



North Shore Sea Level Rise
Risk Assessment and Adaptive Management
Strategy:
Initial Engagement Launch

January 20, 2020
Regular Council Meeting

North Shore Sea Level Rise Strategy



Skwxwú7mesh
Úxwumixw
Squamish Nation



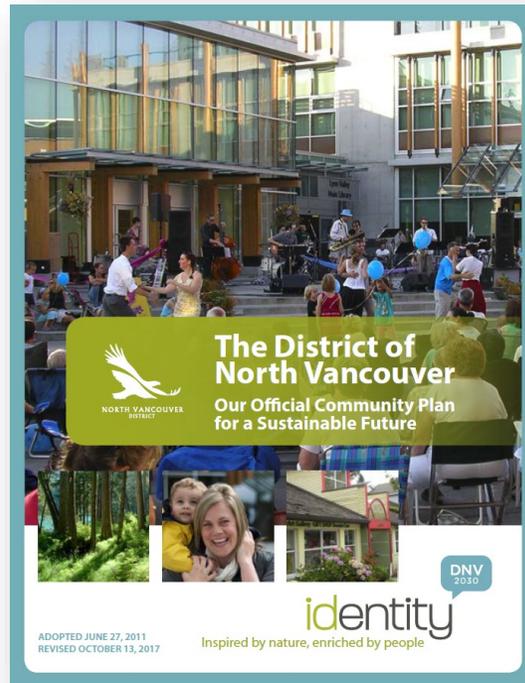
Grant Funding:



Consultant:



Policy Context

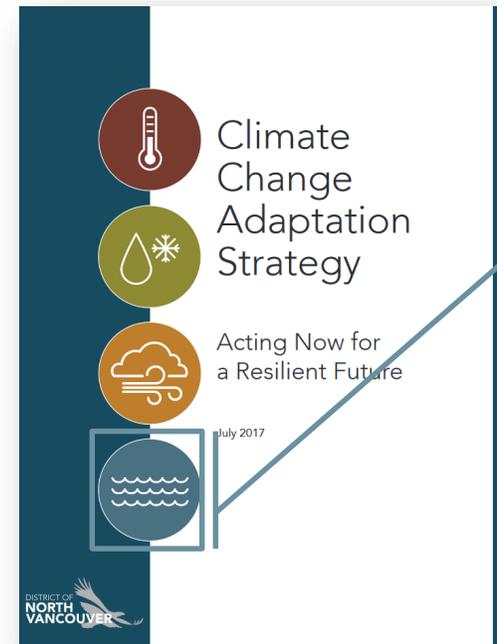


Official Community Plan

- Climate change objectives & policies

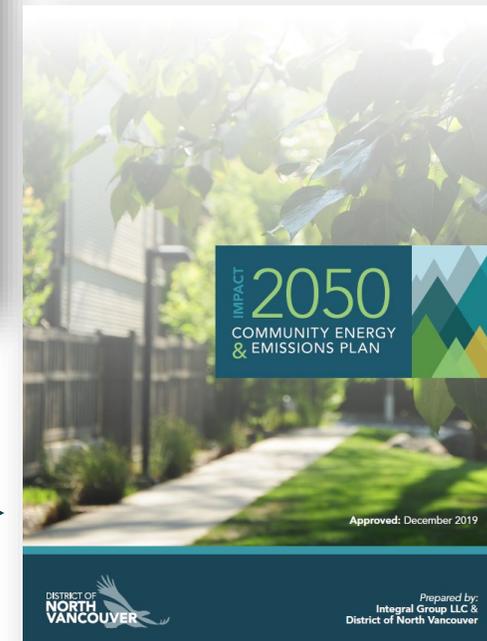
Adaptation →

Mitigation →



Climate Change Adaptation Strategy

Sea Level Rise



Community Energy and Emissions Plan

Existing Policies and Plans Considering Sea Level Rise

- Creek Hazard Development Permit Area
- Engineering studies on creek hydrology, floodplain mapping and bridge hydraulic assessments
- Town and Village Centre Implementation Plans
- Capital renewal plans

Regional Coastal Impacts



Jan 2019 Deep Cove, king tide



Feb 2019 Horseshoe Bay
High winds/waves



Dec 2012 coastal storm
West Van seawall, Stanley Park seawall

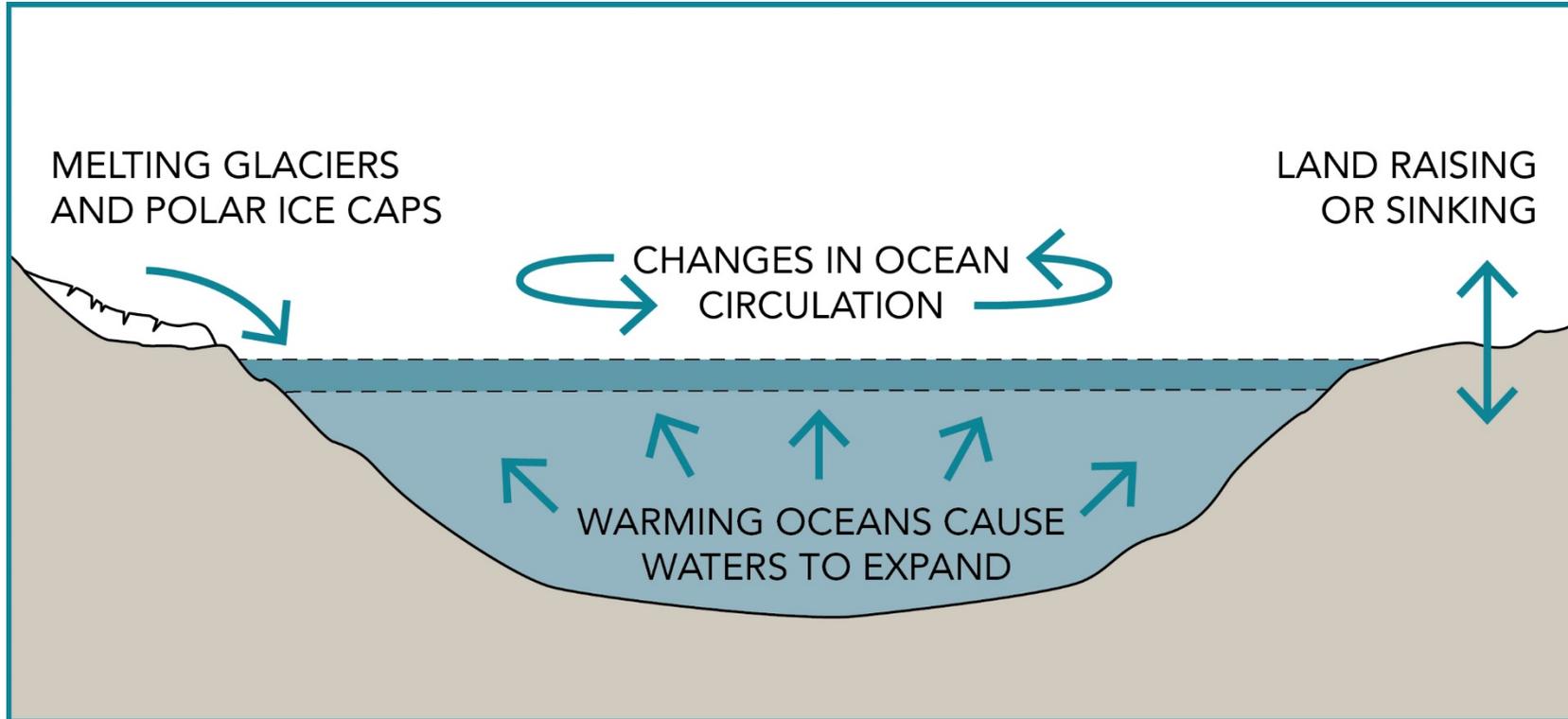


Dec 2018 White Rock Pier damage

Photos (L-R): NS News, CBC News, Vancouver Sun

Sea Level Rise

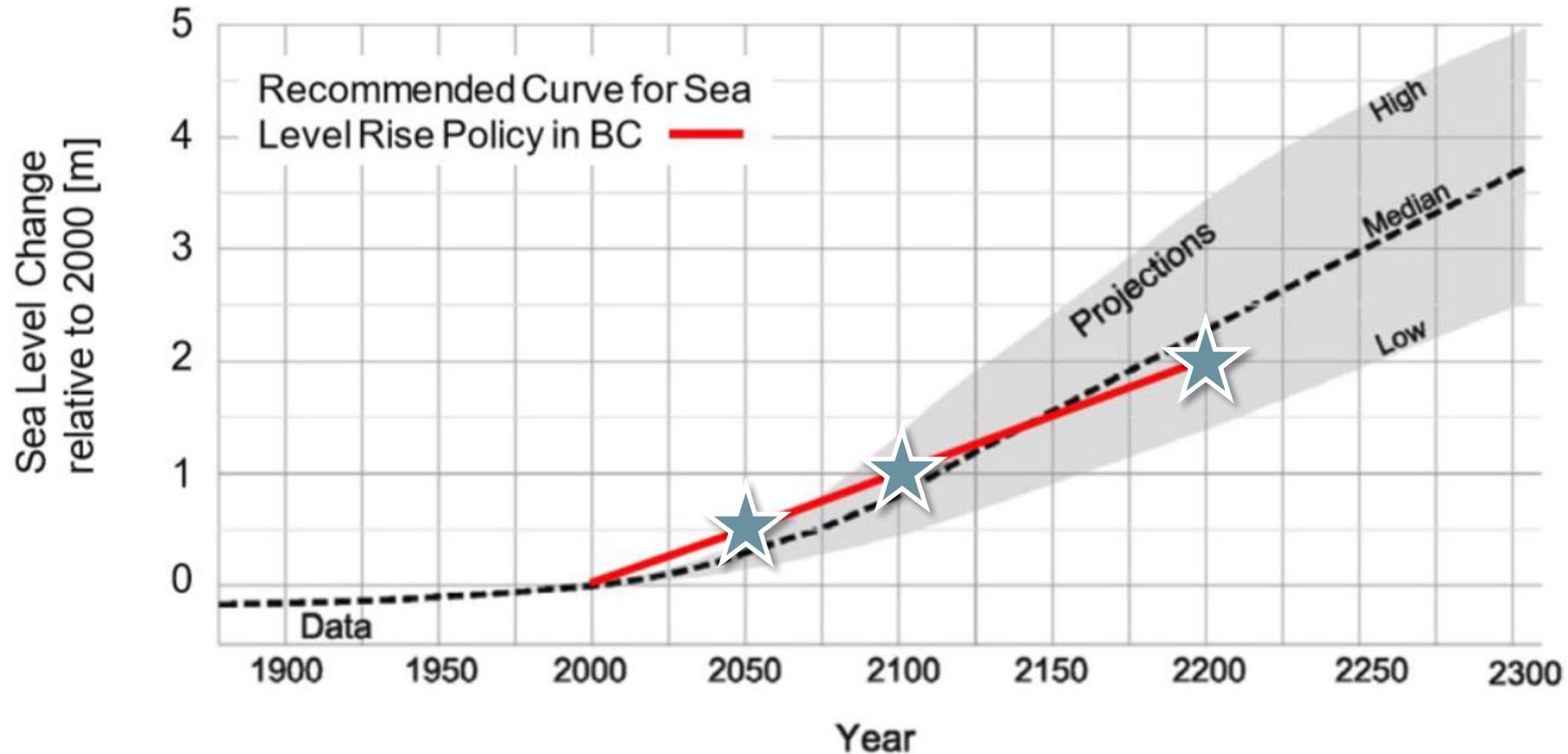
Causes of sea level rise



Measured rise (20th Century):

- **Global average:**
0.17m (7")
- **Vancouver:**
0.04m (1.5")
- **Varies due to
local conditions**

Anticipated Sea Level Rise



(MOE/Ausenco Sandwell, 2011)



Sea Level Rise

PHASE 1-3

Technical Analysis

SUMMER 2018 - SPRING 2019

- Review context
- Identify coastal flood hazards
- Assess vulnerability and risk

PHASE 4

Adaptation Actions Development

SUMMER 2019 - WINTER 2020

- Explore adaptation approaches
- Develop adaptation concepts and action areas

PHASE 5

Final Strategy

WINTER 2020 - SPRING 2020

- Refine adaptation concepts and action areas
- Finalize strategy

North Shore Sea Level Rise Strategy Process

**We
are here**

JANUARY 21, 2020
[DNV.org/SeaLevelRise](https://www.dnv.org/SeaLevelRise)

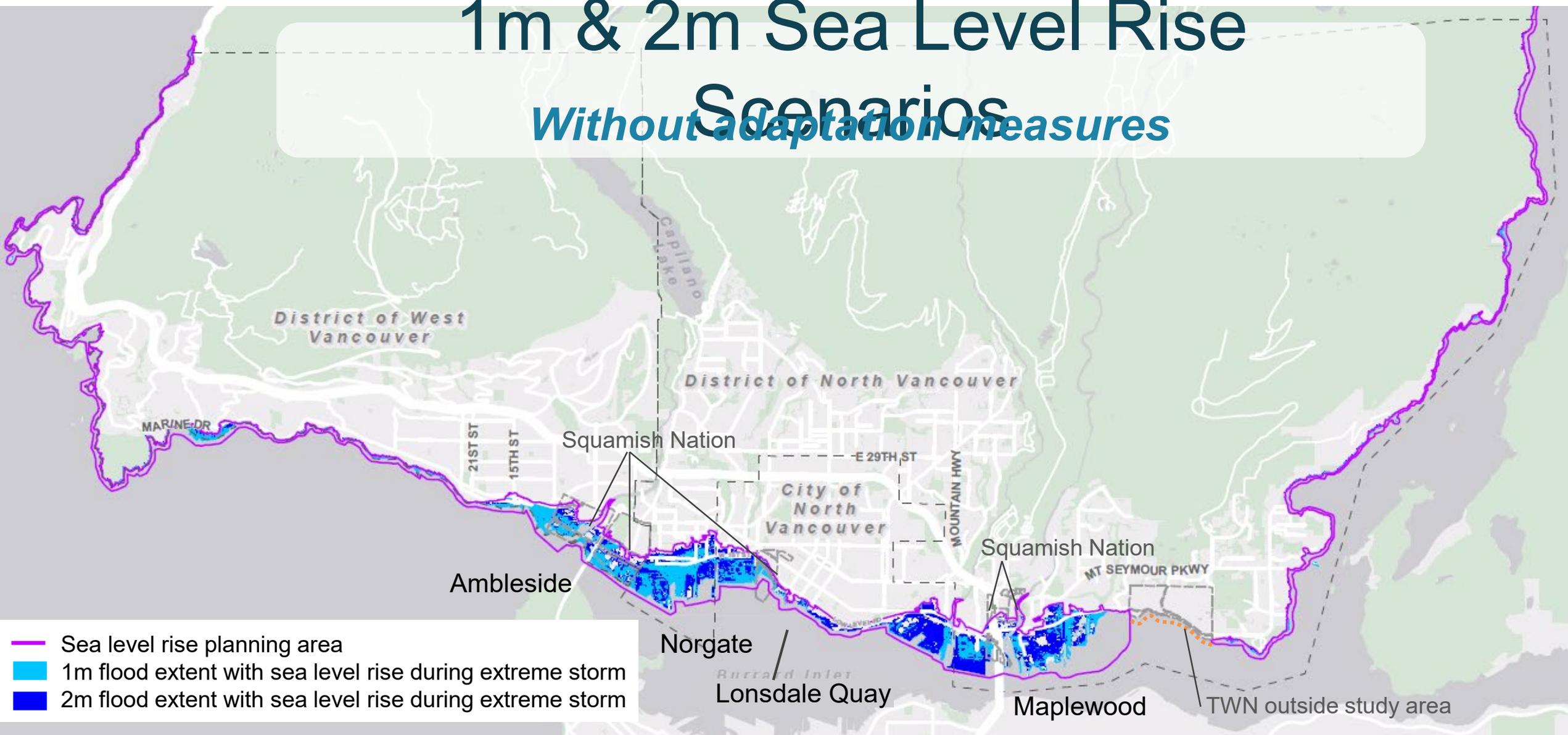


Initial public & stakeholder engagement



Potential adaptation approaches

1m & 2m Sea Level Rise Scenarios *Without adaptation measures*

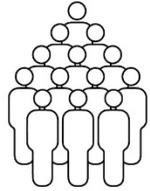


Consequences

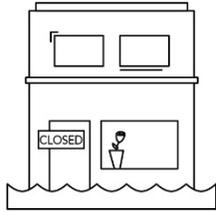
Without adaptation measures

1m

sea level rise



1,300+
residents could
EXPERIENCE
FLOODING



450+
businesses could
EXPERIENCE
FLOODING OR
POWER OUTAGE

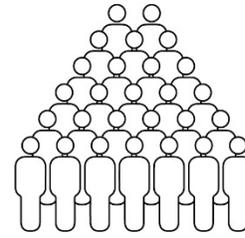


~\$900
million
IN BUILDING
DAMAGE

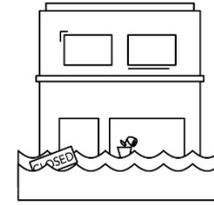
During major storm, whole study area

2m

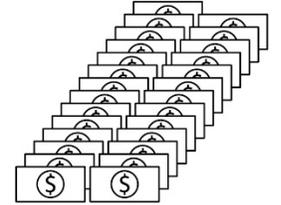
sea level rise



2,700+
residents could
EXPERIENCE
FLOODING



~1,900
businesses could
EXPERIENCE
FLOODING OR
POWER OUTAGE



~\$2.7
billion
IN BUILDING
DAMAGE

During extreme storm, whole study area

Adaptation Approaches

Likely a combination of approaches



Next Steps

Starting January 21st: Initial public and stakeholder engagement

[***DNV.org/SeaLevelRise***](https://www.dnv.org/SeaLevelRise)

- Video
- Online survey
- Letters
- DNV community workshops

Spring 2020:

- Draft strategy: develop, engagement, present to Council



Thank you