



**US Army Corps
of Engineers®**

Innovative Flood Fight Products

Background:

Philadelphia District is designated as one of four host districts for the distribution of innovative flood fight technology products (Rapid Deployment Flood Wall, Hesco Bastion containers, and Portadam). The Rapid Deployment Flood Wall (RDFW) is a granular-filled, plastic grid unit that uses horizontal and vertical tabs to form a continuous structure. Hesco Bastion containers are granular-filled, permeable membrane-lined wire baskets that pin together to form a continuous structure. Portadam consists of an impermeable membrane liner that is supported by a steel frame that pins together to form a continuous structure.

The Philadelphia District responsibilities include the storage of approximately 1,500 linear feet (LF) of each of the three products identified above, inventory control of the products, and regional deployment of the products in the Eastern United States (ME, NH, VT, MA, RI, CT, NY, PA, DE, MD, WV, VA, NC, SC, GA, and FL) to support state and local flood fight operations.

The Philadelphia District Fort Mifflin Distribution Center Warehouse is designated as the Flood Fight Product Storage Facility, and is located in Building No. 4, 6400 Hog Island Road, Philadelphia, Pennsylvania 19135. Deployment of the products is coordinated by the Emergency Management Office at 215-656-6756. The primary POC is Robert Eckhardt.

Deployment Procedures:

Rapid Deployment Flood Wall (RDFW) product is shipped and stored in 50" X 60" X 40" crates containing 100 RDFW units per crate. The RDFW unit stands 48 inches wide and 8 inches tall. The units interlock horizontally and overlap to give a deployed width of 42 inches (3.5 ft) per unit. An Excel spreadsheet is available online (<http://geocellsystems.com/estimator/>) for calculating the amounts of materials required for barrier construction. To operate the spreadsheet, enter the length of the wall desired and the sheet will calculate the number of RDFW units and containers, and cubic yards of sand required, for various wall heights. The Excel spreadsheet and other pertinent information are located on Emergency Management shared drive \\nap-fs1phl\em\Flood-Fight-Products\RDFW.

Hesco Bastion Containers are 4' high X 3' wide X 15' long and are shipped flat-packed on pallets. Each pallet contains 5-6 containers. Each pallet accommodates 75 to 90 LF of flood wall. Additional information regarding Hesco Bastion Containers is available on Emergency Management shared drive \\nap-fs1phl\em\Flood-Fight-Products\Hesco.

Portadam system consists of two main components: welded tubular steel framework supports and flexible waterproof membranes. The steel framework supports are packaged 20 per bundle and the flexible waterproof membranes come in 50- or 100-linear foot sections. Also included is the hardware (clamps, bolts, braces and ties) required for installation of the product. The hardware and installation instructions are containerized in pallets and will cover 100 LF of Portadam barrier. To construct a 100-linear foot Portadam barrier, 76 steel framework supports are required as well as one 100-linear foot membrane. To construct a 90-degree corner, an additional 6 steel framework supports and hardware will be required. Additional information regarding Portadam is available on Emergency Management shared drive \\nap-fs1phl\em\Flood-Fight-Products\Portadam.

USACE GUIDANCE FOR DEPLOYMENT OF EXPEDIENT FLOOD FIGHT PRODUCTS

1. Deployment:

- Issuance of expedient flood fight products will be permitted only in emergencies declared by the District Engineer or designated representative and upon request from the State for assistance. Issue of these products should be focused on protection of critical infrastructure and key facilities.
- The supported district will coordinate directly with the Philadelphia District for delivery of products to the designated area. Provide the type of product preferred, barrier length in LF, destination of shipment, and on-site USACE POC contact information to the Philadelphia District.
- Supported districts will request Class 216 funds through the Division to fund technical assistance and supervision of the products issued to the local sponsor.
- Philadelphia District will request Class 216 funds through the Division to fund transportation of materials to the impacted district's designated location.
- The Supported district must provide and maintain a trained USACE representative on site with the public sponsor during the installation, operation, removal, and repackaging process, and provide technical assistance to the public sponsor for the use of the products.
- Deployment of vendor technical support will be coordinated directly with the Rock Island District (MVR) EOC. The POC at MVR is Mark Clark at 309-794-5264. MVR will request Class 216 funding to provide vendor technical services.
- Transportation of products from other regional stockpiles will be coordinated with HQUSACE prior to movement of the products.

2. Philadelphia District Responsibilities:

- Proper storage and maintenance of products while in storage.
- Prepare and deliver products as requested by impacted districts.
- Transport products from the deployed location back to the stockpile.
- Inspect products for re-usability prior to returning to the stockpile.

3. Supported District Responsibilities:

- Coordinate with Philadelphia District for deployment of flood fight products.
- Hand receipt product to the public sponsor. The hand receipt must contain a statement similar to the recommended statement in EP 500-1-1, Paragraph 4-5c(1) with the addition that *“Subsequent to the flood threat or event, the sponsor agrees to disassemble, clean, and re-palletize the product provided by the government.”*
- Provide technical assistance to the public sponsor on the use of the product and manage and direct product vendor support if provided.
- Provide a trained USACE representative on site with the public sponsor during the installation, operation, removal and repackaging process.
- Coordinate the return shipment of the products to Philadelphia District after product use.

4. Public Sponsor Responsibilities:

- Provide labor to assemble, operate, disassemble and repackage material issued.
- Provide necessary equipment and fill material to assemble the flood fight products.
- Sign hand receipt for responsibility of issued products.