



FLOODPLAIN PERMIT APPLICATION

INFORMATION AND SUBMITTAL REQUIREMENTS

GENERAL INFORMATION

Anyone wishing to develop in the Special Flood Hazard Area (SFHA) in Teton County (excluding incorporated areas) must obtain a **Floodplain Permit application** form from the County Floodplain Administrator and submit it for approval before beginning any development activities. Development may take place within the SFHA, provided that development complies with the local floodplain ordinance, which must meet the minimum Federal requirements.

Development (per the floodplain regulations) is defined as: any man-made change in improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

Activities specifically exempt from the floodplain development permitting process shall be limited to routine maintenance of irrigation facilities. The act of maintaining shall be limited to preserving said facility to its original constructed state so that it may be kept in working order.

Teton County's participation in the National Flood Insurance Program (NFIP) is based upon a mutual agreement with the Federal Emergency Management Agency (FEMA). In return for the local adoption and enforcement of floodplain management regulations that meet the minimum criteria of the NFIP (in Chapter 44 of the Code of Federal Regulations), FEMA provides the availability of flood insurance coverage within the County. The program requires adoption of a local floodplain ordinance, mandatory permits for development within the 1-percent-annual-chance flood inundation area (aka 100-year floodplain), and other obligations. FEMA periodically evaluates the administration and enforcement of the local floodplain management program in relation to the NFIP regulations and has the authority to impose the penalties of probation and/or suspension to the County if the overall program is determined to be inadequately administered or enforced.

Community flood insurance studies (FIS) and maps, developed by FEMA, identify flood hazards including the Special Flood Hazard Area (SFHA); a high-risk area that identifies any land that would be inundated by the base flood, or 100-year flood. The 100-year flood is not the flood occurring only once in one hundred years; but the flood based on statistical probability of having a 1-percent chance of being equaled or exceeded in any given year. The terms base flood, 100-year flood, and 1-percent-annual-chance flood are used interchangeably, however FEMA generally prefers to use the term '1-percent-annual-chance flood' to avoid confusion. Over the life of a 30-year mortgage, a property located within the SFHA has a 26 percent chance (or one chance in four) of being flooded. The FEMA Flood Insurance

Rate Maps (FIRMs) show the SFHA (100-year floodplain) boundaries and flood zones. Zones within the SFHA (where mandatory flood insurance requirements apply) for our region include: Zone A, AE, AH, and AO. The Base Flood Elevation (BFE) is the water surface elevation of the 1-percent-annual-chance flood.

The County Engineer serves as the Local Floodplain Administrator for Teton County. Regulations for the program have been established within the County's **Floodplain Management Resolution**. This Resolution applies to all areas of special flood hazard within the jurisdiction of Teton County, Wyoming (excluding incorporated areas). A floodplain development permit is required for any man-made change to improved or unimproved real estate located within special flood hazard areas except for routine maintenance of irrigation facilities as specified on page 1 of this document. Note that the Town of Jackson administers development activities within the town boundaries, and the Town Engineer serves as Jackson's Floodplain Administrator.

SUBMITTAL REQUIREMENTS

To initiate the floodplain permit process, the applicant must submit a completed permit form with the appropriate fee and supplemental information to:

Teton County Planning and Development Department
200 S. Willow Street, Administration Building Top Floor
Jackson, Wyoming 83001 (307)733-3959
Business Hours: 8AM – 5PM, Mon - Fri

Permit Fees are listed in the Floodplain Development **Fee Schedule**. Questions regarding the floodplain program, permit requirements, or fees, should be directed to the Floodplain Administrator or Teton County Engineer, (307) 733-3317.

Applications shall be reviewed for sufficiency within 14 days, and permit action completed within 60 days of meeting sufficiency. Additional fees may be assessed for insufficient or revised applications. Approved permits are valid for one year from the date of issuance. Upon request, the Floodplain Administrator may extend the duration an additional 6 months, for good cause shown (additional fee applies). No work may commence until a permit has been issued.

Emergency Waiver

Emergency repair and replacement of severely damaged public transportation facilities, public water and sewer facilities, flood control works, and other special circumstances may be authorized by the Floodplain Administrator if:

- Upon notification and prior to the emergency repair/replacement, the Floodplain Administrator determines that an emergency condition exists warranting immediate action; and
- The Floodplain Administrator agrees upon the nature and type of proposed emergency repair/replacement.

Authorization to undertake emergency repair and replacement work may be given verbally if the Floodplain Administrator feels that such a written authorization would unduly delay the emergency work. Such verbal authorization must be followed by preparation and submittal of a Floodplain Permit Application (and fee) describing the emergency condition, the type of work agreed upon, and stating that a verbal authorization had been previously given.

After the Fact Permit

Failure to obtain a permit prior to commencing development, i.e., work currently in progress or after completion - which were not properly permitted. Violation and investigation fees may be assessed. The Floodplain Administrator should be notified immediately, followed by preparation and submittal of a Floodplain Development Permit Application (increased fees apply).

SUPPLEMENTAL DATA REQUIREMENTS

In addition to the completed Floodplain Permit Application and Fee, additional information is required to accompany the submittal based on the nature of the proposed development activities. **All projects shall include a detailed Site Plan, drawn to scale, including the items listed below. Two (2) sets of drawings, preferably 11"x17" (and electronic files submitted on CD,DVD, or via email to the Floodplain Administrator), separate from the drawings submitted with the Building or Grading & Erosion Control Permit Applications, shall accompany the floodplain permit submittal package.** An Environmental Assessment and additional permits may be required for the project. Site Plans should include:

- Property boundary lines of the subject property and those in the immediate vicinity of the project.
- Approximate location of all floodplain boundaries (including 100-year, and Floodway) in the vicinity of the project as depicted on the FEMA Flood Insurance Rate Maps (FIRM). Also show FIRM flood zones, FIRM river station at project site, BFEs and FIRM cross-sections, along with the setback boundaries required for all existing waterbodies and wetlands as required by the Teton County Land Development Regulations (Section 3220).
- The 10-year floodplain boundary. Since this boundary is not shown on the FIRM maps, the applicant is responsible to delineate the boundary utilizing the Flood Insurance Study (FIS) water surface profiles (which includes a 10-year water surface profile) or hydraulic model files.
- Location of existing improvements in the project vicinity, such as driveways, roads, culverts, bridges, buildings, wells, septic systems, utilities, and other improvements.
- Location of all existing physical features in the project vicinity, such as ponds, swales, rivers/streams, irrigation ditches, wetlands, etc.
- Location and dimensions of all proposed improvements, including driveways, roads, culverts, bridges, ponds, buildings, wells, and other features. Indicate lowest floor elevations for all proposed structures.
- Location and quantity of fill that will be placed within the floodplain (along with calculations). Specifications for the fill material (type, size, etc.) and placement (lift thickness, % compaction, etc).

- Existing and proposed site topography & grading (1-foot contour intervals preferred). All elevations shall be surveyed by a registered Professional Land Surveyor or Professional Engineer, tied to mean sea level datum and the benchmark used shall be identified. Elevations shall be based on the most recent recognized datum consistent with the respective FIRM(s) in the project vicinity (generally the National Geodetic Vertical Datum of 1929 (NGVD 29)).

The following are guidelines relating to specific types of development activities and associated information which should accompany the Floodplain Development Permit Application package. The Floodplain Administrator may waive or modify some of these guidelines as applicable to certain projects. Refer to the Floodplain Management Resolution and the NFIP regulations for additional guidance and information.

RESIDENTIAL STRUCTURE

- Demonstrate the lack of alternative locations not subject to flooding for the proposed use and discuss the safety of access to the property in times of flood for ordinary and emergency vehicles.
- Plan and details showing the existing ground elevations, and the estimated Base Flood Elevation (BFE) at the structure, and the FIRM river station at the site with supporting documentation.
- On-site waste/septic disposal systems shall be located to avoid impairment to them or contamination from them during flooding. New and replacement water and sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the system and discharge from the systems into floodwaters. Provide acknowledgement of these requirements, written certification of compliance by a Professional Engineer, and design documentation.
- For Residential structures constructed on suitable fill with a permanent foundation such that the lowest floor (including basement) level is ONE or more feet above the BFE - the fill should be adequately designed, installed in lifts and compacted. The fill should also be properly sloped and protected from erosion and scour during flooding. It is recommended that the fill extend 10-15 feet beyond the structure foundation (in all directions) before dropping below the BFE.
- Obtaining the surveyed elevation of the lowest floor is required upon completing construction and must be submitted to the Floodplain Administrator before a Certificate of Occupancy can be issued. The Elevation Certificate must be completed by a licensed surveyor or engineer. Intermediate inspections may be required during construction as deemed necessary by the Floodplain Administrator.
- New construction and substantial improvement of any residential structure shall have the lowest floor (including basement), elevated ONE foot above the BFE. If the proposed structure has a crawlspace or basement, refer to the Floodplain Management Resolution requirements.

NON-RESIDENTIAL STRUCTURE

Non-residential buildings including commercial, industrial, or other structure (i.e. walled or roofed building, including a gas or liquid storage tank, or a manufactured home) must be elevated or floodproofed.

- Demonstrate the lack of alternative locations not subject to flooding for the proposed use and discuss the safety of access to the property in times of flood for ordinary and emergency vehicles.

Provide statement indicating which of the two development conditions apply:

- The lowest floor (including basement) has been elevated ONE foot above the BFE, or:
- The structure has been designed such that the portion below the BFE plus ONE foot is watertight/floodproof. The walls are substantially impermeable to the passage of water and contain structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A Floodproofing Certificate is to be completed by a registered professional engineer or architect documenting the design, and submitted with the permit application.

BANK STABILIZATION/RESTORATION OR CHANNEL MODIFICATION (including but not limited to barbs/vanes, weirs, check dams, riprap, gabions, retaining walls, boat ramps, as well as soft & hard bioengineering methods such as fabric-wrapped banks, wattles/fascines, root wads, etc.)

- Description of existing conditions, the problem, the scope and objectives of the project. Include historical overview of river movement trends, if any.
- Discussion of design alternatives considered, and explanation of why they were rejected.
- An evaluation of the possible or predicted channel stability, velocities, and shear stresses during flood events, including the possibility of channel avulsion and/or thalweg migration that could affect the flooding dynamics in the project area. Provide certification and explanation of how the project will not adversely affect surrounding land owners upstream, downstream, across stream or adjacent to the proposed project site. **The project shall be designed to withstand the 100-year flood.**
- Typical cross-sections (based on survey data) extending bank to bank and encompassing the entire 100-year floodplain, which shows the existing condition and proposed treatment, the BFE, and the bank full elevation. Applicable boundaries such as the Floodway should also be shown.
- Longitudinal profile of the river surface and bed in the project area.
- Specifications for the treatment materials proposed (type, size, quantities, etc.).
- For Approximate A Zones and river sections without delineated floodways: calculations demonstrating that the cumulative effect of the proposed project activities will not increase the BFE by more than ONE foot.
- For a Watercourse Alteration, such as a realignment or diversion: provide assurance and certification from a qualified engineer or professional with floodplain experience that the flood-carrying capacity will be maintained. Submittal of a Conditional Letter of Map Revision (CLOMR) to FEMA may be required.
- Description of the project implementation (project schedule, phases, sediment control, staging, reclamation, etc.)
- Submit design calculations and any hydrologic or hydraulic model analysis files utilized.

STREAM CROSSINGS (including bridges, culverts, utilities/conduits, and fords)

- Discussion of how the crossing has been designed to offer minimal obstructions to flood flows.
- Channel stability and geometry, along with flood velocities and shear stresses must be evaluated for all stream crossings. Specifically, the design must take into account vertical (degrading or aggrading) and lateral (bank erosion and migration) instability. Provide certification and explanation of how the project will not adversely affect surrounding land owners upstream, downstream, across stream or adjacent to the proposed project site. **The project shall be designed to withstand the 100-year flood.**
- Provide discussion of the site's propensity to experience debris and ice jams during flooding.
- Typical cross-sections (based on survey data) extending bank to bank and encompassing the entire 100-year floodplain, which shows the existing condition and proposed structure, channel and thalweg, the BFE, and the bank full elevation. Applicable boundaries such as the floodway, floodplain, and setbacks should also be shown.
- For a bridge, drawings should clearly identify the low chord and elevation, freeboard, details and dimensions of abutments, piers, approaches, etc. Provide scour evaluation of piers and abutments, including design discussion, calculations, and countermeasure details.
- Buried or suspended utilities. Utility transmission lines carrying toxic or flammable materials are buried to a minimum depth of the calculated maximum depth of scour for a flood of one hundred year frequency. The maximum depth of scour shall be determined from an acceptable hydraulic engineering method and subject to approval by the Floodplain Administrator. Suspended utility lines shall be designed such that the lowest point of the line is suspended at least six feet higher than the BFE.
- Most stream crossings will require some level of hydraulic analysis and may require a Letter of Map Revision (LOMR) or CLOMR (see additional information below) to be prepared and submitted to FEMA at the Applicant's expense. A Flood Study report shall be prepared and submitted with the Floodplain Permit application for any hydrologic or hydraulic analysis performed, accompanied by supporting calculations and electronic copies of the model files.
- Floodway Encroachments require a No-Rise analysis and certification by a registered Professional Engineer. A CLOMR and/or LOMR may also be required for the project.
- For Approximate A Zones and river sections without delineated floodways: calculations demonstrating that the cumulative effect of the proposed project activities will not increase the BFE by more than ONE foot.

POND

- Description of existing conditions, the scope and objectives of the project.
- Design information, and calculations for the amount of material to be removed for the pond.
- Description of where the material will be placed.
- Demonstrate the lack of alternative locations not subject to flooding for the proposed use.

ROAD

- Description of existing conditions, the scope and objectives of the project.
- Alignment plan and profile, cut and fill quantities.

- Demonstrate the lack of alternative locations not subject to flooding for the proposed use.

SUBDIVISION

NFIP regulations require developers to supply BFE data (if not otherwise provided) for their projects that exceed 50 lots or 5 acres, whichever is lesser. The intent of this requirement is to obtain BFE data that can be used by the County for determining elevation and floodproofing needs of new construction.

ADDITIONAL INFORMATION

INTERPRETATION OF FLOODPLAIN BOUNDARIES

The boundaries of the 100-year floodplain shall be determined by scaling distances on the Official Floodplain Maps and using the floodway data table contained in the flood insurance study report (FIS). The maps may be used as a guide for determining the 100-year floodplain boundary, but the exact location of the floodplain boundary shall be determined where the base flood elevation intersects the natural ground.

Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation. The Floodplain Administrator may request information from the developer to aid in the interpretation.

BASE FLOOD ELEVATIONS (BFE)

Flood profiles should be used with topographic surveys and the flood insurance maps showing surveyor cross-sections to most accurately determine the base flood elevation (BFE) for a particular location. Permit applicants proposing floodplain developments in areas without flood elevations available from the NFIP or other sources are required to calculate and submit flood elevation data if their proposed developments are greater than 50 lots or 5 acres in size.

FLOODWAY

Teton County is responsible for prohibiting encroachments including fill, new construction, and substantial improvements within the floodway. For development to be permitted within the floodway it must be demonstrated through hydrologic and hydraulic analyses that the proposed encroachment will not increase flood levels within the community. Known as the No-Rise requirement, it means Zero increase is allowed. The alternative is for the applicant to obtain a CLOMR and floodway revision through FEMA.

Floodway data tables should be used with the flood insurance maps showing surveyors' cross-sections and field measurements to most accurately identify the floodway location. Use of the floodplain

hydraulic models used to develop the FIRMs is also encouraged. Model file data may be obtained directly through FEMA.

FEMA LETTER OF MAP CHANGES (LOMC)

LETTER OF MAP AMENDMENT (LOMA)

A LOMA is an official revision by letter to an effective NFIP map. A LOMA results from an administrative procedure that involves the review of scientific or technical data submitted by the owner or lessee of property who believes the property has incorrectly been included in a designated SFHA. A LOMA amends the currently effective FEMA map and establishes that a specific property is not located in an SFHA.

The LOMA process is outlined in Part 70 of the NFIP regulations. To qualify for a LOMA, the lowest ground touching the structure (defined as the Lowest Adjacent Grade (LAG)) must be at an elevation equal to or higher than the BFE. LOMA submittal data requirements include:

- Completed FEMA MT-1 Form 1 (or MT-EZ Form)
- Copy of NFIP Map indicating the subject property location
- Copy of recorded Deed or Plan map
- Copy of certified site survey showing property and structure location
- Completed FEMA MT-1 Form 2 (Elevation Form) or a completed Elevation Certificate
- Metes & bounds description and map, if request if for portion of property
- If in unnumbered Zone A Area: BFE and supporting data

LETTER OF MAP REVISION BASED ON FILL (LOMR-F)

A LOMR-F is an official revision by letter to an effective NFIP map. A LOMR-F states FEMA's determination concerning whether a structure or parcel has been elevated on fill above the BFE and is, therefore, excluded from the SFHA.

The LOMR-F process is outlined in Part 65 of the NFIP regulations. To qualify for a LOMR-F, both the LAG and the Lowest Floor of the structure must be at an elevation equal to or higher than the BFE, and Teton County must approve the design and construction of the fill. In addition to the LOMA data requirements (listed above), the applicant will also need:

- Completed MT-1 Form 4 (Community Acknowledgement Form)
- In certain instances, additional data that is not referenced within the MT-1 or MT-EZ package may be required.
- Fee for Single Lot/Structure: \$425

LETTER OF MAP REVISION (LOMR)

An official revision to the currently effective FEMA maps used to indicate changes in BFEs, floodplains, and floodways. A LOMR is utilized for revisions relating to new or more detailed analyses (such as updated hydrology or topographic data), physical changes (such as bridges/culverts, channelization, and flood control structures), natural changes (such as channel migration or erosion), and corrections to map

errors. **A LOMR is required for any change (increase or decrease) in Base Flood Elevations resulting from physical changes.** Per the Chapter 44 of the Code of Federal Regulations, Chapter I, Section 65.3, communities have 6 months after the change occurs to submit the data to FEMA. Therefore, A LOMR is submitted to FEMA after construction is complete.

It should be noted that a floodplain analysis, typically involving hydraulic modeling/analysis, is generally necessary to determine if the BFE's will be impacted from proposed physical changes or fill placement.

CONDITIONAL LETTER OF MAP REVISION (CLOMR)

A CLOMR is used for proposed projects to receive FEMA's review and comment on a proposed project that would affect the hydrologic and/or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway or effective base flood elevations. If approved by FEMA, the project must be followed by a LOMR request after completion.

A CLOMR is required for proposed projects that:

- Encroach upon the floodway and cause an increase > 0.00 ft.
- Encroach upon a floodplain when a floodway has not been established and causes an increase of > 1.00 ft.
 - Included all existing and anticipated development – 44CFR 60.3(c)(10)
 - Includes Approximate Zone A. May require development of a hydraulic model.

An increase is determined through comparison of the pre-project (existing conditions) and post-project (proposed conditions) models.