This map illustrates the 100-year floodplain for the town of Newmarket for three conditions: (1) the FEMA Flood Insurance Rate Maps (FIRMs) shown with blue cross hatching; (2) the current floodplain based on 2005 land use conditions; and (3) the projected 2100 floodplain based on a conventional buildout scenario projected from 2005-2005 and extended future 100-year floodplain based on sea level rise and future conditions compared to FIR Ms conditions.

**Map Key:**
- Updated (2005) 100-Year Floodplains
- 2100 100-Year Floodplains: Conventional Buildout
- Effective Zone A: 100-Year Floodplains
- Special Flood Hazard Areas with Base Flood Elevations (BFEs) determined from surveyed cross sections
- Effective Cross Sections
- Landslide Inundation Mapping
- Lamprey River Watershed Boundary
- Subwatershed Boundaries
- Lamprey River and Stream Networks
- Town/County Boundaries
- State roads
- Local roads
- Reservoirs
- Towns
- Elementary Schools
- Intermediate Schools/Elementary School
- Junior/Senior High Schools
- Public Library
- Town Hall
- Intersection
- Railroads
- Urbanized Areas
- Coastline
- Topography: National Elevation Dataset, 10-meter resolution.
- Transportation: NH Department of Transportation, April, 2010.
- Digital Elevation Model.
- Watersheds: NH Department of Environmental Services, Surface Water Modeling System [HEC-HMS]; hydraulic analysis using hydrology model output from four downscaled models; forecasted FIRM base flood elevations generated from 2011 LiDAR imagery (2 meter root mean square error). Reaches without surveyed cross sections have presented mean elevation generated from lift 3 models.

**Acreage Summary:**

**Technical Notes:**

The updated and projected 100-Year Floodplains in the Lamprey River Watershed of New Hampshire are based on the U.S. Army Corps of Engineers flood risk analysis using the methods of the Elevation and Inundation Model [HEC-RAS]. The flood risk analysis was performed using a distributed hydrologic and hydraulic modeling system combined with a GIS framework. The model was developed using the 2011 LiDAR dataset, which was considered to be the most accurate dataset available. The model was calibrated and validated against historical flood events and surveyed cross sections.

**Map Data Sources:**
- Updated (2005) 100-Year Floodplains: Surface Water Modeling System (HEC-HMS); hydraulic analysis using hydrology model output from four downscaled models; forecasted FIRM base flood elevations generated from 2011 LiDAR imagery (2 meter root mean square error).
- 2100 100-Year Floodplains: Conventional Buildout; future land use assumptions as per the Vermont Law School study, "Assessing the Risk of 100-year Freshwater Floods in the Lamprey River Watershed of New Hampshire.
- Map Key: Updated (2005) 100-Year Floodplains; 2100 100-Year Floodplains: Conventional Buildout; Effective Zone A: 100-Year Floodplains; Special Flood Hazard Areas with Base Flood Elevations (BFEs) determined from surveyed cross sections; Effective Cross Sections; Landslide Inundation Mapping; Lamprey River Watershed Boundary; Subwatershed Boundaries; Lamprey River and Stream Networks; Town/County Boundaries; State roads; Local roads; Reservoirs; Towns; Elementary Schools; Intermediate Schools/Elementary School; Junior/Senior High Schools; Public Library; Town Hall; Intersection; Railroads; Urbanized Areas; Coastline; Surface Water: NH National Hydrography Dataset, April 2007.
- Topography: National Elevation Dataset, 10-meter resolution.
- Transportation: NH Department of Transportation, April, 2010.
- Digital Elevation Model.
- Watersheds: NH Department of Environmental Services, Surface Water Modeling System [HEC-HMS]; hydraulic analysis using hydrology model output from four downscaled models; forecasted FIRM base flood elevations generated from 2011 LiDAR imagery (2 meter root mean square error). Reaches without surveyed cross sections have presented mean elevation generated from lift 3 models.

For more information about the project, please visit: [http://100yearfloods.org](http://100yearfloods.org).