# **Site-specific Flood Fighting Solutions**



### The company

Established over 35 years ago, Portadam offers its water management solutions to national and international clients. Our modular cofferdam system is highly flexible and has been engineered to combat flooding as well as provide fluid storage.

Portadam is classified as a small business under NAICS code 238990. We add value to our clients by providing a safety-minded team of professionals who take pride in providing excellence in customer service while consistently identifying our clients' unique needs. We couple that with the ability to provide innovative problem solving and cost effective solutions.

Portadam has a history of successfully preventing damage from flood waters. After excelling in USACE's lab and field tests, the Portadam system has been used to divert floodwaters away from key infrastructure such as emergency response centers, treatment plants, power plants/substations, and telecom switching stations.



Levee extension in Fargo, North Dakota

The equipment's flexibility enables quick installation on unprepared surfaces and along almost any desired line. Portadam can fully deploy the system or our supervisors can oversee the system setup by others. Our rental option enables customers to have protection when it's required without any significant capital outlays. The system is currently available in heights of 5' and 7' and individual units can be quickly combined to accommodate varying elevations and required configurations and contours.

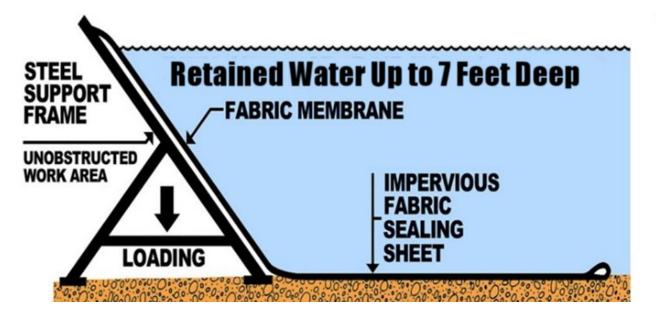


Protecting property from the Mississippi River floodwaters

#### The history

The Portadam cofferdam system was originally developed in 1974 through a grant from the British Government. The purpose was to develop an environmentally friendly system that could be modularly and repeatedly installed and removed quickly and efficiently leaving no negative environmental legacy behind. Over the next two decades the company evolved into a leading provider of water control solutions.

In 2004, Finger Lakes Capital Partners purchased the assets, investing in the Company to expand its operations into additional regions. In 2014 Spring Capital Partners purchased the Company allowing it to establish a stronger market/brand presence in its existing markets as well as grow successfully into new regions and market verticals.



#### The system

The Portadam system is a free-standing, high tensile strength, precision welded modular steel frame structure that is covered with a durable, reinforced vinyl fabric. The frames of this engineered system are available in two sizes (5' and 7').

Once the water level rises, the hydrostatic pressure redistributes the load vertically and downward to secure the frame structure and allows the impervious membrane to create an effective seal to help keep the protected area dry.

**Transportation.** The system (frames, fabrics and hardware) is bundled, easily loaded on flatbed trailers and shipped to the location. It can be deployed to all parts of the country in a matter of days.



Simple system setup and removal

**Installation**. Our certified crews will then install the frames and deploy and secure the fabrics prior to the approach of floodwaters. The system is easy to install and our teams can provide full-deployment of the system or our supervisors can oversee the system setup by others, allowing simultaneous deployment across multiple locations. Depending on conditions, a three-person crew can erect 100s of linear feet per day.



Protecting critical telecommunications infrastructure

**Removal.** Once flood water recedes, the reusable system is quickly dismantled, bundled, loaded and shipped back to the storage facility.

**Maintenance.** Minimal maintenance is required. Visual inspections for damage to the frames or fabrics can determine if repairs are necessary.

**Repair.** Repairs to the fabrics are seldom required and typically are made easily with minimal cost.

## The USACE Test



The U.S. Army Corps of Engineers has conducted stringent laboratory and field-testing on the Portadam system alongside other methods. The

Portadam system rated highly on a number of criteria. Protocol testing included both performance parameters (hydrostatic testing, hydrodynamic testing with waves and overtopping, and structural debris impact testing) and laboratory setting operational parameters (time, manpower, and equipment to construct and disassemble, suitability for construction and disassembly by unskilled labor, fill requirements, ability to construct around corners, disposal of fill material, damage, repair, and reusability).

In addition, field-testing added footprint and right-of-way requirements, durability, adaptability to varying terrain, performance on various surfaces and ability to be raised.

According the U.S. Army Corps of Engineers results, Portadam's strengths include ease of construction and removal (time, manpower, and equipment), low seepage rates, no required fill, high degree of reusability, and limited right-of-way required.

After the U.S. Army Corps of Engineers finished testing the Portadam product, they also purchased 8,000 linear feet of 5-feet high units for flood control. They had sections then stationed across the country for rapid deployment to emergency sites. Having a flood fighting plan in place is essential. A Portadam system can be a key component of your plan. The system's flexible design allows custom layout and our rental option eliminates the need for capital expenditure. Portadam's rapid response approach provides flexibility and the setup & removal is quicker and requires less manpower & equipment than sandbags.

> "Portadam's strengths include ease of construction and removal (time, manpower, and equipment). The Portadam structures were constructed in less time and with a much smaller labor force than the sandbag structures. Also, the Portadam structure was constructed without the use of heavy machinery. The Portadam structure proved easy to remove. The Portadam structure had low seepage rates in both the laboratory and field tests. Portadam structures require no fill except for some sandbags that are used to help seal the leading edge of the membrane liner and to add weight to prevent wind damage. Portadam structures have a high degree of reusability. For the field test, the Portadam structure was 100 percent reusable. Since no heavy machinery is required to construct a Portadam structure, only limited right of way is required."

-Excerpt from Flood-Fighting Structures Demonstration and Evaluation Program: Laboratory and Field Testing in Vicksburg, Mississippi -ERDC TR-07-3



Protecting the power grid from flood damage



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