**Comprehensive Planning Resource Packages**

**September 2021**

**Geological information from the Maine Geological Survey**

Orland

Significant sand and gravel aquifer maps:

Foster, Lauren E. (Compiler), Smith, Troy T. (Compiler), and Doughty, Dale F. (Mapper), 2011, [Significant sand and gravel aquifers in the Brewer Lake quadrangle, Maine](https://digitalmaine.com/mgs_maps/2005): Maine Geological Survey, Open-File Map 11-53, map, scale 1:24,000.

Foster, Lauren E. (Compiler), Smith, Troy T. (Compiler), and Doughty, Dale F. (Mapper), 2011, [Significant sand and gravel aquifers in the Bucksport quadrangle, Maine](https://digitalmaine.com/mgs_maps/2004): Maine Geological Survey, Open-File Map 11-59, map, scale 1:24,000.

Foster, Lauren E. (Compiler), Smith, Troy T. (Compiler), and Doughty, Dale F. (Mapper), 2011, [Significant sand and gravel aquifers in the Orland quadrangle, Maine](https://digitalmaine.com/mgs_maps/2006): Maine Geological Survey, Open-File Map 11-51, map, scale 1:24,000.

Foster, Lauren E., and Smith, Troy T., 2011, [Significant sand and gravel aquifers in the Branch Lake quadrangle, Maine](https://digitalmaine.com/mgs_maps/2007): Maine Geological Survey, Open-File Map 11-50, map, scale 1:24,000.

Surficial geology maps:

Kelley, Alice R., and Caron, Lynn, 2011, [Surficial geology of the Brewer Lake quadrangle, Maine](https://digitalmaine.com/mgs_maps/1927): Maine Geological Survey, Open-File Map 11-18, map, scale 1:24,000.

Kelley, Alice R., and Caron, Lynn, 2013, [Surficial geology of the Bucksport quadrangle, Maine](https://digitalmaine.com/mgs_maps/1969): Maine Geological Survey, Open-File Map 13-14, map, scale 1:24,000.

Weddle, Thomas K., 2011, [Surficial geology of the Orland quadrangle, Maine](https://digitalmaine.com/mgs_maps/1931): Maine Geological Survey, Open-File Map 11-22, map, scale 1:24,000.

Weddle, Thomas K., 2011, [Surficial geology of the Branch Lake quadrangle, Maine](https://digitalmaine.com/mgs_maps/1933): Maine Geological Survey, Open-File Map 11-16, map, scale 1:24,000.

Coastal geology maps:

Dickson, Stephen M., 2001, [Coastal landslide hazards in the Bucksport quadrangle, Maine](https://digitalmaine.com/mgs_maps/271): Maine Geological Survey, Open-File Map 01-508, map, scale 1:24,000.

Dickson, Stephen M., 2001, [Coastal landslide hazards in the Orland quadrangle, Maine](https://digitalmaine.com/mgs_maps/245): Maine Geological Survey, Open-File Map 01-529, map, scale 1:24,000.

Bryant, Marita, Barnhardt, Walter A., Dickson, Stephen M., and Kelley, Joseph T., 2002, [Coastal bluffs in the Bucksport quadrangle, Maine](https://digitalmaine.com/mgs_maps/501): Maine Geological Survey, Open-File Map 02-180, map, scale 1:24,000.

Barnhardt, Walter A., Dickson, Stephen M., and Kelley, Joseph T., 2002, [Coastal bluffs in the Orland quadrangle, Maine](https://digitalmaine.com/mgs_maps/281): Maine Geological Survey, Open-File Map 02-200, map, scale 1:24,000.

Additional Coastal Geology Information Resources

Highest Astronomical Tide Line

1. Map viewer and data download <https://www.maine.gov/dacf/mgs/hazards/highest_tide_line/index.shtml>

Sea Level Rise

1. Scientific assessment of sea level rise and storm surge in Maine: Dickson, S.M., Slovinsky, P.A., and Kelley, J.T., 2020, Sea Level Rise and Storm Surge, *in*: Arnold, S., et. al., *Scientific Assessment of Climate Change and Its Effects in Maine*, Maine Science and Technology Subcommittee, Maine Climate Council, September 23, 2020, [PDF](https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/GOPIF_STS_REPORT_092320.pdf) or [flipbook](https://online.fliphtml5.com/gkqg/jqys/).
2. Sea Level Rise Ticker  <https://www.maine.gov/dacf/mgs/hazards/slr_ticker/index.html>
3. Sea Level Rise Dashboard <https://mgs-collect.site/slr_ticker/slr_dashboard.html>
4. Sea level and storm surge map viewer and data download <https://www.maine.gov/dacf/mgs/hazards/slr_ss/index.shtml>

Coastal Sand Dune Geology

1. Description and uses <https://www.maine.gov/dacf/mgs/pubs/mapuse/series/descrip-dunes.htm>
2. Maps and data download <https://www.maine.gov/dacf/mgs/pubs/online/dunes/dunes.htm>

Beach Shoreline Change

1. Map viewer and data download <https://www.maine.gov/dacf/mgs/hazards/beach_mapping/index.shtml>

Coastal Structure and Dune Crest Overtopping

1. Map viewer and data download <https://www.maine.gov/dacf/mgs/hazards/csdciop/index.shtml>

Coastal Bluff Maps

1. Description and data download <https://www.maine.gov/dacf/mgs/pubs/mapuse/series/descrip-bluff.htm>

Coastal Landslide Hazard Maps

1. Description and data download <https://www.maine.gov/dacf/mgs/pubs/mapuse/series/descrip-slide.htm>

Maine Flood Resilience Checklist

1. Overview <https://www.maine.gov/dacf/mgs/hazards/coastal/MaineFloodResilienceChecklistOverview.pdf>
2. Checklist document: Sherwin, Abbie, 2017, Maine Flood Resilience Checklist; A self-assessment tool for Maine’s coastal communities to evaluate vulnerability to flood hazards and increase resilience: Maine Geological Survey, Open-File Report 17-15, report 44 p. *Maine Geological Survey Publications*. 521. <http://digitalmaine.com/mgs_publications/521>

Maine Floodplain Mapping Program

1. Home page and link to FEMA <https://www.maine.gov/dacf/flood/mapping.shtml>
2. Map viewer <https://maine.maps.arcgis.com/apps/webappviewer/index.html?id=3c09351397764bd2aa9ba385d2e9efe7>

Hurricane Inundation

1. SLOSH map viewer and data download <https://www.maine.gov/dacf/mgs/hazards/slosh/index.shtml>

Coastal Hazards to Property

1. Homeowner’s guide <https://www.maine.gov/dacf/mgs/hazards/chg/index.html>

Tsunami Hazards

1. Gulf of Maine <https://www.maine.gov/dacf/mgs/hazards/tsunamis/index.shtml>

Potential Tidal Marsh Migration

1. Map viewer and data download <https://www.maine.gov/dacf/mnap/assistance/marsh_migration.htm>

Living Shorelines along Coastal Bluffs

1. Demonstration projects <https://www.maine.gov/dacf/mgs/explore/marine/living-shorelines/>

Decision support tool and map viewer for Casco Bay (more areas coming) <https://www.maine.gov/dacf/mgs/hazards/living_shoreline/index.shtml>

Landslide susceptibility:

General ground water information:

Caswell, W. Bradford, 1987, Ground water handbook for the State of Maine: Maine Geological Survey, Bulletin 39, 2nd edition, 135 p., 78 figs., 5 tables. *Maine Geological Survey Publications*. 180. <http://digitalmaine.com/mgs_publications/180> .

Potential zones of high ground water transmissivity (bedrock):

Caswell, Eichler, and Hill, Inc., 1986, [Lineaments, high-yield bedrock wells, and potential bedrock recharge areas in the Bangor 2 degree sheet](https://digitalmaine.com/mgs_maps/1209): Maine Geological Survey, Open-File Map 86-69, map, scale 1:250,000.

Water well data base:

<https://www.maine.gov/dacf/mgs/pubs/digital/well.htm>

Sand and gravel aquifer map information

From the map explanation:





Coastal bluff map information



Additional information on coastal bluff maps: <http://www.maine.gov/dacf/mgs/pubs/mapuse/series/descrip-bluff.htm>

Coastal landslide hazard map information



Additional information on coastal hazards: <http://www.maine.gov/dacf/mgs/explore/marine/facts/coastal-hazard.htm>

Surficial geology information

Surficial deposits are the unconsolidated earth materials that overlie bedrock. They cover a large percentage of the State and include sediments deposited by wind, water, and glacial ice. Glacial deposits are by far the most abundant surficial materials in Maine.

Consideration of surficial materials is important for land-use planning. The properties of these materials affect their values as aquifers, landfill or sewage disposal sites, construction sites, and sources of gravel and other resources.

Glacial sand and gravel deposits: These coarse-grained deposits are often good groundwater aquifers; sources of gravel aggregate

Glacial marine mud and lake deposits: these fine-grained deposits are poorly drained and are the material in which most landslides occur in Maine.

Further information can be found in [Bulletin 44: Surficial geology handbook for southern Maine.](http://digitalmaine.com/mgs_publications/2/)

Landslide susceptibility maps



Find additional information at: <http://www.maine.gov/dacf/mgs/pubs/mapuse/series/descrip-slide-suscep.htm>

All maps, reports, and digital data are available from the Maine Geological Survey

<http://www.maine.gov/dacf/mgs/>

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