



DAM SAFETY INFORMATION

FREQUENTLY ASKED QUESTIONS

Q: What is a jurisdictional dam?

- **Answer:** Any structure that stores or diverts water, fluids, or movable material for a beneficial purpose with a crest height of 20 feet or higher (measured from the lowest portion of the downstream toe of the dam to the crest) or will impound 20 acre-feet or more of water, fluids, or movable material (referred to as the “20/20” rule). This includes tailings storage facilities, or ring-dyke ponds. (NRS 535.010)

Q: What is NOT a jurisdictional dam?

- **Answer:** Small dams, levees, floodwalls, or free-draining embankments. Also dams that fall under the jurisdiction of the U.S. Army Corp of Engineers, U.S. Bureau of Reclamation, or the Bureau of Indian Affairs.

Q: Are small, non-jurisdictional dams safe?

- **Answer:** Small, non-jurisdictional dams can be just as dangerous as jurisdictional dams. They are not inspected by the state unless requested by the owner.

Q: What determines dam height?

- **Answer:** The measurement from crest of the dam to the lowest point of natural ground surface at the toe of the dam. (NAC 535.120)

Q: What determines a dam’s capacity?

- **Answer:** The total volume measurement within the reservoir measured from crest of the dam to the lowest point of natural ground surface at the toe of the dam. Volume amounts below the natural ground surface grade are NOT included in the dam capacity when considering the 20/20 rule. (NRS 535.010)

Q: Who needs to file a Notice of Construction for a dam?

- **Answer:** Anyone within the state who intends to construct, reconstruct, or alter a dam, regardless of size or ownership. (NRS 535.010)

Q: What Who needs to file an application for a dam permit?

- **Answer:** Anyone in the state planning to construct, reconstruct, or alter a jurisdictional-sized dam must obtain a dam safety permit prior to construction. If an application proposes to build a dam slightly below the 20/20 rule, the applicant may be required to submit plans prepared by a licensed professional engineer and/or a survey of the structure and reservoir prepared by a licensed surveyor to accurately determine the applicability of the 20/20 rule. Dams constructed by the U.S. Bureau of Reclamation or U.S. Army Corps of Engineer require the submission of applications and Notice of Construction to the Division, though they are exempt from obtaining approval or a dam safety permit. (NRS 535.010)

Q: What is needed to file an application for a dam permit?

- **Answer:** To file an application for a dam permit, you need to submit the following:
 - a. A complete application with an original signature.
 - b. The required fee.
 - c. A Design Report prepared by or under the supervision of a professional engineer with wet stamp and original signature. This should include a Hazard Classification Study.
 - d. A Geotechnical Report prepared by or under the supervision of a professional engineer with wet stamp and original signature. This should include stability calculations.
 - e. Specifications prepared by or under the supervision of a professional engineer with wet stamp and original signature.
 - f. Plans prepared by or under the supervision of a professional engineer with wet stamp and original signature.

Q: How many copies do I need to submit?

- **Answer:** Regardless of location, two copies (with original signatures) of the application are required.
 - a. For dams on a stream, three copies of the reports, specifications, and plans are required.
 - b. For dams not on streams, two copies of the reports, specifications, and plans are required.

Q: I have a backhoe; can I build my own dam?

- **Answer:** Jurisdictional dams must be designed and have construct oversight by a licensed Nevada Professional Engineer. A licensed contractor must be used to construct all high and significant hazard dams and for medium or large low hazard dams.

Q: Who needs to file an application to decommission a dam?

- **Answer:** Anyone in the state planning to remove a dam that falls under the jurisdiction of the State of Nevada. (NAC 535.200)

Q: What is “hazard creep”?

- **Answer:** Hazard creep is the change in conditions downstream of a dam that causes the hazard classification to be elevated. Owners are required to make necessary modifications to their dams due to a change in hazard classification.

Q: What determines dam size? Why does it matter?

- **Answer:** Dam size, along with hazard classification, dictates the design criteria of the dam. (NAC 535.130)
 - Large: Taller than 50 feet in height or impounds 10,000 acre-feet or more.
 - Medium: Dams that are not large or small
 - Small: Less than 20 feet in height and impounds less than 100 acre-feet.

Q: What determines the Hazard Classification of a dam?

- **Answer:** Hazard Classification of dams are as follows:
 - High Hazard: poses a high probability of causing a loss of life in the event of failure.
 - Significant Hazard: poses a reasonable probability of causing a loss of life in the event of failure, or causing extensive economic losses, or the disruption of a vital lifeline in the event of failure.
 - Low Hazard: poses a very low probability of causing a loss of life in the event of failure or causing little economic losses or the disruption of a vital lifeline in the event of failure. (NAC 535.140)

Q: What is an “inflow design flood” or “design storm”?

- **Answer:** An inflow design flood is the hypothetical flood of a given magnitude resulting from a storm that falls in the tributary watershed for a dam. This magnitude of the flood along with the hazard classification of the dam dictates the dam’s design parameters. Typical values for design include one percent reoccurrence (100-year), 0.1 percent (1,000-year), and Probable Maximum Flood (PMF). (NAC 535.055, NAC 535.240)

Q: Do I need to pay an annual storage fee?

- **Answer:** Privately owned, nonagricultural dams with a storage capacity exceeding 50 acre-feet **AND** flood control detention basins (regardless of ownership or size) are required to pay an annual fee of \$480 plus \$1.25 per acre-foot storage capacity. Storage fees are based on authorized impound capacities for all non-flood control facilities. For flood-control facilities, the fees are based on the capacity volume at the spillway crest. (NRS 533.435, NAC 535.350)

Q: Do I need a water right for my dam?

- **Answer:** You will need a water right if the dam retains water and is not free draining. (NRS 535.010)

Q: What is an Emergency Action Plan (EAP)?

- **Answer:** An EAP is a written document that identifies incidents that can lead to potential emergency conditions at a dam, identifies the areas that can be affected by the less of reservoir and specifies pre-planned actions to be followed to minimize property damage, potential loss of infrastructure and water resource, and potential loss of life because of failure or mis-operation of a dam. EAPs are required for all significant and high hazard classified dams. Dam owners are required to keep EAPs up to date, distribution of EAPs to plan holders, and to perform periodic exercises of the plan. (NAC 535.320)

Q: How often does the Nevada Division of Water Resources inspect dams?

- **Answer:** High hazard dams - annually. Significant hazard dams - every three years. Low hazard dams - every five years. Dams, jurisdictional or not, can be inspected at the request of the owner at any time. (NAC 535.360)

Q: What determines dam ownership?

- **Answer:** Dam ownership can be determined by:
 - The person that causes a dam to be built, rebuilt, or modified.
 - The owner of the land on which the dam is located.
 - The owner of the land on which the reservoir is located.
 - The owner of a water right that is impounded or diverted by the dam.
 - Is a successor in interest in a chain of title that mentions the dam.
 - Is a local cooperator who will assume any control over dams built by the U.S. Army Corps of Engineers or the U.S. Bureau of Reclamation.
 - The person or entity identified by the State Engineer as responsible for the dam.

Q: What is required of dam owners?

- **Answer:** Owners are required to:
 - Operate and maintain their dams in a safe manner at their own expense.
 - Make necessary modifications due to a change in hazard classification.
 - Take all necessary actions to prevent a dam failure.
 - Periodically inspect their dams.
 - Notify the State Engineer of problems or unusual events.
 - Maintain an operations manual and log for their dams.
 - Submit the contact information of the dam operator to the State Engineer.
 - Submit EAPs as required (see above).

Q: If I don't want to follow the rules and regulations regarding dams, what happens?

- **Answer:** Construction, reconstruction, or alteration of a jurisdictional-sized dam without proper approval is guilty of a misdemeanor with each day of violation a separate offense. In addition, fines may be assessed up to \$10,000 a day for each violation.

Report an Emergency

Nevada Division of Water Resources

Phone: 775-684-2800

Email: dams@water.nv.gov

Nevada Division of Emergency Management

Phone: 775-687-????

After Hours: 775-687-????