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DEPARTMENT OF ENVIRONMENTAL PROTECTION

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MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION

SPEAKING IN SUPPORT OF L.D. 65

AN ACT TO UPDATE THE DEFINTION OF "COASTAL WETLANDS" UNDER THE NATURAL RESOURCES PROTECTION ACT

SPONSORED BY REP. DOUDERA

BEFORE THE JOINT STANDING COMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES

DATE OF HEARING:

January 27, 2025

Senator Tepler, Representative Doudera, and members of the Committee, I am Naomi Kirk-Lawlor from the Office of the Commissioner at the Department of Environmental Protection, speaking in support of L.D. 65.

This bill would change the definition of "coastal wetlands" in the Natural Resources Protection Act (NRPA) to refer to a more consistent delineator, the Highest Astronomical Tide, which is stable over a 20-year period, rather than the highest annual tide, which changes every year. The Department also recommends changing the identical definition of coastal wetlands in the Mandatory Shoreland Zoning act. Unfortunately, we did not include this when the bill was submitted to the Revisor's

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Office, and request now that the bill be amended to maintain consistency between the statutes. Suggested amendment language is included with my testimony.

Currently, coastal wetlands are defined in both the Natural Resources Protection Act and the Mandatory Shoreland Zoning Act as, "all tidal and subtidal lands; all lands with vegetation present that is tolerant of salt water and occurs primarily in a salt water or estuarine habitat; and any swamp, marsh, bog, beach, flat or other contiguous low land that is subject to tidal action during the highest tide level for the year in which an activity is proposed as identified in tide tables published by the National Ocean Service. Coastal wetlands may include portions of coastal sand dunes."

From a regulatory perspective, the current situation is challenging because the elevation of the edge of many coastal wetlands changes from year to year. This can mean that NRPA permitting requirements or mandatory setbacks under Shoreland Zoning may be different for neighbors who develop their property in different years, creating confusion and questions of fairness.

Tides are very complex and predicting them is complicated. Many factors affect both the timing and magnitude of high and low tides. When predicting a tide, the National Oceanic and Atmospheric Service, or NOAA, calculates the changing gravitational forces of the moon and sun that act on the Earth and its oceans. If the Earth were a smooth ball of rock covered in water, without continents, then these calculations would be very close to the actual tides. However, land masses and ocean bathymetry also influence how water can move across the globe and affect the tides. This is why tidal amplitudes are so much greater in Eastport than in Portland, for example. So, in addition to the gravitational forces produced by celestial bodies, the predicted astronomical tide is also partially based on historical observations at many different locations along the coastline.

Because of cyclical gravitational factors related to the relative positions of Earth, the moon, and the sun, tide predictions have a 19-year cycle of variability, which is called a tidal epoch. Every 19 years predicted tides peak. This variability represents, on

average, about 2.5 inches in elevation, although depending on the location, these differences can be smaller or larger. One important thing that is not included in NOAA's tide predictions is weather. High and low pressure zones and storm winds can have a significant influence on actual, measured tide levels.

The National Oceanic and Atmospheric Service defines the Highest Astronomical Tide as the highest predicted tide within a 40-year period that includes two tidal epochs. The Highest Astronomical Tide remains constant over 20-year periods. In contrast, highest annual tide is the highest predicted tide within one calendar year and changes every year. The difference between the Highest Astronomical Tide and the highest annual tide is variable depending on the location and the year. In Maine the difference is usually on the order of 0.1 to 0.5 ft, or a few inches, but can be greater in some locations in some years. In the year with the highest predicted annual tide, the Highest Astronomical Tide would be equal to the highest annual tide. However, the actual, measured highest tide in any given year may be higher or lower than predicted due to factors like weather.

NOAA publishes the tide predictions for approximately 117 distinct locations along the Maine coastline. No information is provided on the predicted tides in between these points. To help the public determine predicted tide values, the Maine Geological Survey has produced a Highest Astronomical Tide Web Viewer that interpolates NOAA's published predictions and displays the best available information on the elevation of the Highest Astronomical Tide along the entire coastline of Maine. This tool allows someone to find their area of interest and see a mapped line on a satellite image that represents the Highest Astronomical Tide. They can then click on a section of line to get the predicted value of the Highest Astronomical Tide.

The Department is proposing to use the Highest Astronomical Tide to delineate the edge of the coastal wetland because it is stable over a 20-year timescale and is readily available and accessible to the public and to Department staff through the Maine Geological Survey's Highest Astronomical Tide Web Viewer.

Several years ago, the Land Use Planning Commission, which has delegated authority under the Natural Resources Protection Act, changed its definition of coastal wetland to rely on the Highest Astronomical Tide. Updating the definition in the NRPA and the Shoreland Zoning Act will also create consistency between organized and unorganized coastlines in the state.

Thank you for the opportunity to testify before you today in support of L.D. 65 and the attached suggested amendment. I would be happy to answer any questions from the Committee, both now and at work session.

An Act to Update the Definition of "Coastal Wetlands" Under the Natural Resources Protection Act

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 38 MRSA §480-B, sub-§2, as amended by PL 2005, c. 330, §13, is further amended to read:

2. Coastal wetlands. "Coastal wetlands" means all tidal and subtidal lands; all areas with vegetation present that is tolerant of salt water and occurs primarily in a salt water or estuarine habitat; and any swamp, marsh, bog, beach, flat or other contiguous lowland that is subject to tidal action during the highest astronomical tide ~~level for the year in which an activity is proposed as identified in tide tables published~~ as determined by the United States Department of Commerce, National ~~Ocean Service~~ Oceanic and Atmospheric Administration. Coastal wetlands may include portions of coastal sand dunes.

Sec 2. 38 MRSA §436-A, sub-§1, as amended by PL 2005, c. 330, §10, is further amended to read:

1. Coastal wetlands. "Coastal wetlands" means all tidal and subtidal lands; all lands with vegetation present that is tolerant of salt water and occurs primarily in a salt water or estuarine habitat; and any swamp, marsh, bog, beach, flat or other contiguous low land that is subject to tidal action during the highest astronomical tide ~~level for the year in which an activity is proposed as identified in tide tables published~~ as determined by the United States Department of Commerce, National ~~Ocean Service~~ Oceanic and Atmospheric Administration. Coastal wetlands may include portions of coastal sand dunes.

SUMMARY

This bill amends the definition of "coastal wetlands" in the Natural Resources Protection Act and the Mandatory Shoreland Zoning Act.