

RESOURCES

Learn more about living with levees: <u>https://www.fema.gov/flood-maps/</u> living-levees.

Find your flood map and learn your risk at FEMA's Map Service Center: <u>http://msc.fema.gov</u>.

See if your community has a levee at the National Levee Database: <u>http://levees.sec.usace.army.mil</u>.

Find resources, tools and templates on levees: http://fema.gov/flood-maps/living-levees/tools-templates.



MONTANA: LEVEES



A levee is a man-made structure with an earthen or concrete embankment. Levees contain, control or move the flow of water during a flood. Communities have used levees for thousands of years to reduce flood risk. Montana has more than 50 levee systems.

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LEVEES AND FLOOD RISK

Levees may reduce flood risk; they do not remove the risk completely. No flood event or levee is the same. A levee that can hold floodwater for one event may not be able to for the next. With enough flow, floodwaters may run over the top of the levee and reach nearby structures. Over time, a levee's structural strength can also decline. In heavier storms, floodwaters can erode levees; this can make an opening for water to flow through.



THE BEST WAY TO PROTECT YOURSELF IS TO BUY FLOOD INSURANCE. VISIT HTTP://FLOODSMART.GOV TO LEARN MORE.

LEVEE SYSTEMS AND FLOOD MAPS

Floodplain maps are created to show a community's risk from flooding. These maps are important tools; they help a community and its residents know what areas a flood could affect. Levees can play an important role in providing some reduced flood risk to the 1% Annual Chance flood that can be shown on a floodplain map.

For this to happen, an engineer with levee expertise must perform a technical evaluation of the levee. The engineer will determine if a levee is tall and strong enough to reduce the risk of flooding. If a levee meets the criteria, the engineer can certify that the levee may provide that reduced flood risk. If FEMA agrees then it can then recognize the certification and show that the levee offers reasonable protection from the 1%-annual-chance flood hazard that is shown on flood maps.

When a new flood study is conducted and it includes a levee system, many options are available to communities for that levee to be shown as providing a reduced flood risk on the floodplain map, depending on the levee:

Accredited Levee System: This levee system meets standards set by FEMA to reduce flood risk for a 1%-annual-chance flood event. An engineer has certified the data. To learn more, view Meeting the Criteria for Accrediting Levee Systems on Flood Maps at https://www.fema.gov/sites/default/files/documents/fema_meeting-criteria-accrediting.pdf.

A99/AR Levee System: Zone A99 and Zone AR regulations apply to levee systems that are being built for the first time (Zone A99) or are being restored (Zone AR) to reduce flood hazard to at least the 1%-annual-chance flood event. To learn more, visit <u>https://www.fema.gov/flood-maps/</u>living-levees/construction-restoration-mapping/#zone-ar.

Non-Accredited Levee System: The levee system does not meet the requirements. It was not constructed, or designed as a levee, or it does not reduce the flood hazard for a 1%-annual-chance flood. A community may take one of two steps:

- Levee Analysis and Mapping Procedures: In this path, the community follows the levee analysis and mapping procedures process for non-accredited levee systems.
- Provisionally Accredited Levee (PAL) System: The PAL designation is for a levee system that FEMA has already accredited. It is awaiting data and/or documentation that will prove that the levee system is still in compliance.