WATERFRONT SITE - DOVER, NH

- City owned parcel
- 29 acres with 1,900 ft. of Cochecho River shoreline
- Adjacent to downtown and Henry Law Park
- Previous site of WWTP and DPW facility
- Largest sewer pump station located on site
- Access via Makem Bridge and River Street
DOVER WATERFRONT HAS RICH HISTORY AS SEAPORT SERVED BY GUNDALOWS AND SCHOONERS USED BY TEXTILE MILLS
COCHECHO RIVER HAS LONG HISTORY OF FLOODING
CITY AND CWDAC HIRED A PROJECT TEAM LED BY UNION STUDIO TO ASSIST IN DEVELOPMENT OF CONCEPT PLANS IN 2015
CONSULTANTS MAPPED FLOODPLAINS AND WETLANDS ON SITE

Legend
- Base Flood Elevations (feet)
- Zone AE (1% Annual Chance Flood Hazard)
- Zone A (1% Annual Chance Flood Hazard)
- Regulatory Floodway
- 0.2% Annual Chance Flood Hazard
- Aquifers: Water Table
- Wetlands
- 50% Wetland Buffer
- 200ft Riverfront Buffer
- 201 Contours
- Parcels
- Buildings
- ROW

Water Features
Dover Waterfront
City of Dover, NH

Date: 1/10/2016
DVT

Document Path: H:\Project\DO\DO Waterfront\DO Waterfront MDL\Waterfront_240519.pdf
Climate change is expected to have significant impacts on critical infrastructure and natural and cultural resources in coastal New Hampshire over the next century and beyond. This report is intended to help municipal and state decision-makers prepare for projected sea-level rise and other coastal hazards and maximize the resilience those hazards pose to municipalities and state assets.

**Sea-level Rise**

- Global sea-levels have been rising and are expected to continue rising well beyond the end of the 21st century, having one-great significance to our storm, waves, and ecosystems, coastal resources and other coastal property and infrastructure.

**Projections**

- Understanding rates of global greenhouse gas emissions is challenging, but research shows that current greenhouse gas concentrations and trends or accelerated emissions will continue to influence sea levels in the future.

**Precipitation**

- Mean annual precipitation in the northeastern United States increased by approximately 6 inches (more than 16%) between 1960 and 2010.

**Projections**

- Annual precipitation is expected to increase by as much as 20% between 2020 and 2050 compared to the late 20th century. Most of the precipitation increases will be in winter and spring in the form of snowfall and rain, with no apparent changes in frequency, intensity, or the number of days affected by precipitation events.

**Extreme Precipitation**

- The Northeast experienced a 30% increase in total annual precipitation from storms classified as extreme events between 1962 and 2004. "Extreme," is defined as the number of times each year that the 34th highest amount is exceeded at a given location.

**Prospects**

- Extreme precipitation events are projected to increase frequency and to be the amount of precipitation (rainfall, and snowfall). The total amount produced by hurricanes is projected to increase. However, current climate models and analyses are not well suited to projecting future changes in the frequency or magnitude of extreme precipitation events.

**Storm Surge**

- The New Hampshire coast is significantly impacted by both hurricanes and storms. While these storms drive ocean water towards the land, resulting in short-term increases in water levels called storm surge. The actual height of a flood is determined by factors such as storm intensity, forward speed, storm surge, water depth, and storm characteristics, and is guided by the approach of the storm and the coastal features.

**Projections**

- Considering changes in water levels due to a 2-meter (8-foot) sea level rise, today’s extreme storm surges (e.g., 300-year flood) will have a greater magnitude and occur more frequently over time.

Coastal sea-level rise and coastal development in New Hampshire have been significantly influenced by winds from the hurricanes, which have been significant in reducing long-term loss. However, there is some uncertainty in the population of these hurricanes, and in the number of years affected, and so the impacts are not always consistent, both in terms of the frequency and intensity of storms.
CITY REQUIRED CONSULTANTS TO USE SLR PROJECTIONS FOR 2100 IN SITE DESIGN AND GRADING PLANS FOR SITE
CONSULTANTS PRODUCED MAP OF 2100 SEA LEVEL RISE OF 6.6 FEET AND FLOODPLAIN TO EXAMINE WORST CASE SCENARIO
CONSULTANTS HAVE DEVELOPED PRELIMINARY SITE GRADING PLANS
SHORELINE TREATMENT OPTION - URBAN

COCHECHO WATERFRONT
SHORELINE TREATMENT OPTION – GRANITE BLOCK STEPS

COCHECHO WATERFRONT
SHORELINE TREATMENT OPTION – NATURAL PARK

COCHECHO WATERFRONT
SHORELINE TREATMENT OPTION – NATURAL GREEN SPACE/BOARDWALK

COCHECHO WATERFRONT
RECOMMENDED PRELIMINARY DESIGN FROM CONSULTANTS

- Small plaza extended to serve double duty as unloading zone.
- Boat house replaces parking area (9,000 SF pad shown).
- Parking lot shifted and expanded to serve larger program.

COCHECHO WATERFRONT