

## CHAPTER 2

### OBTAINING A FLOODPLAIN DETERMINATION FOR A MINOR SITE ASSESSMENT

#### 2.1 Purpose

This chapter explains the process of obtaining Base Flood Elevations (BFEs) and floodway limits for projects consisting of a single residential lot and/or a single residence and/or out building. Typically, these determinations are done to evaluate an application for a Letter of Map Amendment (LOMA) or Letter of Map Revision based on fill (LOMR-F) for an existing residence and/or out building, or to provide the BFE for a proposed structure on property near a stream or lake. A LOMA is a letter action by the Federal Emergency Management Agency (FEMA) which revises the currently effective flood map. These assessments may not require the same level of detailed floodplain or floodway analysis typically needed for larger developments.

#### 2.2 IDNR Assistance

The IDNR will provide the BFE and floodway limits if the request meets all of the following requirements:

- It is for a single residence and/or out building;
- It is on a single residential lot; and
- No other associated work is proposed in the stream channel, including a driveway stream crossing.

The IDNR uses the Indiana Floodplain Information Portal (INFIP) eFARA process and the “Request for Floodplain Information” form to determine if it will provide the BFE service. If the Department determines, based on the submitted information, that the project does not qualify as a Minor Site Assessment, the requester will be advised to retain an engineering firm to perform the assessment and provide the results to the IDNR for review, see Figure 2-1.

#### 2.3 Submittal Request

A requester should begin by submitting a request via the Indiana Floodplain Information Portal (INFIP). This interactive floodplain mapping tool includes an

eFARA submittal function. A request can also be submitted using the “Request for Floodplain Information” form available on the IDNR website.

This information should be filled out completely for the quickest response. The time required for the IDNR review is often directly affected by the quality of the submitted information.

IDNR uses a first come, first served approach in responding to requests. Accordingly, a requester should consult with IDNR personnel to determine if other floodplain requests are pending in the area which may affect that of the requester. A state map delineating the basin teams for Division of Water Engineering Services with staff contacts can be found on the IDNR website.

## **2.4 Hydrologic-Hydraulic Approach Used by the IDNR**

Figure 2-1 presents an overview of the process used to obtain a BFE and/or floodway limits for a Minor Site Assessment (single residential lot or residence and/or out building).

For a Minor Site Assessment, the IDNR will typically calculate a hydraulic rating of a single cross-section. Analyses will include determination of the 1% annual chance peak discharge.

### **2.4.1 Hydraulics**

IDNR’s approach to calculating the BFE typically begins with a search for available topographic mapping. The IDNR has access to detailed topographic mapping for all areas of the state through the LiDAR acquisition program. However, if the requester has access to other more detailed mapping or surveying, that mapping may also be provided to aid in the analysis. Typically, topographic mapping with a contour interval of two feet is the minimum detail acceptable for use in calculating the BFE for a site.

Typically, one cross- section is all that is required for a Minor Site Assessment. However, if the site is located upstream of a bridge, then bridge and roadway profile information may also be requested by IDNR, along with one cross-section downstream of the bridge. All survey information should be gathered and presented as described in Chapter 5, “Surveying Standards and Methods,” of these guidelines.

The IDNR will not calculate BFEs for sites that require analyses involving more than two cross-sections if the site is upstream of a bridge or one cross-section if not upstream of a bridge. For a Minor Site Assessment upstream of a bridge or culvert, the IDNR will only calculate BFEs for the site based on one natural full valley cross-section at the project site and one natural full valley cross-section downstream of the existing bridge or culvert crossing in addition to the waterway

opening dimensions and top of road profile of the bridge or culvert. If the preceding cross-section numbers must be exceeded in order to provide reasonable results, IDNR will advise the requester to retain an engineering firm to complete the BFE and/or floodway determination and submit results to the IDNR for review and possible approval.

When a bridge or culvert is directly downstream of the site, IDNR will apply a more detailed hydraulic modeling program, such as HEC-RAS, to determine the BFE. In these instances, the floodway will be assumed to include all land that is below the BFE.

The Department will estimate the average friction slope and channel and overbank roughness coefficients, (Manning equation “n” values).

#### 2.4.2 Floodways

Floodway limits cannot be determined using a single cross-section. Where only one cross-section has been used for a site, the floodway will include all land that is below the BFE.

If a more precise determination of the floodway is desired, then the site must be evaluated using the methods discussed in Chapter 3, “Performing a Detailed Floodplain Analysis.” In such cases, IDNR will advise the requester to retain an engineering firm to perform this calculation and submit the calculations to the IDNR for final approval.

Use this process when a Base Flood Elevation and/or floodway are needed for a single residential lot or structure.

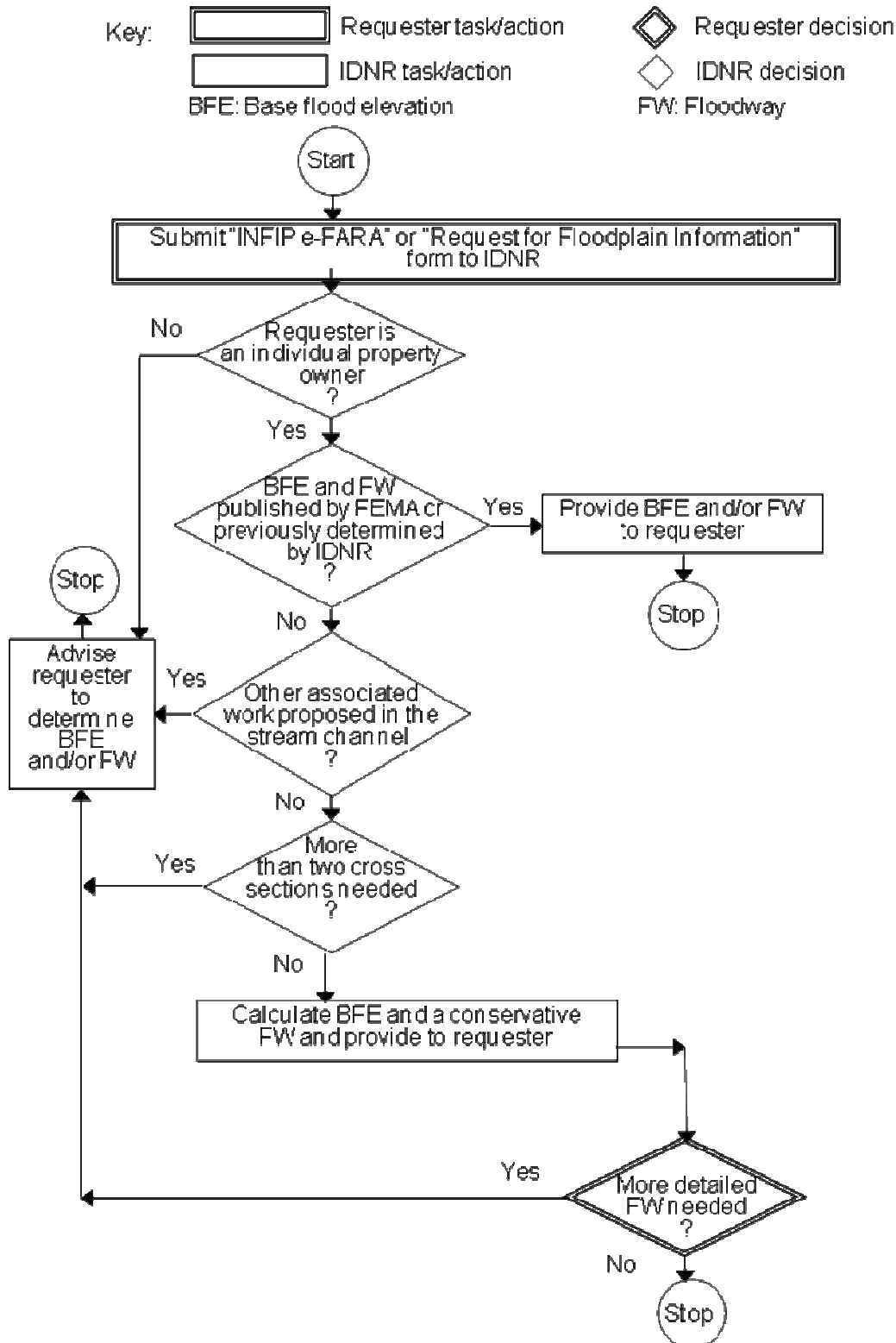


Figure 2-1