100-Year Floodplains in the Lamprey River Watershed: Flood Insurance Rate Maps (FIRMs), Updated (2005) Conditions, and 2100 Conventional Buildout

Raymond Panel

Map Description:
This map illustrates the 100-year floodplain for the town of Raymond for three conditions: (1) the FEMA Flood Insurance Rate Maps (FIRMs) produced with base case conditions; (2) the updated floodplain based on 2005 land use conditions and updated 100-year 24-hour rainfall of 8.5” shown in pink; and (3) the projected 2100 floodplain based on conventional buildout conditions (extrapolated from 1962-2005 rates) and assumed future 100-year 24-hour rainfall of 11.4” shown in orange. The map and table below show the increase in the extent of the floodplain based on current and future conditions compared to FIRM 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 Elevation (BFEs) determined
- Effective Cross Sections

Acresage Summary:

Technical Notes:
The updated and projected floodplains were generated using HEC-RAS river hydraulic model software and the USACE Hydrologic Engineering Center River Analysis System (HEC-RAS) and HEC-HMS hydrologic model software and the Household Conservation System (HEC-HMS). The 100-year 24-hour rainfall values were derived from the USGS 1986 Regional Climate Center rain gauge network and extrapolated to 2100 using historical trends. The 100-year rainfall values were then applied to the 1962 HEC-HMS model for the Lamprey River Watershed to generate a revised floodplain based on a 2005 land use and projected rainfall of 8.5”. The revised floodplains were then updated to the revised HEC-RAS model for the Lamprey River Watershed to generate the final floodplains for 2005 and 2100 conditions.

Map Data Sources:
- HEC-HMS Model (2005) based on 1962 data
- HEC-RAS Model (2005) based on 2005 data
- HEC-HMS Model (2100) based on 2005 data
- HEC-RAS Model (2100) based on 2005 data
- Special Flood Hazard Areas with Base Flood Elevation (BFEs) determined
- Effective Zone A 100-Year Floodplains
- Updated (2005) 100-Year Floodplains

For further information about this project, please visit http://100yearfloods.org.