AquaDam Re-Rolling Review

(A Single Closed Ended AquaDam Being Re-Rolled in Hopland, CA)

AquaDams® are available in several configurations, including the Single Closed End (SCE), Double Closed End (DCE), and Double Open End (DOE) models. This document outlines the process for re-rolling an 8' tall, 17' wide, 232' long SCE AquaDam® using a pickup truck with a flatbed trailer, a Telehandler forklift, a ½-inch spool of rope, razor knives, and two pieces of timber.

To re-roll an AquaDam®, the unit must first be de-watered sufficiently so that it begins to float on the water's surface. Once floating, the AquaDam® can be re-positioned within the body of water more easily, if necessary. Moving the floating unit is typically accomplished with manual labor, though a jet-ski can also serve as an effective tool for maneuvering the dam.

AquaDam® dewatered enough to float and be maneuvered across the lake.

Before re-rolling an AquaDam®, a sufficiently large staging area must be identified. For reference, a 30-foot by 60-foot space was used to accommodate an 8-foot-tall, 17-foot-wide, 230-foot-long AquaDam® in this example. Ideally, the staging area should be adjacent to a lightly trafficked road or path to facilitate pulling operations.

Positioning is critical: the AquaDam® should be laid out perpendicular to the bank, with the closed end —secured with timber—pulled up the slope. Angled positioning may result in improper rolling or kinking of the dam. The re-rolling process should be conducted slowly to allow for adequate drainage, especially in larger units. These larger AquaDams® often feature longitudinally sewn panels that can trap pockets of water. Taking time to ensure complete drainage will help maintain the integrity of the roll and prevent complications during transport or storage.

Google Earth Pro aerial view showing a typical staging area.

AquaDams® are typically shipped rolled around a central piece of timber, much like a carpet roll. For SCE units, this timber is at the closed end of the dam. However, the original timber the dam was shipped with, may not be structurally sufficient to support the combined weight of the water and the AquaDam® during re-rolling. If the timber is deemed strong enough, ropes should be securely wrapped around each end. When pulled vertically, these ropes allow the timber to act as a rolling core, assisting in the controlled re-rolling of the AquaDam®.

Below is an image showing an AquaDam with a piece of timber that is too small to be used to re-roll.

If the original timber core is not sufficient to support the combined weight of the AquaDam® and residual water during re-rolling, it must be replaced with a larger, more robust timber. Properly securing the closed end of the AquaDam® around this timber is essential to ensure a smooth and controlled re-rolling process.

AquaDam having a larger piece of timber added to assure a proper re-roll.

For larger AquaDams®, ½-inch rope is recommended. Secure the rope to each end of the timber and wrap it in a way that enables the timber to act as a rolling axis. When upward force is applied, the timber will naturally initiate the rolling motion. These ropes should then be attached to a Telehandler forklift, which will be used to lift and pull back on the AquaDam®, guiding it into a tight, uniform roll.

Ropes are being secured and wrapped around the timber to promote the rolling motion.

To initiate the re-rolling process, the Telehandler forklift is used to lift and pull back on the ropes secured to the timber at the closed end of the AquaDam®. As the dam is elevated and begins to exit the water, it will naturally start to dewater. It is important to allow sufficient time for drainage, as reducing the internal water volume significantly decreases the overall weight, making the re-rolling process more manageable. Continue lifting and pulling back to encourage the AquaDam® to roll tightly around the timber. After approximately 20 feet of rope has unspooled from the timber, the forklift should lower its forks and reposition closer to the roll. Re-wrap the rope around the timber and repeat the lifting and pulling process. For larger AquaDams®, the width of the dam often exceeds the span of the Telehandler forks, causing the ropes to form a triangular configuration. This can lead to inward pressure on the dam's edges. If the rope angle becomes too tight or the dam is excessively wide, a second piece of timber should be introduced to help distribute the force evenly and maintain the integrity of the roll.

AquaDam re-roll with one piece of timber (notice the angle in ropes).

Introducing an additional piece of timber creates separation between the ropes above the AquaDam®, allowing for perpendicular alignment at each end. This configuration improves control and balance during the re-rolling process. Repeating the lift-and-pull motion with the Telehandler initiates continued rolling of the dam.

Caution is advised, as timber under load may fracture—especially if not properly sized or positioned. To mitigate risk and ensure a smoother re-roll, it is essential to allow the AquaDam® to drain thoroughly. Reduced internal water volume significantly decreases weight, making the rolling process more efficient and less strenuous on equipment and materials.

Using both timbers allowing the ropes stay vertical during re-roll.

The re-rolling of an AquaDam® is a methodical process that requires patience and repetition. The sequence involves lifting upward with the Telehandler forklift, pulling back to initiate the roll, lowering the forks, repositioning the forklift closer to the roll, and re-wrapping the ropes around the timber. This cycle is repeated until the AquaDam® is fully re-rolled. Taking the time to perform each step carefully ensures a tight, uniform roll and minimizes stress on the materials and equipment.

Dual timber re-roll example.






Once fully re-rolled, the AquaDam® should resemble a large carpet roll, making it easy to maneuver for loading, transport, and storage. This compact form is ideal for preserving the unit's integrity and preparing it for future use. A properly executed re-roll will not damage the AquaDam®, provided that care is taken throughout the process. Damage typically only occurs if the unit is intentionally cut or punctured.

Example of an 8'X17' X230' AquaDam re-rolled after use.

Once the AquaDam® is fully re-rolled, place it securely on a flatbed trailer or similar transport vehicle. Be sure to follow all applicable Department of Transportation (DOT) regulations for securing oversized or heavy loads. With proper handling and safety measures in place, your AquaDam® is now ready for transport, storage, or future deployment.

AquaDam re-rolled, loaded, and tied down to a flat bed trailer ready for travel.