

DEPARTMENT OF PUBLIC WORKS

People serving people.

Raul Rojas
DIRECTOR

Notice of Possible Grant Funding for Elevating Homes for Flood Protection

September 15, 2017

Dear Property Owner,

If your property has been identified by the Federal Emergency Management Agency (FEMA) as being in an area potentially vulnerable to flooding you might benefit from elevating your structure so that the lowest floor is above flood levels. This is a common way to avoid flood damage.

There is a FEMA grant program targeted to help homeowners elevate their homes above the 1% annual exceedance flood (the so-called "100-year") water surface elevation. The County of Marin, on behalf of Marin County property owners in specific targeted areas, submitted a Notice of Interest to apply for FEMA grants for elevating structures (homes) under this program and we were notified that the County may receive up to \$3 million in funding for this program. The next phase is to submit site specific grant applications with detailed information on the structures proposed to be elevated, costs, and location relative to floodplains. If the County is awarded grants, the program will provide funding to cover up to 75% of elevation costs to eligible homeowners in flood hazard areas.

If you are interested in participating in this grant program, to be eligible you must meet three criteria: your home must be in a FEMA-designated Special Flood Hazard Area, the total cost to elevate your structure must be less than \$168,000, and you must be able to pay 25% of the structure raising costs. However, meeting the minimum eligibility requirements does not guarantee you will receive a grant. The final grant award decision is made by FEMA based on overall benefits of your project relative to those of other applicants. **No commitment needs to be made in order to apply, but you do need to express written interest.**

We've attached a "Marin County Structure Elevation Program Frequently Asked Questions" sheet to help you understand the program and requirements, as well as the process the County will undertake to obtain grant funds and provide them to eligible property owners. We've also included excerpts from FEMA's Hazard Mitigation Assistance guidance document. Please read this attached information very carefully before applying because the FEMA funding does come with restrictions; such as the requirement that the **property contain a deed restriction requiring flood insurance.**

Please take a moment to review these items. **If you would then like to participate in this program please fill out the attached "Elevation Worksheet" and return to the County.** We must receive your completed worksheet no later than **October 16, 2017** so we are able to prepare the FEMA application on your behalf prior to the application deadline of November 1, 2017. If you have any questions about the

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San Rafael, CA 94913-4186
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Accounting

Airport

Building Maintenance

Capital Projects

Certified Unified Program
Agency (CUPA)

Communications
Maintenance

County Garage

Disability Access

Engineering & Survey

Flood Control &
Water Resources

Land Development

Purchasing

Real Estate

Reprographic Services

Road Maintenance

Stormwater Program

Transportation &
Traffic Operations

Waste Management

elevation grant program please email Jon Liang at jliang@marincounty.org or call 415-473-6215. Please email or regular mail your completed worksheet to Mr. Liang at the address in the worksheet below.

Sincerely,

Tony Williams,
Principal Civil Engineer
Marin County Flood Control & Water Conservation District

Elevation Worksheet - Due October 16, 2017

Please return this form filled out to:
Jon Liang, County of Marin
3501 Civic Center Dr., Rm 304
San Rafael, CA 94903
Or
Fax: 415-473-3799
Email: jliang@marincounty.org

Structure Function:

- ☐ Residential - Primary
☐ Residential - Long-term Rental

Structure Address:

Quantity of Structures to Elevate: _____

Year Structure Constructed: _____

Current Elevation of lowest finished floor: _____ feet Circle Reference Datum: NAVD88 or NGVD29

Type of Construction:

- ☐ Wood Frame ☐ Mobile Home
☐ Masonry ☐ Other, please specify: _____

Type of Foundation:

- ☐ Perimeter Bearing Wall, specify: ☐ Slab-on-grade
 ○ With Crawlspace ☐ Open Foundation with Piers/piles
 ○ With Basement ☐ Other, please specify: _____

If structure has been flooded, enter last 3 times it occurred (by year):

Please attach **3 current photographs** of the full structure at eye level and indicate date here: _____

If structure has been damaged by flood, please also include photos from prior to and after damage if available.

Years of other photos and whether they depict damage or not: _____

Property Owner name(s) and mailing address
(if different from structure location):

Email address: _____

Phone number: (____) _____ - _____

Estimated cost to design and construct your structure
elevation (please attach estimates or quotes*):

Signature of property owner(s) affirming interest in applying for FEMA funding to elevate structure and intent to design the structure elevation in compliance with NFIP standards in 44 CFR Part 60 (required):

Sign: _____ Date: _____

Sign: _____ Date: _____

*Obtain a cost estimate from licensed consultant(s)/contractor(s) with experience in home elevation and inform them that the construction contract, following grant award and approval by FEMA, will be competitively bid by the County to avoid conflicts of interest and to comply with 2 CFR Sections 200.318 through 200.326.

Marin County Structure Elevation Program Frequently Asked Questions

What is the purpose of the Marin County Structure Elevation Program?

The purpose of the program is to provide federal assistance to homeowners with cost-effective projects to raise their homes above floodwaters, thereby preventing future damage.

Whom do I contact if I am interested in this program?

Please contact the Jon Liang at jliang@marincounty.org at the County of Marin, as he will be preparing applications on your behalf. Please put "Home Elevation" in the subject line and provide the address of the structure you are potentially interested in elevating. He will contact you later with additional information for you and to seek verification of interest ownership, residency, property type, and availability of matching funds.

How do I find out if I am eligible for the Elevation Program?

All single-family homes within FEMA Special Flood Hazard Areas which would cost less than \$168,000 to elevate are eligible (this needs to include construction, design, surveying, permitting, and relocation costs). Cost estimating, not including grant administration costs, is the responsibility of the homeowner, but if the grant is awarded, the service costs to prepare your estimate may be reimbursable by FEMA up to 75%. Please consult with a licensed and experienced contractor and/or consultant to discuss and develop costs for raising your home and inform them that the construction contract, following grant award and approval by FEMA, will be competitively bid by the County to avoid conflicts of interest and to comply with 2 CFR Sections 200.318 through 200.326.

How likely am I to receive funding?

At this time up to \$3 million is available through the FEMA Hazard Mitigation Grant Program (HMGP) for use Marin-countywide. Properties will be sorted according to the estimated flood elevation relative to the current finished floor elevation and the cost to raise the home (i.e. the homes with the best benefit-cost ratio), including administrative costs. Administrative costs will be higher in incorporated cities and towns due to FEMA-required additional inter-agency coordination and staffing. A waiting list will be maintained in case any of the top ranked properties drop out of the grant program later in the process, or if other funding opportunities arise.

Will FEMA pay for the cost of elevating my house?

In most cases, the HMGP funds that are available through this program will pay for 75% of your FEMA eligible expenses. You as the property owner will likely be responsible for the 25% owner match. Eligible expenses include all permanent improvements necessary to elevate the property and meet applicable codes and ordinances (such as seismic retrofitting of raised structure and utilities connections). If accessibility improvements are medically necessary, those are eligible. Soft costs, such as engineering and permitting, including those incurred before environmental approval by FEMA, are potentially eligible. Temporary relocation costs for owner during construction are also eligible. See pages 77 and 78 of the attached FEMA guidance for a list of eligible and ineligible structure elevation costs.

What expenses are eligible for reimbursement?

Only expenses necessary for elevation of the home are eligible. See pages 77 and 78 of the attached FEMA guidance for a list of eligible and ineligible structure elevation costs.

What kind of receipts do I need to keep for reimbursement?

In order to effectively document that eligible work was both performed and paid for, HMGP requires verification of payment (paid invoices, receipts, cancelled checks documenting work, a bank

statement that reflects the payment of an eligible expense, or contractor statement on company letterhead certifying that an eligible expense was paid for if no other documentation is available).

Is my award taxable?

Consult a tax professional for information on how this award will affect your tax liability.

What costs are ineligible?

Examples of ineligible costs include, but are not limited to elevating masonry chimneys, increasing capacity of HVAC systems, repairs or improvements to utilities that are inadequate or have preexisting damage, improvements to existing inadequate floor systems, construction work begun prior to approval by FEMA, raising the home above the recommended elevation (it's ok to raise to base flood elevation + 1 foot + 2 feet for estimated sea level rise in 30 years if relevant), landscaping, decks/porches not impacted by the elevation. The project is not eligible if construction costs for the structure raising are incurred prior to FEMA environmental review and approval (engineering and permitting costs are eligible). See pages 77 and 78 of the attached FEMA guidance for a list of eligible and ineligible structure elevation costs.

Do I have to vacate the house during the elevation process? If yes, is relocation during this time a reimbursable expense?

If relocation is required then relocation is an eligible reimbursable expense. Relocation cost must be documented reasonable living expenses (except for food and personal transportation) that are incurred during the period that the homeowner is displaced by the elevation construction.

Can I perform any of the work myself under this grant?

Volunteer or "DIY" work is not eligible. You must find a qualified licensed contractor to perform work being funded under this grant.

When do I have to make a decision about whether to participate in this program?

Information about your home will need to be submitted to FEMA by November 1, 2017 in order to be considered for funding. Although you do not need to make a commitment at this time, you do need to sign a form or letter (to be provided by County) affirming your interest in applying. You can drop out of the program any time

How much does it cost to raise my house above the flood level?

There are too many variables to estimate project costs without engineered plans. The condition of your home, the height of your home relative to flood levels, and structure/foundation types are examples of variables affecting cost. Please consult with a qualified contractor and/or consultant to discuss and develop costs for your home.

What is the maximum award per household and when is the HMGP awarded?

HMGP is a reimbursement program. Receipts need to be submitted for 100% project cost even though FEMA generally only provides reimbursement for 75%. Maximum eligible total project costs are \$175,000 including construction, temporary relocation, design, permitting, administrative costs by County staff, and any other eligible costs; this corresponds to a potential maximum reimbursement to homeowner and County per project of \$131,250.

Do I have to repay the grant money?

The HMGP funds are a grant, not a loan, and therefore are not required to be repaid. There will be a requirement to record a Deed Restriction against your property (see page 49, section E.7.1 for details).

Do I have to invest money before I am approved for a grant?

Yes, there may be engineering and/or surveying costs that you will be responsible for up front in order to provide the information FEMA needs to evaluate your project. These may be partially reimbursable if the grant is awarded.

Example Homeowner Investment Timeline¹

	Grant Phase		
	Pre-Award	Environmental Review	Award & Construction
Rough Time Frame	April 1, 2017 (date disaster declared) to November 1, 2017 (date application is due).	FEMA environmental review occurs after preliminary grant award and could take several months.	Occurs only after environmental review by FEMA is complete, potentially in a year or two.
Example Types of Service Costs² Potentially Incurred by Homeowner³	Preliminary design and cost estimating from licensed, experienced engineer or contractor. Possibly surveying.	More detailed design, revised cost estimates, deed amendments as requested by FEMA.	Building and environmental permits, CEQA, final construction plans, temporary housing (if needed), surveying and construction inspection.

1. Subject to change by FEMA and varies by individual.

2. If grant is awarded, all eligible costs may be reimbursed by FEMA at a rate of 75%. Invoices and/or receipts for the full cost must be provided to the County so your costs can be documented to FEMA in requests for reimbursement.

3. Total costs must not exceed \$175,000 including County bidding of construction contract (for signature by homeowner) and grant administration costs (typically 10% of total project costs).

How long does it take to lift my house?

The actual construction time may require you to be out of your home for 90 days. The process from application to construction could last months to years, depending on the complexity of environmental review and other factors at the federal level.

Why am I required to provide personal financial information?

Federal funds are being used to provide assistance; financial information is required for reporting and continued funding determinations. This information is secure and confidential. By providing this information you can be helping yourself and your neighbors bring additional funding to the community.

Will I no longer have to pay for flood insurance?

If your home is currently in a FEMA Special Flood Hazard Area (SFHA or 100-year floodplain) you are required to have existing flood insurance sufficient to cover the value of improvements. Owners of structures that will be elevated must execute a deed restriction prior to the start of construction that stipulates the requirement for flood insurance for as long as the building remains in the SFHA. Please discuss Letters of Map Change with the Land Development division counter engineer (415-473-3755) if you live in an unincorporated area and then discuss with your insurance provider if you can reduce your flood insurance premium. If you live in a city or town discuss with your local floodplain administrator and insurance provider.

What is a deed restriction and why must I have one regarding flood insurance?

As a condition of reimbursement, the structure must be covered by flood insurance for the life of the structure. A deed restriction requiring flood insurance must be maintained for any structure that has received HMGP funding. This reduces the risk to the Federal Government from future flood losses on a property where the Federal Government has provided mitigation funding. If you accept an award under this program, pursuant to federal law, you must maintain flood insurance on the home and a deed restriction indicating this as a requirement for future homeowners for the life of the structure. Please see pages 49 and 50, section E.7.1 of the attached FEMA guidance for the exact wording required for your deed.

How far above flood elevation do I need to raise my home?

People who live in FEMA Special Flood Hazard Areas have specified Base Flood Elevations (BFE) for the 100-year flood, or the flood that has a 1% chance of occurring in any given year. Current County Code stipulates that homes in the unincorporated areas be raised at least 1 foot above the BFE. If you live in the vicinity of the coastal or bay shoreline and may be subject to current or future tidal influence, it is recommended to raise your home at least another 2 feet above that to account for possible sea level rise over the next 30 years. If you live in an incorporated city or town, please contact your local floodplain administrator to determine how much you would raise your home.

You must elevate to the strictest elevation standard of the Federal, State and Local Government. If new Preliminary BFEs have been released for your community, you would need to raise your home your locally applicable height above the Preliminary BFE. If a community added an additional elevation requirement, then you must elevate to the local government standard. You should check with your local Flood Plain Administrator for details. In unincorporated areas you may contact the Land Development division counter engineer (415-473-3755).

Does the home have to be my primary residence?

No, but properties that are rented to tenants must be on a year-round basis (i.e. not vacation home rental). Tenants must be provided with temporary housing during construction and allowed to return to the property after construction. The owner shall not discriminate in the rental of any units on the basis of race, color, national origin, religion, sex, familial status or handicap.

Do I have to live in an unincorporated area?

If you live in an incorporated city or town you may be eligible for this program if your local municipality is a partner in this project. Partners as of April 8, 2016 include: Novato, Mill Valley, Larkspur, San Anselmo, Ross, and Fairfax as they are part of Marin County Flood Control & Water Conservation District Flood Zones that are contributing to funding the application process.

I am thinking about selling my home, can I apply for a HMGP Elevation Grant?

Yes, if you still own your home you can apply for the HMGP Elevation Grant, BUT you cannot sell or transfer title until the elevation is complete or you will be disqualified from the program. The HMGP Elevation Grant makes allowances for changes in home ownership due to deaths, incapacity, or divorce.

What happens if my application data is incomplete?

The application will be reviewed for eligibility and completeness. Applications that do not satisfy the eligibility and completeness requirement will not be approved nor funded.

Am I responsible for finding a qualified builder and is there a list of approved contractors available to consider for my project?

Although homeowners are responsible for obtaining designs and cost estimates, and will ultimately sign the contract with the construction contractor, the County will advertise the project for competitive bid in order to prevent conflict of interest and comply with 2 CFR Sections 200.318 through 200.326,

as required under this grant program (see page 31, section D.3 of the attached FEMA guidance). The County of Marin is not affiliated with any contractor or contracting firm, nor does it endorse or recommend any contractor or contracting firm.

What types of permits and insurance do I need to elevate my home?

Required permits and insurance are determined by local codes and ordinances. Applicants are encouraged to consult their local building code official. Associated costs are eligible for 75% reimbursement.

Excerpts from FEMA Guidance Document

For additional information about the eligibility of PNPs for **HMGP**, see Part VIII, A.6.

Table 1: Eligible Subapplicants

Entity	HMGP	PDM	FMA
State agencies	✓	✓	✓
Federally-recognized tribes	✓	✓	✓
Local governments/communities ⁽¹⁾	✓	✓	✓
Private nonprofit organizations (PNPs)	✓		

⁽¹⁾ Local governments/community may include non-federally recognized tribes, or consistent with definition of local government at 44 CFR 201.2, may include any Indian tribe or authorized tribal organization, or Alaska Native village or organization that is not federally recognized per 25 U.S.C. 479a et seq.

C. Cost Sharing

Under the HMA programs, the total cost to implement approved mitigation activities is generally funded by a combination of Federal and non-Federal sources. Both the Federal and the non-Federal cost shares must be for eligible costs used in direct support of the approved activities under this guidance and the award. Contributions of cash, third-party in-kind services, materials, or any combination thereof, may be accepted as part of the non-Federal cost share.

FEMA administers cost-sharing requirements consistent with 2 CFR Sections 200.29, 200.306, and 200.434. To meet cost-sharing requirements, the non-Federal contributions must be verifiable from the subrecipient's records, reasonable, allowable, allocable, and necessary under the grant program and must comply with all Federal requirements and regulations.

In general, HMA funds may be used to pay up to 75 percent of the eligible activity costs. The remaining 25 percent of eligible activity costs are derived from non-Federal sources. Exceptions to the 75 percent Federal and 25 percent non-Federal share (see **Table 2**) are as follows:

- ◆ **PDM** – Small impoverished communities may be eligible for up to a 90 percent Federal cost share. For information about small impoverished communities, see Part VIII, B.2.
- ◆ **FMA**
 - FEMA may contribute up to 100 percent Federal cost share for severe repetitive loss properties.
 - For acquisition or relocation activities for severe repetitive loss properties that are not determined to be cost effective using FEMA-approved cost-effectiveness options (e.g., BCA version 5.0 or higher, pre-calculated benefits), property owners may alternatively receive the calculated expected savings to the NFIF as provided by the GSTF value. For more information on this provision, see Part VIII, C.3.
 - FEMA may contribute up to 90 percent Federal cost share for repetitive loss properties.

- FEMA may contribute up to 75 percent Federal cost share for properties that are NFIP-insured but do not meet the repetitive loss or severe repetitive loss definitions.

- ◆ **Insular areas, including American Samoa, Guam, the Northern Mariana Islands, Puerto Rico, and the U.S. Virgin Islands** – FEMA automatically waives the non-Federal cost share when the non-Federal cost share for the entire grant is under \$200,000 and not an individual subaward. If the non-Federal cost share for the entire grant is \$200,000 or greater, FEMA may waive all or part of the cost share; such a waiver is usually consistent with that provided for PA under the Presidential major disaster declaration. If FEMA does not waive the cost share, the insular area must pay the entire cost-share amount, not only the amount over \$200,000.

Cost-share requirements also extend to management costs with the following exceptions:

- ◆ For **HMGP**, available **HMGP** management costs are calculated as a percentage of the Federal funds provided. There is no additional cost-share requirement for management costs.
- ◆ Under **PDM**, only tribal Recipients and subrecipients meeting the definition of small and impoverished are eligible for a non-Federal cost share of 10 percent for management costs.

See Part VIII, A.8 for further information about **HMGP** cost-share requirements and Part IV, E.4 for further information on funding restrictions for management costs.

Table 2: Cost-Share Requirements

Programs	Mitigation Activity (Percent of Federal/Non-Federal Share)	Recipient Management Costs (Percent of Federal/Non-Federal Share)	Subrecipient Management Costs (Percent of Federal/Non-Federal Share)
HMGP	75/25	100/0	—/(¹)
PDM	75/25	75/25	75/25
PDM – subrecipient is small and impoverished community	90/10	75/25	90/10
PDM – Tribal Recipient/subrecipient is small and impoverished	90/10	90/10	90/10
FMA – insured properties and planning grants	75/25	75/25	75/25
FMA – repetitive loss property ⁽²⁾	90/10	90/10	90/10
FMA – severe repetitive loss property ⁽²⁾	100/0	100/0	100/0

(1) Subapplicants should consult their State Hazard Mitigation Officer (SHMO) for the amount or percentage of **HMGP** subrecipient management cost funding their State has determined to be passed through to subrecipients.

(2) To be eligible for an increased Federal cost share, a FEMA-approved State or Tribal (Standard or Enhanced) Mitigation Plan that addresses repetitive loss properties must be in effect at the time of award, and the property that is being submitted for consideration must be a repetitive loss property.

D.3 Procurement

For conflict of interest requirements for procurement under awards, all Applicants, sub-applicants, and non-Federal entities must follow the requirements under the procurement regulations at 2 CFR Sections 200.317 through 200.326. When procuring property and services under a Federal award, a State Recipient or subrecipient must follow the same policies and procedures it uses for procurements from its non-Federal funds and the requirements outlined in 2 CFR Section 200.317. All other Recipients and subrecipients (not a State) must follow 2 CFR Sections 200.318 through 200.326. For more information on the procurement process, see HMA Job Aid (*HMA Procurement Standards*).

D.4 Duplication of Programs

FEMA will not provide assistance for activities for which it determines the more specific authority lies with another Federal agency or program. Other programs and authorities should be examined before applying for HMA funding. HMA funds are not intended to be used as a substitute for other available program authorities. Available program authorities include other FEMA programs (e.g., IA, PA) and programs under other Federal agencies, such as the U.S. Environmental Protection Agency, U.S. Army Corps of Engineers, and the Natural Resources Conservation Service. FEMA may disallow or recoup amounts that duplicate other authorities.

For additional information about DOP for wildfire mitigation projects, see Addendum, Part B.2.4. For additional information about DOP under flood risk reduction measures, see Addendum, Part F.2.

D.5 Duplication of Benefits

HMA funds cannot duplicate funds received by or available to Applicants or subapplicants from other sources for the same purpose. Examples of other sources include insurance claims, other assistance programs (including previous project or planning grants and subawards from HMA programs), legal awards, or other benefits associated with properties or damage that are subject of litigation.

Because the availability of other sources of mitigation grant or loan assistance is subject to available information and the means of each individual Applicant, HMA does not require that property owners seek assistance from other sources (with the exception of insurance). However, it is the responsibility of the property owner to report other benefits received, any applications

DUPLICATION OF BENEFITS

DOB is used to describe assistance that is from more than one source and that is used for the same purpose or activity. The purpose may apply to the entire project or only part of it.

DOB may apply when assistance for the same purpose:

- Has been received
- Will be received
- Is reasonably available from another source, such as insurance or legal settlements due to the property owners

E.1.1 Mitigation Projects

This section briefly describes the mitigation projects eligible under one or more of the three HMA programs. **Table 3** summarizes the eligibility of the following project types for each program:

- ◆ **Property Acquisition and Structure Demolition:** The voluntary acquisition of an existing flood-prone structure and, typically, the underlying land, and conversion of the land to open space through the demolition of the structure. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions. For property acquisition and structure demolition projects, see Addendum, Part A.
- ◆ **Property Acquisition and Structure Relocation:** The voluntary physical relocation of an existing structure to an area outside of a hazard-prone area, such as the Special Flood Hazard Area (SFHA) or a regulatory erosion zone and, typically, the acquisition of the underlying land. Relocation must conform to all applicable State and local regulations. The property must be deed-restricted in perpetuity to open space uses to restore and/or conserve the natural floodplain functions. For property acquisition and structure relocation projects, see Addendum, Part A.
- ◆ **Structure Elevation:** Physically raising and/or retrofitting an existing structure in accordance with ASCE 24-14 (Base Flood Elevation [BFE] plus freeboard) or higher when required by FEMA or local ordinance. Elevation may be achieved through a variety of methods, including elevating on continuous foundation walls; elevating on open foundations, such as piles, piers, posts, or columns; and elevating on fill. Foundations must be designed to properly address all loads and be appropriately connected to the floor structure above, and utilities must be properly elevated as well. FEMA requires Recipients and subrecipients to design all structure elevation projects in accordance with ASCE 24-14. For additional information about structure elevation projects, see Addendum, Part E.
- ◆ **Mitigation Reconstruction:** The construction of an improved, elevated building on the same site where an existing building and/or foundation has been partially or completely demolished or destroyed. Mitigation reconstruction is only permitted for structures outside of the regulatory floodway or Coastal High Hazard Area (Zone V) as identified by the existing best available flood hazard data. Activities that result in the construction of new living space at or above the BFE will only be considered when consistent with mitigation reconstruction requirements. FEMA requires Recipients and subrecipients to design all mitigation reconstruction projects in accordance with ASCE 24-14. For additional information about structure elevation projects, see Addendum, Part D.
- ◆ **Dry Floodproofing:** Techniques applied to keep structures dry by sealing the structure to keep floodwaters out. For all dry floodproofing activities, FEMA requires Recipients and subrecipients to design all dry floodproofing projects in accordance with ASCE 24-14. Dry floodproofing is not permitted in the Coastal V Zone.

E.7 National Flood Insurance Program Eligibility Requirements

HMA eligibility is related to the NFIP as follows:

- ◆ **Subapplicant Eligibility:** All subapplicants for FMA must be participating in the NFIP, and not be withdrawn or suspended, to be eligible to apply for grant funds. Certain political subdivisions (i.e., regional flood control districts or county governments) may apply and act as subrecipients if they are part of a community that is participating in the NFIP where the political subdivision provides zoning and building code enforcement or planning and community development professional services for that community.
- ◆ **Project Eligibility:** HMGP and PDM mitigation project subapplications for projects sited within an SFHA are eligible only if the jurisdiction in which the project is located is participating in the NFIP. There is no NFIP participation requirement for HMGP and PDM project subapplications for projects located outside of the SFHA.
- ◆ **Mitigation Planning Eligibility:** There are no NFIP participation requirements for HMGP and PDM hazard mitigation planning subapplications. However, under FMA, the subapplicant must be participating in the NFIP to be eligible for planning funding.
- ◆ **Property Eligibility:** Properties included in a project subapplication for FMA funding must be NFIP insured at the time of the application submittal. Flood insurance must be maintained for the life of the structure.

E.7.1 Special Flood Hazard Area Requirements

For structures that remain in the SFHA after the implementation of the mitigation project, flood insurance must be maintained for the life of the structure to an amount at least equal to the project cost or to the maximum limit of coverage made available with respect to the particular property, whichever is less. The maximum limit of coverage made available is defined as the replacement cost value of the structure up to \$250,000 for residential and \$500,000 for non-residential. Insurance coverage on the property must be maintained during the life of the property regardless of transfer of ownership of such property.

The subrecipient (or property owner) must legally record, with the county or appropriate jurisdiction's land records, a notice that includes the name of the current property owner (including book/page reference to record of current title, if readily available), a legal description of the property, and the following notice of flood insurance requirements:

This property has received Federal hazard mitigation assistance. Federal law requires that flood insurance coverage on this property must be maintained during the life of the property regardless of transfer of ownership of such property. Pursuant to 42 U.S.C. 5154a, notwithstanding any other provision of law, no Federal disaster relief assistance made available in a flood disaster area may be used to make a payment (including any loan assistance payment) to a person for

repair, replacement, or restoration for damage to any personal, residential, or commercial property if that person at any time has received flood disaster assistance that was conditional on the person first having obtained flood insurance under applicable Federal law and subsequently having failed to obtain and maintain flood insurance as required under applicable Federal law on such property. The property owner is also required to maintain this property in accordance with the floodplain management criteria of 44 CFR Section 60.3 and any city/county ordinance.

Applicants/subapplicants receiving assistance for projects sited in an SFHA must ensure that these requirements are met by requesting that the participating property owner(s) sign an *Acknowledgement of Conditions for Mitigation of Property in an SFHA with FEMA Grant Funds* form and providing the form to FEMA prior to award or final approval. This form is available on the FEMA website at <http://www.fema.gov/library/viewRecord.do?id=3592> or can be provided by the appropriate FEMA Regional Office (for Regional Office information, see Part VII). Properties that do not meet these requirements will not be eligible to receive assistance under the HMA programs.

If an approved HMA project affects the accuracy of an applicable Flood Insurance Rate Map (FIRM) or requires a map amendment to meet a locally adopted floodplain management ordinance, the subrecipient is responsible for ensuring that the appropriate map amendments or revisions are made. Costs associated with these map amendments are to be identified in the cost estimate section of a subaward application and may be eligible costs under the HMA programs.

E.8 Statutory, Regulatory, and Other Requirements

Mitigation activities must adhere to all relevant statutes, regulations, and requirements, including (this list is not all inclusive, See Part IX, Appendix D for full citations):

- ◆ Sections 203 (PDM) and 404 (HMGP) of the Stafford Act
- ◆ Section 1366 (FMA) of the NFIA
- ◆ Section 322 of the Stafford Act (Mitigation Planning)
- ◆ Section 324 of the Stafford Act (Management Costs)
- ◆ NHPA (36 CFR Part 800)

FEDERAL LAWS PROHIBITING DISCRIMINATION IN EMERGENCY PROGRAMS ON THE BASIS OF DISABILITY

- Rehabilitation Act of 1973
- Americans with Disabilities Act of 1990
- Stafford Act of 1988
- Post-Katrina Emergency Management Reform Act of 2006
- Fair Housing Act Amendments of 1988
- Architectural Barriers Act of 1968
- Individuals with Disabilities Education Act (IDEA) of 1975
- Telecommunications Act of 1996
- Twenty-First Century Communications and Video Accessibility Act of 2010

Description	Web Link or Contact Information
9. Mitigation Reconstruction References	
<ul style="list-style-type: none"> • ASCE/SEI 24-14, <i>Flood Resistant Design and Construction</i>, 2014 • ASCE/SEI 7-10, <i>Minimum Design Loads for Buildings and Other Structures</i>, 2010 • International Building Code (IBC), 2015 edition • International Code Council, <i>Reducing Flood Losses Through the International Codes</i>, 4th Edition, 2014 • FEMA P-55, <i>Coastal Construction Manual</i>, 4th Edition, August 2011 • FEMA P-424, <i>Design Guide for Improving School Safety in Earthquakes, Floods and High Winds</i>, December 2010 • FEMA 489, <i>Mitigation Assessment Team Report: Hurricane Ivan in Alabama and Florida</i>, August 2005 • FEMA P-499, <i>Home Builder's Guide to Coastal Construction Technical Fact Sheet Series</i>, December 2010 • FEMA 543, <i>Design Guide for Improving Critical Facility Safety from Flooding and High Winds</i>, January 2007 • FEMA 549, <i>Mitigation Assessment Team Report: Hurricane Katrina in the Gulf Coast</i>, July 2006 • FEMA P-550, <i>Recommended Residential Construction for Coastal Areas: Building on Strong and Safe Foundations</i>, 2nd Edition, December 2009 • FEMA 551, <i>Selecting Appropriate Mitigation Measures for Floodprone Structures</i>, March 2007 • FEMA 577, <i>Design Guide for Improving Hospital Safety in Earthquakes, Floods, and High Winds: Providing Protection to People and Buildings</i>, June 2007 • <i>Guidance for Applying ASCE 24 Engineering Standards to HMA Flood Retrofitting and Reconstruction Projects</i>, November 2013 	
10. Structure Elevation References	
<ul style="list-style-type: none"> • ASCE/SEI 24-14, <i>Flood Resistant Design and Construction</i>, 2014 • FEMA P-55, <i>Coastal Construction Manual</i>, 4th Edition, August 2011 • FEMA P-259, <i>Engineering Principles and Practices of Retrofitting Floodprone Residential Structures</i>, 3rd Edition, January 2012 • FEMA P-312, <i>Homeowners Guide to Retrofitting</i>, 3rd Edition, June 2014 • FEMA 347, <i>Above the Flood: Elevating Your Flood Prone House</i>, May 2000 • FEMA P-499, <i>Home Builder's Guide to Coastal Construction Technical Fact Sheet Series</i>, December 2010 • FEMA Technical Bulletin TB-1, <i>Openings in Foundation Walls and Walls of Enclosures</i>, 2008 • FEMA Technical Bulletin TB-5, <i>Free-of-Obstruction Requirements</i>, 2008 • FEMA Technical Bulletin TB-9, <i>Design and Construction Guidance for Breakaway Walls</i>, 2008 • FEMA Form 81-31, <i>NFIP Elevation Certificate</i>, February 2013 • <i>Guidance for Applying ASCE 24 Engineering Standards to HMA Flood Retrofitting and Reconstruction Projects</i>, November 2013 • Hurricane Sandy Recovery Advisory #7, <i>Reducing Flood Risk and Flood Insurance Premiums for Existing Residential Buildings in Zone A</i> 	
11. Dry Floodproofing, Non-residential References	
<ul style="list-style-type: none"> • FEMA P-936, <i>Floodproofing Non-Residential Buildings</i>, July 2013 • <i>Guidance for Applying ASCE 24 Engineering Standards to HMA Flood Retrofitting and Reconstruction Projects</i>, November 2013 • FEMA P-312, <i>Homeowner's Guide to Retrofitting</i>, 3rd Edition, June 2014 • NFIP Technical Bulletin (TB) 3-93, <i>Non-Residential Floodproofing—Requirements and Certification</i> 	

E. Structure Elevation

Part E of the Addendum supplements the information provided in Parts I through IX of the HMA Guidance. The project-specific guidance in this section does not provide all of the information necessary to apply for funding through an HMA program and must be read in conjunction with all other relevant sections of this guidance. See Part IX, C of the HMA Guidance for additional resources on structure elevation.

E.1 Overview

Structure elevation activities generally involve physically raising an existing structure to an elevation at the BFE or higher if required by FEMA or local ordinance. Structure elevation may be achieved through a variety of methods, including elevating on continuous foundation walls; elevating on open foundations, such as piles, piers, posts, or columns; and elevating on fill. Foundations must be designed to properly address all loads and be appropriately connected to the floor structure above, and utilities must also be properly elevated. Buildings proposed for elevation must be structurally sound and capable of being elevated safely.

E.2 Additional Project Eligibility Requirements

At a minimum, FEMA requires Applicants and subapplicants to design all structure elevation projects in accordance with the NFIP standards in 44 CFR Part 60. For additional information about the NFIP and structure elevation projects, see Part III, E.7 of the HMA Guidance.

FEMA requires Applicants and subapplicants to design all structure elevation projects in accordance with ASCE 24-14, or latest edition, or its equivalent as minimum design criteria.

E.2.1 Eligible Design Standards

Buildings proposed for structure elevation must be structurally sound and capable of being elevated safely. Important design considerations for structure elevations consistent with 44 CFR Part 60 are as follows:

- ◆ The lowest floor of the structure must be elevated to the BFE or to the elevation specified in the local ordinance if higher. Upon completion of the elevation work, an Elevation Certificate (FEMA Form 81-31) verifying “as built” elevations must be completed to ensure that the structure complies with the local floodplain ordinance and NFIP floodplain management and HMA requirements.
- ◆ Elevation projects must be designed and adequately anchored to prevent flotation, collapse, and lateral movement of the structure due to hydrodynamic and hydrostatic loads, including the effects of buoyancy. It is recommended that an engineer certify that the design elevation will withstand the depth and velocity of 100-year flood events (hydrostatic and hydrodynamic loads), any potential increase in wind load, or any other relevant load factors.

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- ◆ For elevation projects in Zone V with open foundations (piles, piers, posts, or columns), the space below the lowest floor must be free of obstructions or constructed with non-supporting breakaway walls, open wood lattice-work, or screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. Guidance on free-of-obstruction and breakaway wall requirements is available in FEMA Technical Bulletin (TB) 5, *Free-of-Obstruction Requirements* (2008), and FEMA TB-9, *Design and Construction Guidance for Breakaway Walls Below Elevated Coastal Buildings* (2008).
 - ◆ For elevation projects on continuous foundation walls with fully enclosed areas below the lowest floor, the area must be used solely for parking of vehicles, building access, or storage as identified in 44 CFR Section 60.3(c)(5).
 - ◆ Elevation projects on continuous foundation walls must be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs to meet these criteria must be certified by a registered Professional Engineer or meet or exceed the criteria in 44 CFR Section 60.3(c)(5). Guidance on meeting this requirement can be found in FEMA TB-1, *Openings in Foundation Walls and Walls of Enclosures* (2008).

E.3 Elevation Project Application Package

In addition to the items identified in Part IV, H of the HMA Guidance, the following data are required for each structure:

- ◆ Physical address and property owner's name
- ◆ Estimated cost to elevate each structure
- ◆ Name and location of flooding source (e.g., creek, river, watershed, or location of stormwater ponding) and location on the applicable Flood Insurance Rate Map
- ◆ The proposed elevation of the lowest floor for each structure to be mitigated, the BFE, and the current elevation of the lowest finished floor
- ◆ Type of existing foundation (slab-on-grade, crawl space, basement, or open foundation) and the proposed elevation method and standard to be used
- ◆ A statement that the project will be designed in compliance with NFIP standards in 44 CFR Part 60

E.4 Implementation

Elevation project implementation entails pre-construction activities, construction, inspection of the completed foundation and engineering certification, and obtaining a Certificate of Occupancy. Before construction of the foundation begins, it is very important to conduct an inspection of the condition of the structure, survey the site, and complete a soil inspection to make sure the proposed elevation project is feasible on the site.

E.4.1 Elevation Methods

Standard structure elevation methods are identified in FEMA P-312, *Homeowner's Guide to Retrofitting – Third Edition* (2014), and FEMA P-347, *Above the Flood: Elevating Your Floodprone House* (2000). In addition, FEMA has developed guidance for the design of appropriate foundations based on the requirements of the International Codes and other applicable standards. This guidance is provided in FEMA P-550, and is available for use with HMA structure elevation projects. Furthermore, FEMA requires Applicants and subapplicants to design all structure elevation projects in accordance with ASCE 24-14, or latest edition.

Available elevation methods, which are thoroughly described in FEMA P-312, Chapter 5, and FEMA P-347 include:

- ◆ Elevating the existing structure on piles, posts, or piers
- ◆ Filling in the basement and replacing it with an elevated floor
- ◆ Elevating by vertically extending the foundation walls of the home

Activities that result in the construction of new living space at or above the BFE are considered only when they are consistent with mitigation reconstruction requirements described in Addendum Part E.2.1. Activities include structure elevations that abandon a lower enclosed area and add a second story above the BFE to an existing structure.

The method that is selected for elevating a house depends on factors such as:

- ◆ Foundation type
- ◆ Condition of the house
- ◆ Applicable State and local building codes
- ◆ Soil type and bearing capacity
- ◆ Weight of the house and lateral forces on the house from water and other natural hazards, such as winds and earthquakes
- ◆ Height of proposed elevation above the grade level
- ◆ Number of additions to the original structure

The most common foundation types are:

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- ◆ Crawl space on foundation walls
 - ◆ Slab-on-grade
 - ◆ Open type foundation – piles and posts or piers

Additional details to consider when constructing an elevation project can be found in the following publications:

- ◆ FEMA P-55, *Coastal Construction Manual*, Fourth Edition (2011)
- ◆ FEMA P-259, *Engineering Principles and Practices of Retrofitting Floodprone Structures* (2012)
- ◆ FEMA P-499, *Home Builders Guide to Coastal Construction Technical Fact Sheet Series* (2010)
- ◆ ASCE 24-14, *Flood Resistant Design and Construction* (2014), or latest edition

This list is not a comprehensive list of publications on retrofitting and elevations. More documents are available at <http://www.fema.gov/building-science-publications>.

E.4.2 Eligible Structure Elevation Costs

Allowable costs are costs that are necessary and reasonable for the proper and efficient performance and administration of the Federal award. The following costs associated with structure elevation projects are generally allowable:

- ◆ Engineering services for design, structural feasibility analysis, and cost estimate preparation
- ◆ Surveying, soil sampling, completion of Elevation Certificate, title search, deed recordation fees, legal and/or permitting fees, project administration, and construction management
- ◆ Disconnection of all utilities
- ◆ Building of a foundation so that the lowest floor is at the BFE or higher if required by local ordinance or FEMA
- ◆ Physical elevation of the structure and subsequent lowering and attachment of the structure onto a new foundation
- ◆ Construction of a floor system that meets minimum building code requirements when the existing floor system cannot be elevated or is not appropriate for the new foundation
- ◆ Reconnecting utilities and extending lines and pipes as necessary and elevating all utilities and service equipment
- ◆ Debris disposal and erosion control
- ◆ Costs for repair of lawns, landscaping, sidewalks, and driveways if damaged by elevation activities

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- ◆ Construction of a utility room above the BFE only if there is no existing space within the house for this purpose or there is no alternative cost-effective way to elevate the utilities
 - ◆ Elevation of existing decks, porches, or stairs
 - ◆ Construction of new stairs, landings, and railings to access the elevated living space per minimum code or local ordinance
 - ◆ Construction of ADA-compliant access facilities or ramps when an owner or a member of the owner's family has a permanent disability and a physician's written certification. An ADA-compliant access to ingress/egress is allowable for funding unless specified otherwise in applicable State or local codes (for more information on ADA, see <http://www.ada.gov>). If ramps are not technically feasible, a mechanical chair lift may be installed.
 - ◆ Documented reasonable living expenses (except food and personal transportation) that are incurred while the owner is displaced by the elevation construction
 - ◆ Abatement of asbestos and lead-based paint
 - ◆ Filling basements with compacted clean fill

E.4.3 Ineligible Structure Elevation Costs

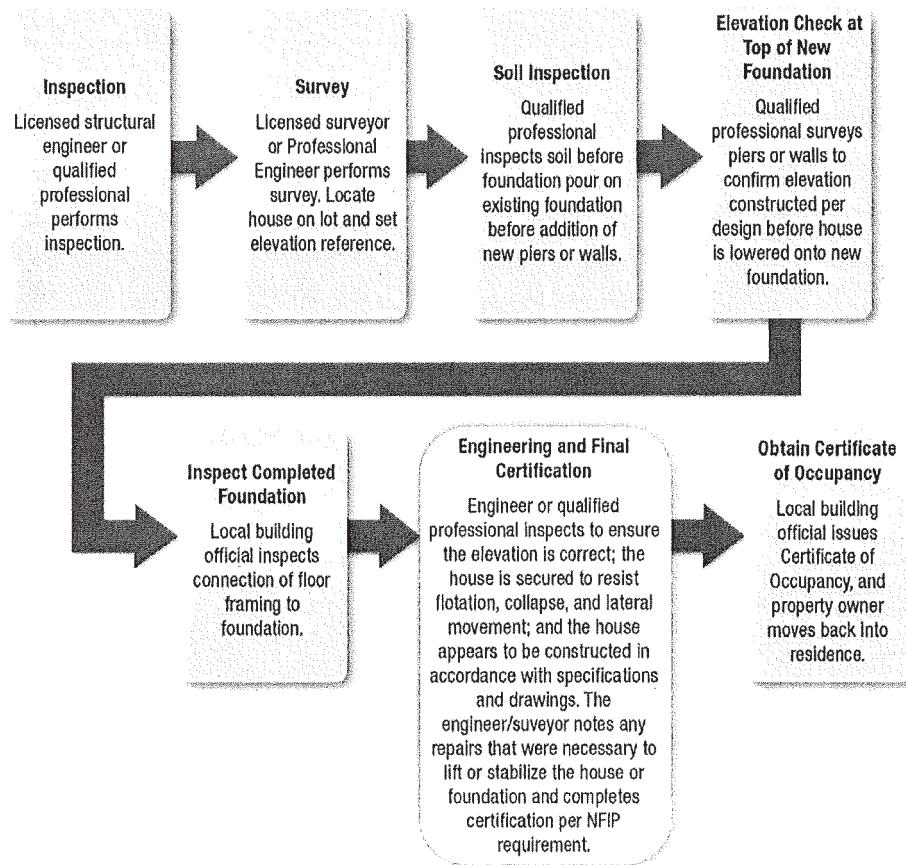
Certain structure elevation activities and their associated costs are not eligible. Ineligible costs for structure elevation include, but are not limited to, the following:

- ◆ Elevating structures that were not in compliance with current NFIP standards at the time of construction
- ◆ Costs related to building additions or auxiliary structures
- ◆ Construction of new decks or porches
- ◆ Any improvements for purely aesthetic reasons, unless required by the EHP compliance review
- ◆ Costs to replace or repair utility service components that are undersized, inadequately designed, or unsafe, unless required by code (except utility rooms noted as eligible costs)
- ◆ Exterior finish on the exposed foundation of the elevated building, unless required by EHP compliance review and or local code
- ◆ Additional landscaping for ornamentation beyond what existed on the site prior to construction of the project (e.g., trees, shrubs)

E.4.4 Survey and Inspection Considerations

Surveying and inspections are encouraged throughout the construction process. Certifications of the surveys ensure that the work has been performed in compliance with the structure-specific plans and specifications, applicable codes and standards, and minimum NFIP requirements. Figure 1 identifies important inspection and survey considerations.

Figure 1: Inspection and Survey Considerations



E.5 Elevation Closeout

In addition to the typical HMA closeout procedures, closeout of structural elevation projects generally includes:

- ◆ Update of the property site information in the respective HMA system (i.e., eGrants or NEMIS) database for each structure
- ◆ A Certificate of Occupancy for each structure in the project to certify that the structure is code-compliant

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- ◆ A Final Elevation Certificate (FEMA Form 81-31) for each structure to ensure the structure has been elevated to the proper elevation
 - ◆ A copy of the recorded deed amendment for each property as required by Part III, E.7.1 of the HMA Guidance
 - ◆ Certification by an engineer, floodplain manager, or senior local official that the completed structure elevation is in compliance with local ordinances and NFIP regulations, including all applicable NFIP Technical Bulletins
 - ◆ A front, rear, and side photograph of the final elevated structure
 - ◆ Verification of flood insurance for each structure