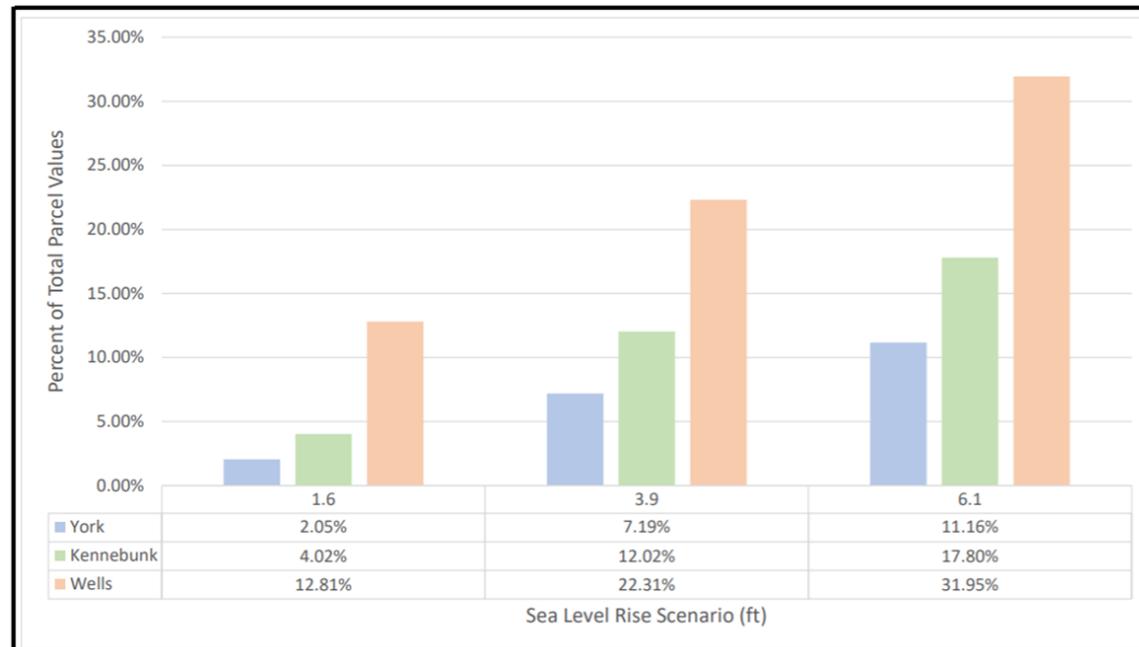
Vulnerability Assessment for the Towns of York, Wells, and Kennebunk, Maine		NUMBER OF PARCELS WITH ONLY LAND IMPACTED BY SEA LEVEL RISE
Southern Maine Planning & Development Commission Saco, Maine	Project 2000925	September 2020 <span style="float: right;">Fig. 89</span>



Vulnerability Assessment for the Towns of York, Wells, and Kennebunk, Maine		NUMBER OF PARCELS WITH BUILDINGS AND LAND IMPACTED BY SEA LEVEL RISE
Southern Maine Planning & Development Commission Saco, Maine	Project 2000925	September 2020 <span style="float: right;">Fig. 88</span>

# RESULTS: ASSESSED VALUE OF IMPACTED PARCELS (WELLS)

Sea Level Rise Scenario	Assessed Value Impacted	Impact as % of Town-Wide Assessed Value	Impact as % of 2020 Town Budget
1.6 ft	\$433,185,221	12.8%	21.4%
3.9 ft	\$754,619,443	22.3%	35.2%
6.1 ft	\$1,080,587,296	32%	50.4%



# VULNERABILITY ASSESSMENT QUESTIONS

- What was the timeframe for each of the sea level rise scenarios?
- Is there some sense of probabilistic analysis on where each of those scenarios are?
- Given the estimated years each sea level rise will occur, are there scenarios where these estimates will be reached sooner?



# COASTAL FLOODING: FUTURE PROJECTIONS

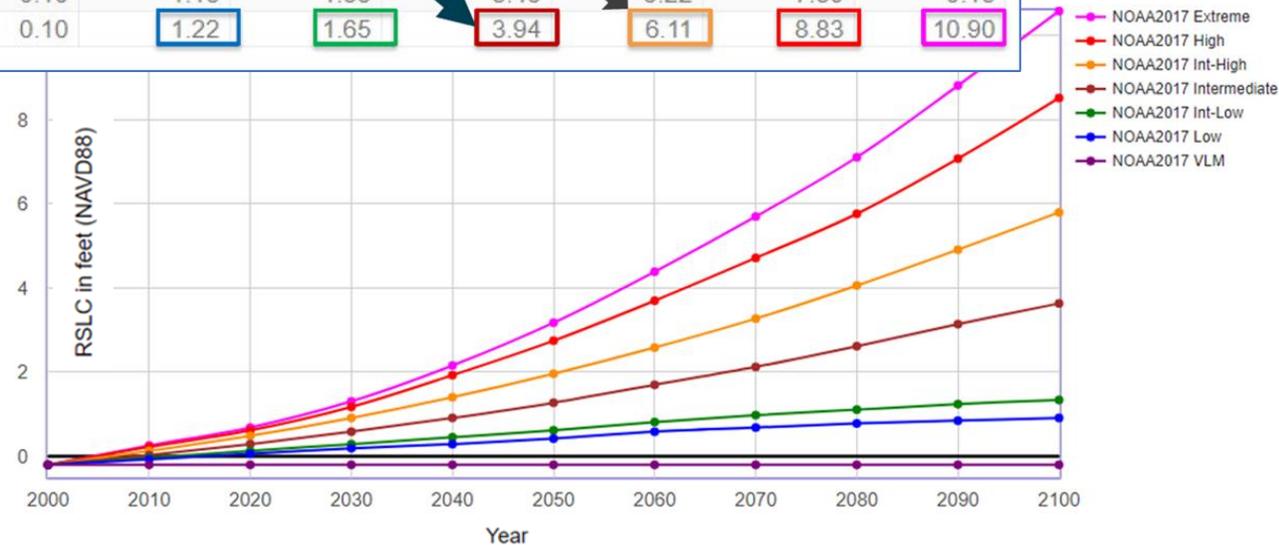
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Scenarios for PORTLAND  
NOAA2017 VLM: 0.00000 feet/yr  
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  - Regionalized, specific to ME coast
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# SOCIAL & ECONOMIC ANALYSIS

## Inputs

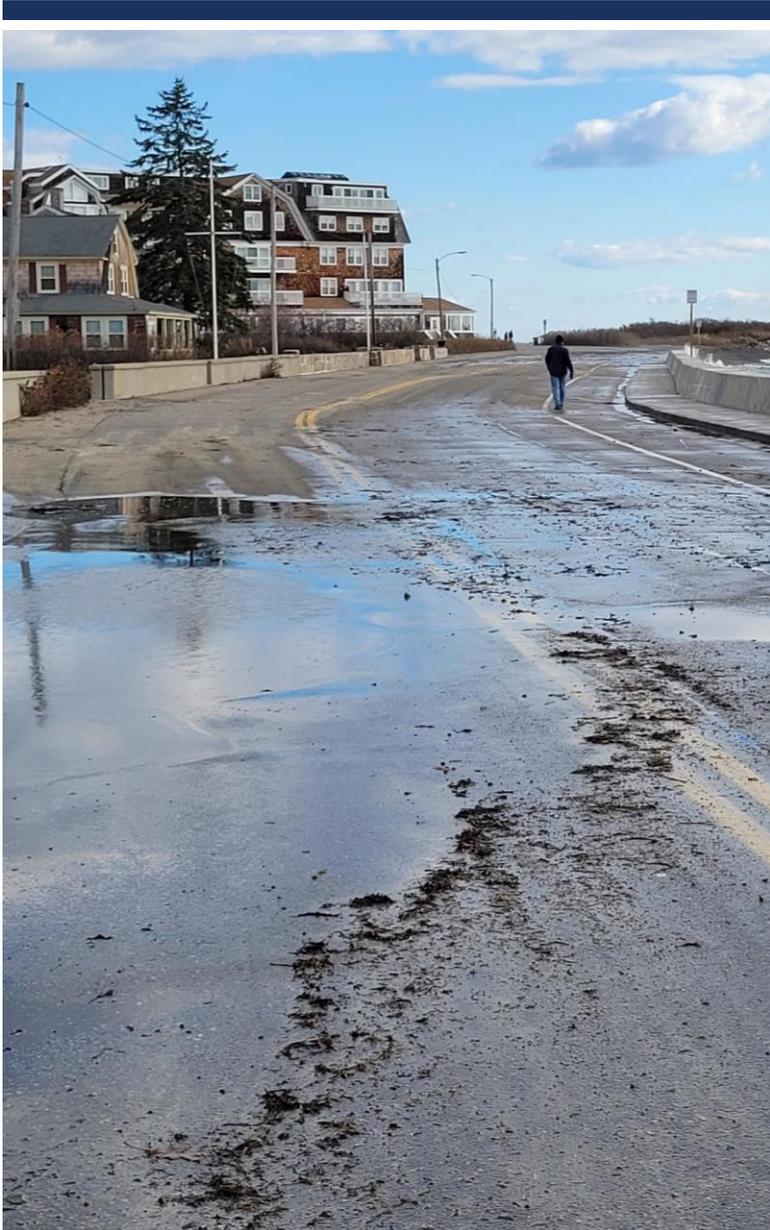
- State data
- Census data
- Results of GIS vulnerability assessment

## Outputs

- Economic profile of towns
- Population demographics
  - Age, income, poverty, housing occupancy
- Economic impacts – town and region
  - Businesses, industries, employment, salaries, economic output
  - Direct, indirect, and induced effects
- Fiscal impacts
  - Property taxes, municipal budget, commercial taxes and fees



Photo credit: P. Dest



## BUSINESSES ARE INTERCONNECTED

*Q: How can communities use the results of the economic analysis and information about impacted businesses and economic activity to better understand secondary impacts to the local economy. For example, businesses that aren't going to be touched by water but rely on tourism or the beach?*

**A:** Important to look at town's economy and look at the intersections between businesses . . . businesses don't exist in a vacuum they are all interconnected, look at it as an ecosystem, look at which businesses connect or depend upon each other and look at, what do we do if disaster strikes, so think about resiliency plans or think about diversifying the economy away from tourism, which might be a bit of an issue, but that is something that a lot of coastal communities are thinking about now. There aren't any easy answers, hopefully use this information as a steppingstone.



DISCUSSION, Q&A

## ***Thoughts on using this information for future program planning for the Town?***

Kennebunk:

...everyday getting warnings about sea level rise.  
...challenge is our town's planning efforts look 10-20 years in the future  
...the reality is with SLR it won't be feasible to get to structures. Have a bathtub effect with the wall along the sidewalk and the walls along the properties. That's where the water levels are going to be in the future.  
... a challenge for planning.  
... it's how we're going to manage it going into the future  
... it's difficult compared to what we typically do.  
... Make some difficult decisions for the future.  
... hard to get participation about challenges [when seasonal residents are] only there when it's sunny.  
... Pay attention to it for every decision we make

York:

... a lot of information to take in ... steppingstone for further evaluation.  
Comes at an opportune time ... creating a climate action plan, as well as updating our comprehensive plan.  
... incorporate it into these large planning documents.  
... open the conversation about land use and future of growth areas of our town.  
Do we want to start pushing growth areas and density into some of these highly vulnerable areas, looking into these projections. And if we are going to allow density in these vulnerable areas, what kind of adaptation strategies should we implement as part of the design of these structures and some of these uses that may be permitted in some of these areas?  
... greater review moving forward.

Wells:

... fits perfectly with the towns upcoming comprehensive planning update, we'll be working this information right into it.  
... we have been thoughtful and aggressive in our conservation of land ... making sure we have space for water to go.  
... comprehensive plan process and growth pattern discussions in general, certainly using this data ... if the town does decide it wishes to pursue the creation of a downtown center, making sure that that downtown center is well away from any waterfront.  
And from a tax-base preservation standpoint. .  
.we have the capacity to maintain a tax base in a year round capacity  
There is space here for the town of Wells to be thoughtful and prepare for the future

## **Infrastructure**

Has there been a systematic evaluation of Kennebunk's culverts and storm water outfalls?

Impacts to inland drinking water sources from increased underground penetration of salt?

Would dykes at strategic spots in the rivers to redirect water be helpful?

What are expected impacts to sewage treatment plants?

Will rising sea levels have fresh water be impacted and become brackish as the seawater seeps deeper into the landfall?

Will the Public KKW water supply be impacted, where do they draw the water from?

## **Beach Impacts**

Does any part of the assessments address loss of beaches?

How does the work done on Long Sands (York) by the town support this issue?

How have other towns that have taken the lead handled beach properties?

## **FEMA/Floodmap impacts?**

Was FEMA involved and is the information you've gathered going to influence the P-FIRM maps?

## **Regulations/Planning/Insurance**

Is there a need for consistency among the coastal towns in York County regarding things like freeboard requirements?

Do we know if enough properties have flood insurance in that zone?

Besides incorporating this in the Comp Plan, can parts be incorporated in the Shoreland zoning section of the Town's Land Use Ordinance?

Can a dual SLR and Stormwater tax be proposed to fund projects to mitigate flooding and increased impervious coverage?

## **Engagement/Next Steps?**

Is this something you want the public to get to know more about, so they are aware of what we need to look forward to in the future or how we can try to address it and go forward with this information? Where does it go from here?

## **More Data**

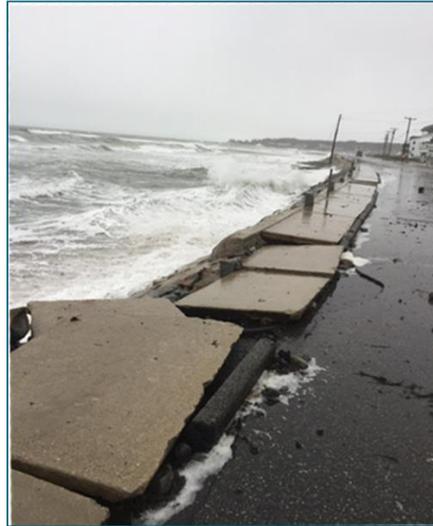
Has there been any NOAA data on storm surge and numbers of storms?

A coastal landscape at sunset. The foreground shows a rocky shoreline with a small inlet of water. The middle ground features a line of large, dark rocks extending into the water. In the background, a row of houses is built on a cliffside, overlooking the ocean. The sky is a mix of orange, yellow, and blue, indicating the time is either sunrise or sunset. The overall scene is serene and scenic.

# COASTAL RESILIENCE STRATEGIES

# WHAT CAN THE TOWN DO TO PREPARE?

- **\$1 in mitigation saves \$6**
- Municipal action is vital
  - Home Rule = Opportunities!
- No “one size fits all” approach
- Addressing the range of impacts and vulnerabilities requires employing a range of solutions



- Integrate resilience measures into existing plans, policies, and land use tools
  - Floodplain management ordinance
    - Increase freeboard requirement
  - Tidal culvert repair
    - Upsize culverts to handle additional flows and design based on future sea level rise
  - Capital Improvement Plan
    - Include coastal resilience criteria

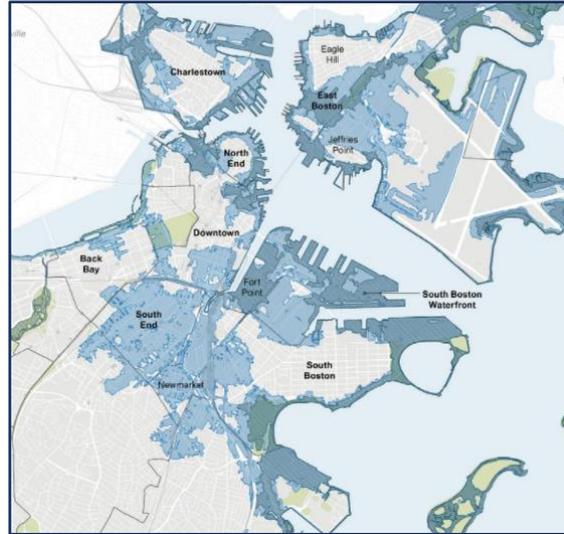
# EXAMPLE STRATEGIES



Photo: Woods Hole Group

Relocation of beach parking lot landward and dune restoration and enhancement

Nauset Beach, Orleans, MA



Coastal resilience overlay zoning district with provisions for reducing flood risk while stimulating mixed-use development

Hull, MA



Public park designed to serve as a flood storage area near coastal wetlands

Beverly, MA

# RESILIENCE STRATEGIES (WELLS)

## Policy

- ✓ Establish municipal committee to address coastal issues
- ✓ Incorporate coastal resilience criteria in CIP
- ✓ Address sea level rise in the Comprehensive Plan update

## Land Use

- ✓ Freeboard for structures through floodplain management ordinance; include sea level rise areas
- ✓ Coastal resilience overlay zoning district
- ✓ Include sea level rise impact areas in shoreland zone

## Mitigation Projects

- ✓ Strategically conserve floodable open space
- ✓ Improve stormwater management infrastructure
- ✓ Retrofit impacted structures using floodproofing measures

## Funding

- ✓ Pursue external grant opportunities
- ✓ Establish a municipal resilience fund
- ✓ Continue partnering with surrounding towns and organizations to leverage funds



# ENGAGEMENT ACTIVITY: RESILIENCE STRATEGIES



1

Why	How	Who	When
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...
...	...	...	...

2

Why	How	Who	When

3

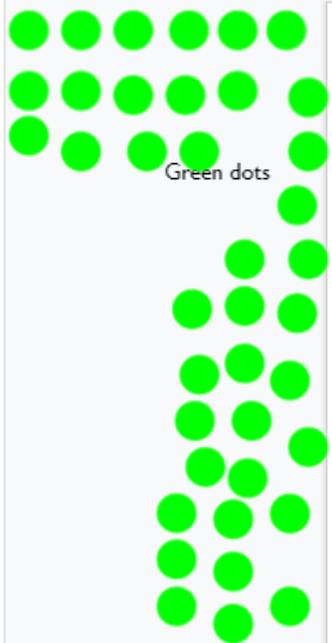
Why	How	Who	When

4

Why	How	Who	When

5

Why	How	Who	When



Green dots

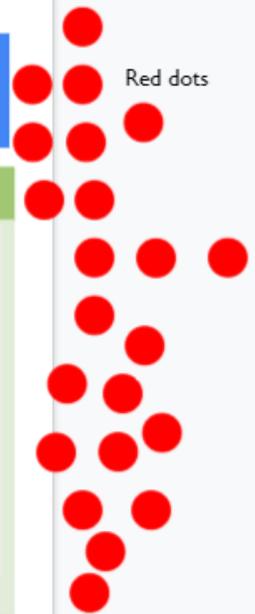
Directions: Each participants gets 2 green dots and 1 red dot. Place green dots in strategy categories where Kennebunk should focus its work. Place a red dot if a strategy seems like a bad fit for Kennebunk. You do not need to use all your dots.

Policy

Land Use

Mitigation Projects

Funding



Red dots

Click to add speaker notes

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# Policy Strategy Recommendations

Kennebunk	York	Wells
Ordinances about building in the affected areas	Should align with comp plan and Climate Action Plan (3 mentions)	Creation of a sustainability committee to focus on issue
Requirements that development address SLR impacts	Standards for structures in flood zones/sea level rise impacted zones	(incorporate in Comprehensive Plan)
Publicity now about potential loss of land and homes	Building code matches future flooding considerations	
Increase and move tax base to offset future losses in beach area	Consider sea rise impacts in capital improvement plan	
Encourage inland development	Revolving loan program to support buy, rent, or retreat (California is doing now)	
Develop a plan for transitioning away from infrastructure that will no longer be tenable (sea wall, beach roads)	Combined SLR and stormwater tax to fund mitigation projects	
Transitional Retreat (Buyout & no longer Invest)	Incorporate clear and concise policy for building, land use, etc.	
Setting funding caps on failing existing sea wall infrastructure	The water needs to go somewhere, what does the community majority think about where it should go?	
Zoning Updates that reflect the Maine Climate Action Plan goals		
Providing education for contractors working in these areas.		
Should there be disclosures made about SLR when an at-risk property is for sale?		

# RESILIENCE STRATEGIES (WELLS)

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# COMMUNITY ENGAGEMENT IDEAS

## Audience

- Business owners
- Residents in impacted areas
- Neighborhoods in impacted areas
- Second property owners
- Builders and developers
- Youth/school-age kids
- All residents

## Visual Aids

Video animations

Future water heights around town

Interactive map on town website

Create a model that tells a visual story

## Written Material/Direct Mailing

Questionnaire to residents

Annual voter guide

Include project 2-pager in the tax bill

Direct mailing to addresses in impacted area

Monthly newspaper column

Annual assessment of likely financial risk over time due to SLR

## Workshops

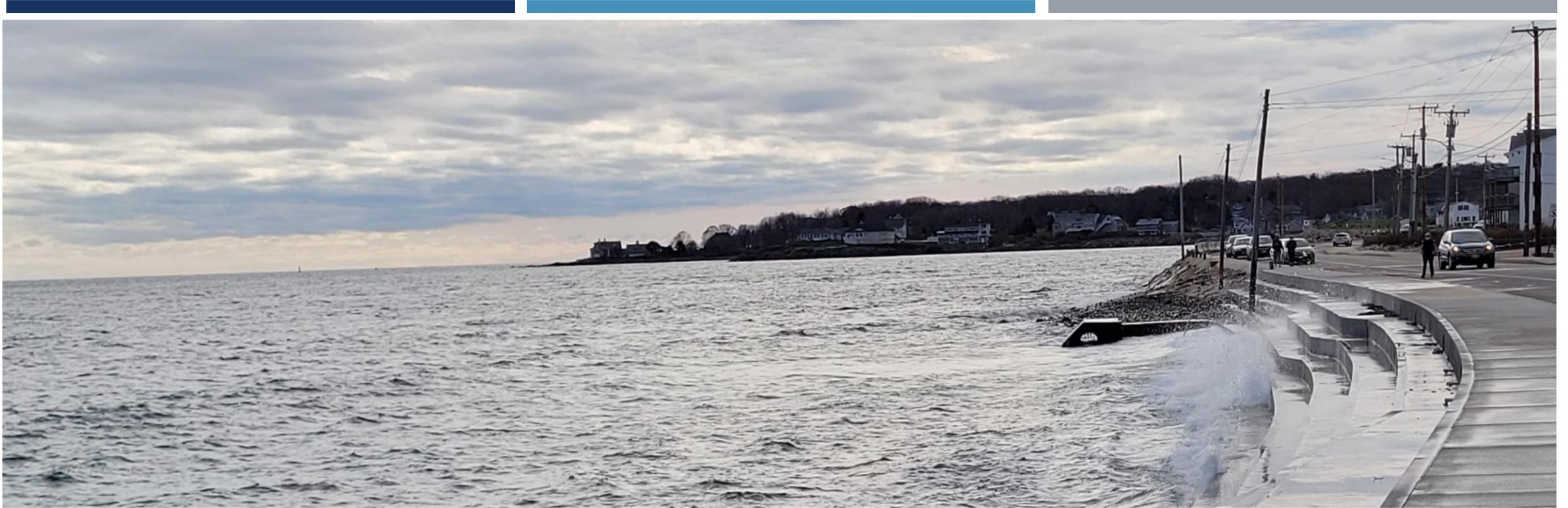
Community workshops by neighborhood

With Stores, Inns, and Restaurant-owners

Where-to-put-the-new-town-center  
Charette

Engage builders and developers on strategies for buildings to tolerate higher water levels





**NEXT STEPS**