

# **Floodplain Program 101**

## **Purpose**

The purpose of this handout is to provide local zoning officials with a basic understanding of how to administer their local floodplain ordinance. This document is something that was put together to assist zoning officials in some of their decisions. This document does not replace the adopted zoning ordinance of a community; it is a quick check document to make sure the local zoning authority is heading in the correct direction with a floodplain decision. Within this document are two flow charts, definitions, as well as some basic frequently asked questions. Keep in mind when using this document, each project in the floodplain is different, and may have something unique associated with it. If you need any assistance, contact your regional water management engineer.

## **Definitions**

**Alteration** → An enhancement, upgrading or substantial change or modifications other than an addition or repair to a dwelling or to electrical, plumbing, heating, ventilating, air conditioning and other systems within a structure.

**Regional Flood Elevation (RFE)** → The elevation associated with a flood determined to be representative of large floods to have occurred in Wisconsin or which may be expected to occur on a particular lake, river or stream once in every 100 years. Means the flood having a one percent chance of being equaled or exceeded in any given year, as published by FEMA as part of a FIS and depicted on a FIRM.

**Basement** → Any enclosed area of a building having its floor sub-grade, i.e. below ground level on all sides.

**Development** → Any artificial change to improved or unimproved real estate, including, but not limited to, the construction of buildings, structures or accessory structures; the construction of additions or alterations to buildings, structures or accessory structures; the repair of any damaged structure or the improvement or renovation of any structure, regardless of percentage of damage or improvement; the placement of buildings or structures; subdivision layout and site preparation; mining, dredging, filling, grading, paving, excavation or drilling operations; the storage, deposition or extraction of materials or equipment; and the installation, repair or removal of public or private sewage disposal systems or water supply facilities.

**Floodplain** → That land which has been or may be covered by flood water during the regional flood. The floodplain includes the floodway, floodfringe, shallow depth flooding, flood storage, and coastal floodplain areas.

**Floodway** → The channel of a river or stream, and those portions of the floodplain adjoining the channel required to carry the regional flood discharge.

**Floodfringe** → That portion of the floodplain outside of the floodway, which is covered by flood water during the regional flood. The term, “floodfringe” is generally associated with standing water rather than flowing water.

Letter of Map Change (LOMC) → A LOMC is a letter that reflects an official revision and/or an amendment to an effective FIRM. If a property owner or lessee thinks their property has been inadvertently mapped in a SFHA, property owners or lessees, or their representatives, may submit a request to FEMA for a LOMC. FEMA issues LOMCs in place of republishing and physically revising an effective FIRM with a new effective date.

Letter of Map Amendment (LOMA) → An official amendment, by letter, to an effective NFIP map. A LOMA establishes a property's location in relation to the Special Flood Hazard Area (SFHA). LOMA's are usually issued because a property has been inadvertently mapped as being in the floodplain, but is actually on natural high ground above RFE.

Letter of Map Revision (LOMR) → A LOMR is FEMA's modification to an effective Flood Insurance Rate Map (FIRM), or Flood Boundary and Floodway Map (FBFM), or both. LOMR's are generally based on the implementation of physical measures that affect the hydrologic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective RFEs, or the SFHA. The LOMR officially revises the FIRM or FBFM, and sometimes the FIS report, and when appropriate, includes a description of the modifications. The LOMR is generally accompanied by an annotated copy of the affected portions of the FIRM, FBFM, or FIS report.

Letter of Map Revision Based on Fill (LOMR-F) → is FEMA's modification of the SFHA shown in the FIRM based on the placement of fill outside the existing regulatory floodway. All requests for changes to effective maps, other than those initiated by FEMA, must be made in writing through the CEO of the community or an official designated by the CEO.

Conditional Letter of Map Amendment (CLOMA) → FEMA's comment on a letter from FEMA stating a parcel of land or proposed structure will not be elevated by fill (natural grade) and, upon construction would not be inundated by the base flood if built as proposed

Conditional Letter of Map Revision (CLOMR) → is FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective RFEs or the SFHA. The letter does not revise an effective NFIP map; it indicates whether the project, if built as proposed, would be recognized by FEMA. FEMA charges a fee for processing a CLOMR to recover the costs associated with the review.

Conditional Letter of Map Revision based on Fill (CLOMR-F) → FEMA's comment on a letter from FEMA stating a parcel of land or proposed structure that will be elevated by fill and, upon construction, would not be inundated by the base flood if fill is placed on the parcel as proposed or the structure is built as proposed.

Maintenance → The act or process of restoring to original soundness, including redecorating, refinishing, non-structural repairs, or the replacement of existing fixtures, systems or equipment with equivalent fixtures, systems or structures.

Zone A Floodplain → The base floodplains mapped by approximate methods, i.e., RFEs are not determined. Often called an unnumbered A zone or an approximate A zone.

Zone AE Floodplain → The base floodplain where RFEs are provided.

# Zone A Floodplain Development Scenarios

A property owner proposes to develop in a Zone A Floodplain

Local Zoning Official requests property owner to hire an engineer and submit a Hydrologic & Hydraulic Analysis to establish a Regional Flood Elevation (RFE). This should include floodway/floodfringe delineation.

Once the analysis is completed and submitted, the Local Zoning Official forwards the analysis to the regional Water Management Engineer for the DNR for review and approval.

Scenario 1

Scenario 2

Scenario 3

The analysis shows the property is out of the floodplain (above RFE). Local Zoning Official recommends the property owner obtain a LOMR, permitting proceeds as normal.

The analysis shows the property is in the flood fringe. No additional analysis to review impacts on RFE is needed. Flood fringe standards must be met, and permitting proceeds as normal.

The analysis shows the property is in the floodway. Additional analysis is needed to review impacts on RFE as part of the original submitted analysis.

Additional analysis shows the fill does not increase RFE. Local Zoning Official informs property owner to apply for a LOMR-F to develop on fill in the floodway. LOMR-F is approved by FEMA, permitting proceeds as normal.

Additional analysis shows the fill increases the RFE by less than 1 foot. Local Zoning Official issues the floodplain permit only if the increase is either contained on the applicant's property OR flooding easements are obtained from affected properties. LOMR-F needs to be obtained before floodplain permit is issued.

Additional analysis shows the fill increases the RFE by 1 foot or more. Local Zoning Official denies the floodplain permit until a CLOMR is obtained from FEMA.

# Zone AE Floodplain Development Scenarios

A property owner proposes to develop in a Zone AE Floodplain

Local Zoning Official requests the applicant to show if the proposed project is in the floodway or flood fringe (if the existing study has the delineation). If not the Local Zoning Official requests an analysis to develop a floodway and delineate on a copy of the effective Flood Insurance Rate Map (FIRM)

Once the analysis is completed and submitted, the Local Zoning Official forwards the analysis to the Regional Water Management Engineer for the DNR for review and approval.

Scenario 1

Scenario 2

The analysis shows the property is in the flood fringe. No additional analysis to review impacts on RFE is needed. Flood fringe standards must be met, and permitting proceeds as normal.

The analysis shows the property is in the floodway. Additional analysis is needed to review impacts on RFE as part of the original submitted analysis.

Additional analysis shows the fill does not increase RFE. Local Zoning Official informs property owner to apply for a LOMR-F to develop on fill in the floodway. LOMR-F is approved by FEMA, permitting proceeds as normal.

Additional analysis shows the fill causes an increase (0.00 feet) to the RFE. Local Zoning Official informs the applicant a CLOMR (plus flooding easements) must be obtained From FEMA, or the applicant's consultant redesigns project to cause no rise.

Additional analysis causes decrease in RFE. A CLOMR is not required, however within 6 months of project completion, the local community must apply for a LOMR from FEMA and amend local ordinance.

CLOMR is issued by FEMA. WDNR approval and floodplain permit issued by Local Zoning Official. Within 6 months of the project completion, local community must apply for a LOMR from FEMA

CLOMR denied. No WDNR approval and the floodplain permit denied by local Zoning Official

### **Additional notes for Zone A Development**

1. After the local zoning official requests a hydrologic and hydraulic analysis to determine the RFE and floodway/floodfringe delineation, if the proposed property is in the floodfringe, no additional analysis to review the impacts on the RFE is needed. It is assumed that the floodfringe is already “filled.” However, applicable floodplain regulation still applies to development in the floodfringe.
  - a) Please review your ordinance for these standards.
2. If the property owner is filling in the floodway, for development, they must first obtain a LOMR-F from FEMA. Habitable structures, as well as other uses listed in your floodplain ordinance, are prohibited in the floodway.
  - a) In order to submit for a LOMR-F from FEMA, NR 116.18 must be met, which states: “No area in the floodplain may be removed from the floodplain unless it can be shown that the area has been filled to the flood protection elevation (RFE + 2 feet) and is contiguous to other lands lying outside of the floodplain.”
  - b) Part of the LOMR-F application is having the local zoning official check off a box indicating that NR 116.18 is met. This is how FEMA knows the proposed development is compliant with State and Local standards.
  - c) The LOMR-F removes the property from the floodplain for insurance and regulatory purposes.
3. If the approved hydrologic and hydraulic analysis shows the property was mistakenly mapped in the floodplain, the local zoning official should advise the property owner to submit for a LOMR, which prevents them from having to pay flood insurance.
  - a) A LOMR is free of charge in this instance.
  - b) A local zoning official may grant the floodplain permit without a LOMR but it is strongly advised that the property owner obtain it.

### **Additional notes for Zone AE Development**

1. If the effective map shows the proposed site to be in a Zone AE floodway, the proposed development cannot cause an increase in RFE. If the project does cause an increase of more than 0.00 feet, the applicant must submit to FEMA for a CLOMR.
  - a) If the proposed property is in the flood fringe, no additional analysis to review the impacts on the RFE is needed.
  - b) If the CLOMR is issued by FEMA, the Local Zoning Official may grant the floodplain permit. However, within 6 months of the project completion, the local community must apply for a LOMR from FEMA and amend the local ordinance to include the LOMR
2. If the parcel is located in a Zone AE with an established RFE, and the property owner submits a certified survey to show that the lowest adjacent grade (LAG) of the parcel is above the RFE the parcel is considered to be out of the floodplain.
  - a) However, the community cannot issue any development permits until the property owner has submitted the certified survey to FEMA and a LOMA has been issued.

## Frequently Asked Questions

1. When is a hydrologic and hydraulic analysis required?
  - a. If the property is in a Zone A floodplain, with no data or RFE established, the local zoning official must request an analysis be completed and submitted for review and approval by the community's engineer and the DNR. Because there is no RFE established, there is essentially no data to compare to a certified survey or an elevation certificate, and therefore an analysis is needed.
  - b. If the property is in a Zone AE floodplain, with a RFE and floodway established, the local zoning official should request an analysis to determine if the proposed development or project impacts the floodway of the effective FIRM. In Wisconsin, the project or disturbance cannot increase the RFE.
  
2. Are there ever any circumstances when a hydrologic and hydraulic analysis is not required?
  - a. There may be such instances, where it is obvious a minor project will not impact the RFE and/or adjacent properties. Administrative code-compliant engineering studies are not required for projects which meet all of the following criteria:
    - i. The project will not significantly affect flood flows, flood elevations or floodplain boundaries
    - ii. Insurable structures will not be affected
    - iii. Project is located in an undeveloped area (per NR 116 definition) and
    - iv. The Department review concludes that only the applicant's property would be affected by the proposal.
  - b. Typically, an analysis should be done if there is any uncertainty. Hydrology and hydraulics can be unpredictable, and what may seem rather obvious could cause a significant impact. Should a property owner and/or a consultant disagree on the requirement for an analysis, contact your regional water management engineer for assistance.
  
3. Who requests a hydrologic and hydraulic analysis?
  - a. This is the responsibility of the local zoning official, since the permitting is completed under the local ordinance. The regional water management engineer for the Department may be asked for assistance, but it is ultimately up to the local zoning official to decide if an analysis should be submitted for review.
  
4. When is a LOMA required?
  - a. Property owners typically inquire about LOMAs in order to either avoid a mandatory flood insurance purchase requirement or to avoid meeting the development standards required by the local ordinance.
  - b. If the property is located in a Zone AE floodplain, and the property owner submits a certified survey demonstrating their parcel was mapped in the floodplain incorrectly, a LOMA would be required before any permits can be issued.
  - c. If the property is located in a Zone A floodplain, an analysis was completed and approved to establish a RFE, and the parcel is shown out of the floodplain, a LOMA is not required

but highly recommended since it prevents that property owner from having to purchase flood insurance. Permitting can commence without a LOMA in this circumstance.

- d. It is important to note that LOMA RFEs established by FEMA in a Zone A are for insurance purposes only and cannot be used for permitting.
  - e. A LOMA issued by FEMA for an unstudied Zone A does not revise the floodplain map, therefore cannot automatically be used for issuing a permit.
5. When is a LOMR-F required?
- a. Property owners typically inquire about LOMR-Fs in order to either avoid a mandatory flood insurance purchase requirement or to avoid meeting the development standards required by the local ordinance.
  - b. Habitable structures as well as other uses listed in your local floodplain ordinance are prohibited in the floodway. If the property owner demonstrates that the proposed floodway fill (Zone A or Zone AE), does not impact the RFE and meets the requirements of NR 116.18, (fill required to be placed at the flood protection elevation [BFE + 2 feet] and contiguous dry land access provided), then a LOMR-F must be obtained before any sort of development and permitting is started.
  - c. A LOMR-F removes the property from the floodplain for flood insurance and regulatory purposes. It ultimately changes the Flood Insurance Rate Maps to show the property is out of the floodplain.
  - d. Part of obtaining the LOMR-F is having the local zoning official check a box on the application which indicates local and state standards are met. This is how FEMA knows that the proposed project is compliant with local and state standards.
  - e. Once the LOMR-F is obtained, permitting can commence, provided all other floodplain regulation is met.
6. When is CLOMR required?
- a. If the proposed development or project is located in a Zone A floodplain, and the required analysis demonstrates it causes an increase to the RFE of 1 foot or more, then the local zoning official should deny the floodplain permit until a CLOMR is obtained from FEMA.
  - b. If the proposed development or project is located in a Zone AE floodplain, and it causes any increase (0.00 feet), OR a decrease in the mapped floodway by more than 20 feet, the applicant must submit to FEMA for a CLOMR. In this scenario, the applicant has two options:
    - i. Redesign the project to cause no increase; OR
    - ii. Get flooding easements for the increase, and apply for the CLOMR meeting these 4 criteria under 44 CFR 65.12:
      1. Alternatives analysis
      2. Concurrence with communities
      3. Notification of property owners
      4. No insurable structures impacted
  - c. Once a CLOMR is issued by FEMA, the local zoning official may commence with the floodplain permitting. However, within 6 months of the project completion, the local



community must apply for a LOMR from FEMA, verifying the project was completed as planned and amend the local ordinance to include the LOMR.

- d. A CLOMR is not required when a project causes a decrease (0.00) in flood flows. However, within 6 months of the project completion, the local community must apply for a LOMR from FEMA and amend the local ordinance to include the LOMR.
7. What do I do once FEMA sends a copy of the approved LOMC?
    - a. Once a LOMC is approved by FEMA, they will send the local zoning official a copy of the approved LOMC. LOMAs and LOMR-Fs do not need to be adopted into your local floodplain ordinance, however a LOMR does. This will require the class II hearing notice process. Once the LOMR is adopted, a copy of the amended floodplain ordinance must be submitted to the Department for review and approval. The Department will then forward the ordinance to FEMA for final approval.
  8. A property owner is located in the floodplain, and is proposing to complete structural repairs and maintenance on their structure. What is allowed for a nonconforming structure?
    - a. If the property is a nonconforming structure located in the floodplain, no modification or addition to any nonconforming structure may equal or exceed 50% of the Equalized Assessed Value (EAV) of their structure unless the entire structure is permanently changed to be conforming.
      - i. Various maintenance items are exempt from the 50% provision of your floodplain ordinance. (refer to question 9 for more detail)
      - ii. Alterations or modifications are not exempt from the 50% provision of your floodplain ordinance. (refer to question 9 for more detail)
      - iii. The property owner must submit a set of detailed plans with cost estimate including labor and materials which is then compared to the EAV of their structure to show that the work to be completed is within the 50% provision.
  9. What constitutes maintenance versus an alteration/modification?
    - a. When deciding on maintenance versus an alteration/modification, remember that the floodplain program is essentially an insurance program under the National Flood Insurance Program (NFIP). If the proposed work is generally a one to one replacement or in other words, a replacement in kind, then this would not count towards the 50% provision, and be considered a maintenance item. If the proposed project is an alteration/modification which if damaged would cost significantly more to replace than what was originally there, it is fair to assume that particular proposal should be considered a substantial improvement and count towards the 50% provision (see definitions). The following are a few examples to help demonstrate this:
      - i. Running a new gas line to the house and set new meter**
        1. If the structure currently uses gas and the replacement is being done to correct faults in the current system, then the new line and meter would be considered maintenance. If the existing system is not gas then the new system would be an improvement and subject to the 50% limit.

**ii. Install new HVAC unit and duct work**

1. If the current HVAC unit is being replaced by a unit with the same cooling capacity (same or similar BTUs) and there is no new duct work being run, then it would be considered maintenance. If the new unit is a substantial upgrade and new duct work is being installed then it would be an improvement and subject to the 50% limit.

**iii. Replace tub/shower unit and hot water heater**

1. If the capacity of the replacement water heater is of greater capacity and substantially upgraded, such as electric to gas, then it would be subject to the 50% limit. If it were of the same capacity then it would be considered maintenance. If the shower/tub were substantially upgraded, let's say from a single unit to a brand new tiled wall unit, then it would count towards the 50% limit. Otherwise if it is a 1 to 1 replacement, it would be maintenance.

**iv. Insulate the cabin where it is not currently insulated**

1. This is an improvement and subject to the 50% limit

**v. Update electrical wiring (if needed) and install new lights and security system**

1. Updating the electrical wiring would not be an alteration if the wiring is being replaced to correct an existing violation of state or local safety codes [44 CFR 59.1 Substantial improvements (1)]. If they are updating it to meet the new load capacity of the new mechanicals then it should generally be considered an alteration.

**vi. Possible new floor coverings**

1. Replacing carpet is considered maintenance. Replacing carpeting with wood flooring is an improvement and subject to the 50% limit.

**vii. Three new windows**

1. Replacing 3 new windows would be maintenance. The replacement windows would need to be the same size and the amount of sash work would need to be limited. If the replacement windows are substantially upgraded, like a double hung to a bay window, then it would be an improvement and counts towards the 50% limit. The replacement of all the windows in the structure would be considered an alteration.

**viii. New exterior siding**

1. If it's a 1 to 1 replacement, maintenance. If the exterior is aluminum siding and being replaced by cedar shakes for example, then it may be an improvement and subject to the 50% limit.

**10. Does the cost to flood-proof a structure count towards the 50% provision?**

- a. No, the cost to elevate a structure does not count towards the 50% provision if elevated to the flood protection elevation. This should be located in your local floodplain ordinance.

**11. Can a property owner flood-proof their structure using piers/pilings?**

- a. If it's a voluntary elevation, then yes, the property owner can use piers/pilings to elevate their structure. They must be designed by a professional engineer to demonstrate they can withstand flood flows. Refer to the flood proofing section of your ordinance.
- b. One thing to keep in mind is that once modifications and additions are proposed to a structure that is elevated on piers/pilings, some ordinances under the nonconforming section may not allow any sort of modification or addition unless the structure is on fill.

This is why it is important to always refer to your ordinance as it may be more restrictive than state standards.

- c. Flood proofing on piers/pilings does not remove the structure from the floodplain for regulatory purposes. Therefore it is still subject to any additional regulation under your local floodplain ordinance.

12. How are Dam Failure Analyses adopted into local floodplain ordinances?

- a. Dam Failure Analyses (DFA) are required for all large dams in Wisconsin. Once a DFA is approved by the Department, the regional water management engineer will send a 6 month adoption letter to the local zoning official. This letter will provide all applicable information needed to adopt the hydraulic shadow of the approved DFA into the local floodplain ordinance. In most cases, the hydraulic shadow needs to be regulated as floodway.
- b. If your floodplain ordinance does not have a floodplain appendix, then the local zoning official must adhere to the formal adoption process which requires a class II hearing notice. Once the DFA is adopted and the local floodplain ordinance is amended, a copy of the amended ordinance must be submitted to the Department for review and approval.