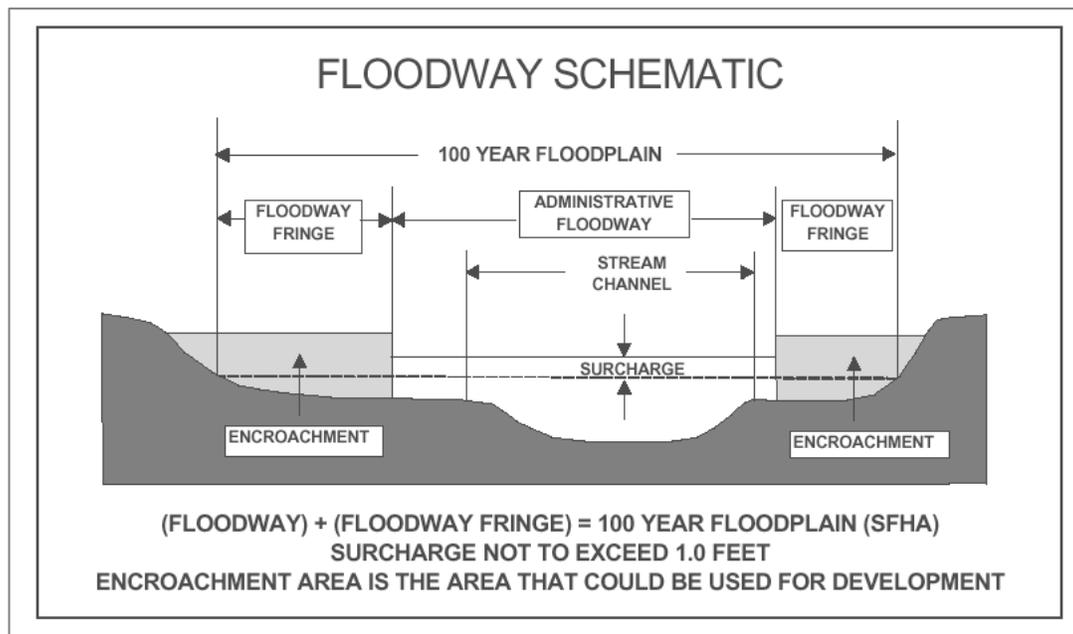


## Floodway Encroachments

*The floodway is the channel of a river or stream and the overbank areas that must remain open to carry the deeper, faster moving water during a flood.* If the remainder of the floodplain, called the floodplain fringe, is completely obstructed, the 100-year flood elevation would not increase more than one foot. The regulatory floodway may be shown on the Flood Insurance Rate Map or on a separate Flood Boundary and Floodway Map. Because floodway boundaries are delineated using computer modeling, they often do not correspond to any features visible at the site.

### Why Is the Floodway Different than Other Floodplain Areas?

A basic principle of floodplain management is that *development must not increase the flood hazard on other properties.* “Floodways” are areas where fill or other development is likely to divert flow and contribute to increased water depths during a flood. Floodways may also be subject to high velocities, which can cause severe damage to structures and high risks for occupants and emergency responders. *Ideally, floodways should be undeveloped areas that can accommodate flood flows with minimal risk.* Any new development in the floodway generally requires an engineering analysis of the impact on flood hazards.



### What Is Meant by Encroachment?

An “encroachment” is any floodplain development that could obstruct flood flows, such as fill, a bridge, or a building. A driveway, road, or parking lot at grade (without any filling) would not cause an obstruction. Development of lakeshore floodplains, where there is no flow, is not considered an encroachment.

### How Are Floodplain Encroachments Regulated?

The development standards for a floodplain encroachment depend on both the project location and the amount of information provided on flood hazard maps:

- Floodplain fringe: The modeling used to establish floodway boundaries indicated that any encroachment or obstruction in the fringe area (outside the floodway) would not result in a “significant” increase in flood levels (i.e. no more than one foot), so no encroachment analysis is required.
- Floodway: *No new development is permitted within the regulatory floodway unless a licensed professional engineer demonstrates that the proposed encroachment shall not result in any rise in the 100-year flood elevation.* This no-rise requirement is in addition to all other floodplain development standards applicable to the proposed project.

- **Riverine floodplain with base flood elevations, but no floodway:** When the flood hazard map designates base flood elevations (100-year flood heights) but no floodway is delineated, the applicant must demonstrate that the cumulative effect of the proposed development, when combined with all other existing and anticipated floodplain development, would not increase the water surface elevation of the 100-year flood more than one foot at any location.
- **Approximate A Zones:** When floodplain boundaries were established using approximate techniques (which produce neither floodways nor base flood elevations), the municipality may require an analysis to demonstrate that the project would not result in physical damage to any other property.

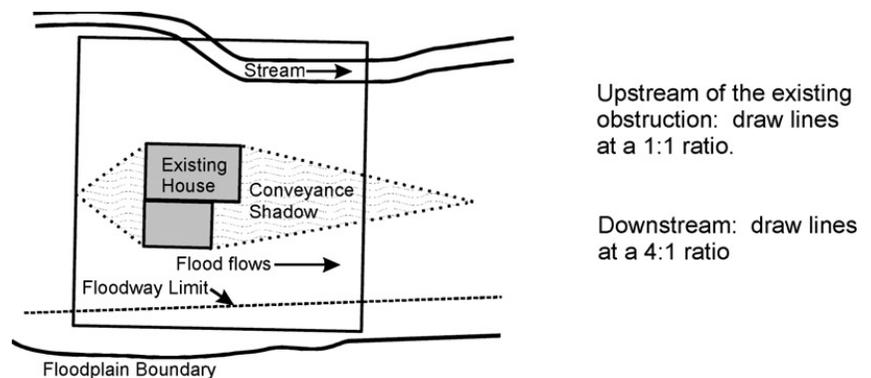
### Are There Exceptions to the Encroachment Requirements?

Federal standards do not allow communities to issue variances for development within the floodway that would result in increased flood levels. However, there are some situations (such as dams, bridges, or roads) in which a project in the floodway may be justifiable even though it would cause a rise in the flood elevation. This necessitates that the flood hazard map be changed to reflect the new hazard. The applicant must apply to the Federal Emergency Management Agency (FEMA) for (1) a conditional map revision before the development occurs and (2) a final letter of map revision after the development has been completed.<sup>1</sup>

### No-Rise Certification for Floodway Encroachments

Any proposed encroachment in the floodway requires a technical evaluation by a licensed professional engineer to demonstrate that the project will not affect flood heights. The results of this analysis must be maintained in the municipality's permit file. This can be in the form of a No-Rise Certification supported by technical data and signed by a registered professional engineer. The supporting technical data should be based on the standard step-backwater computer model used to develop the floodway shown on the flood hazard map. Hydraulic modeling of the pre-project and post-project conditions should demonstrate that the change in the 100-year flood height is 0.00 feet.

A detailed surface water profile analysis may not be necessary for a small project located completely within the "conveyance shadow" of an existing obstruction (because flood water is already flowing around the larger obstruction). The limits of this conveyance shadow can be determined as illustrated. However, an engineer must still certify that the floodway encroachment would not cause any rise in the flood elevation.



### Additional Resources

- *Floodplain Development and Floodway Guidance*, prepared by the NYS Department of Environmental Conservation, available at <http://www.dec.ny.gov/lands/24281.html>, provides guidance on meeting the "no-rise" and "no adverse effect" criteria using hydraulic modeling techniques.
- *Procedures for Compliance with Floodway Regulations*, Floodplain Management Information Series Special Report; prepared by U.S. Army Corps of Engineers, Federal Emergency Management Agency, and Pennsylvania Department of Community Affairs (1990); available at [http://www.nh.gov/oep/programs/floodplainmanagement/regulations/documents/floodway\\_regulations.pdf](http://www.nh.gov/oep/programs/floodplainmanagement/regulations/documents/floodway_regulations.pdf); describes the analyses needed to document floodway impacts and procedures for requesting floodway revisions.

<sup>1</sup> The MT-2 Form for floodplain map revisions that show changes to flood elevations is available at [http://www.fema.gov/plan/prevent/fhm/dl\\_mt-2.shtm](http://www.fema.gov/plan/prevent/fhm/dl_mt-2.shtm).