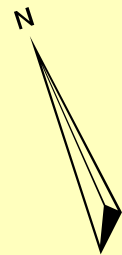


# FLUVIAL EROSION HAZARD ZONES

## DRAFT

### Town of Bradford

October 3, 2008



● Structures found in the FEH zone but not in the FEMA flood zone

#### FLUVIAL EROSION HAZARD

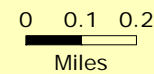
- VERY LOW
- MODERATE
- HIGH
- VERY HIGH
- EXTREME

#### FEMA NFIP FLOOD

- A
- AE
- AE, FLOODWAY

1:22,000

1 inch equals 1,833 feet



State Plane Meters, NAD 83

For planning purposes only.  
Not for regulatory interpretation.

TWO RIVERS-OTTAUQUECHEE REGIONAL COMMISSION  
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#### Map Development

In the FEH mapping process, stream sensitivity is translated into an area along a stream (the FEH zone) that is needed by the stream to maintain or adjust toward equilibrium. This is also the area that is most likely to experience damage caused by fluvial erosion. FEH zones are based on the concept of meander belt width, the area of a valley occupied by a stream as it winds back and forth (or meanders) in its attempt to achieve a stable slope. The meander belt width is directly related to the width of a stream and the size of the watershed it drains.

Smaller tributaries have a narrower FEH zone associated with them. In addition, the width of an FEH zone depends upon its sensitivity. For example, a steep, headwater stream with a bed made up mostly of boulders is extremely stable (Very Low sensitivity). For streams like this, the FEH zone does not extend beyond the width of the channel. In contrast, a meandering, lowland stream with fine substrate is much more prone to lateral migration and sensitive to disturbance (Very High sensitivity). In this case, the FEH zone is a full six channel widths wide.

#### FEH District

A fluvial erosion hazard map provides a town valuable insight into the location and nature of fluvial erosion hazards, and can be used to support many effective mitigation options. Avoidance is the most cost effective approach to mitigating fluvial erosion hazards in the long run, and a FEH Overlay District is an important way to limit encroachment along rivers. FEH zone boundaries from the final, science-based FEH map can be translated directly into boundaries of a FEH overlay district, or can be used as a guide for the development of a FEH overlay district that meets the specific needs of a town.

#### FEMA Flood Maps

FEMA flood maps show flood risk associated with inundation flooding. This type of flooding results from water slowly rising across low lying areas. Vermont typically experiences flash or fluvial erosion flooding which can result in erosion and river course changes in uplands as well as lowlands.

