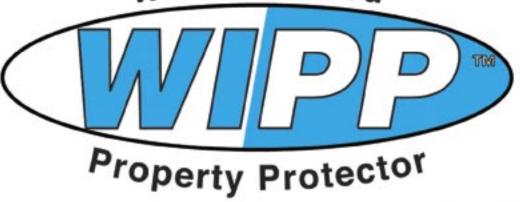
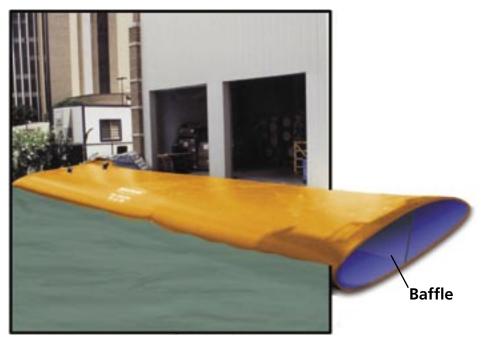


# Water-Inflated







### **System Description**

The WIPP<sup>™</sup> water-inflated property protector is designed to control flood water. The WIPP<sup>™</sup> System relies on a patented internal baffle system for stability. The system is manufactured from industrial-grade, vinyl-coated polyester membrane material. The WIPP<sup>™</sup> System is characterized by being light-weight, rapidly deployed and removed, compact in storage, repairable and reusable.

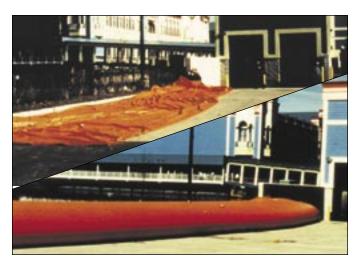
Available sizes range from 1-foot to 4-foot high and 10-foot to 150-foot long.

To install the system simply unroll and inflate with any available water.

# **WIPP<sup>™</sup> provides rapid installation.**



Installing sandbags is very labor intensive.



A 6-foot high, 100- foot long WIPP™ System is inflated in under an hour.

The water does the work when installing the WIPP™ System.



A 1-foot high, 125- foot long WIPP™ System is inflated in five minutes.





# Sandbags



### Save Time.

Time is crucial in a flood. The WIPP<sup>™</sup> System can be installed in a fraction of the time required by sandbags.

## Save Labor.

Roll the WIPP<sup>™</sup> System into position. Inflate with any available water source, even the floodwater. The water does most of the work instead of the back-breaking task of filling, carrying and placing sandbags.

## Save Money.

The WIPP<sup>™</sup> System costs less than an equal sized deployment of sandbags when considering the purchase, deployment, removal, & disposal of the sandbags.

## Save Money.

Unlike sandbags the WIPP<sup>™</sup> System is also **reusable**. After the flood waters have receded, simply drain, roll up and store the WIPP<sup>™</sup> System for future floods. Sandbags also require a much larger storage area than a comparable size WIPP<sup>™</sup> System.





Size Matters.



A 3-foot high x 100-foot long WIPP<sup>M</sup> System weighs 270 lbs and can be stored in a 4-foot long x 1.5-foot wide x 1.5-foot high area.

A 3-foot high x 100-foot long sandbag wall requires 3,450 sandbags (50 lbs per bag) with a total weight of 172,500 lbs requiring storage space of 172.5 cubic yards.

WIPP <sup>™</sup> System (100-ft long)				Sandbags (100-ft long wall)			
Height (ft)	Weight prior to inflation (lbs)	Storage Requirements (ft long x ft wide x ft high)	Storage Requirements (cubic yds)	Height (ft)	Number*	Weight (lbs)**	Storage Requirements (cubic yds)***
1	115	2 x 1 x 1	.7	1	850	42,000	42.5
2	188	3 x 1.25 x 1.25	1.6	2	1,800	90,000	90
3	270	4 x 1.5 x 1.5	3	3	3,450	172,500	172.5
4	392	4.5 x 2 x 2	6	4	5,600	280,000	280
5	930	5 x 2.5 x 2.5	10.4	5	8,250	412,500	412.5
6	1,098	5.5 x 3 x 3	16.5	6	12,350	617,500	617.5
7	1,227	6 x 3.5 x 3.5	24.5	7	18,500	925,000	925
8	1,620	6.5 x 4 x 4	34.7	8	27,750	1,387,500	1,387.5

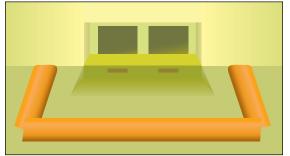
\*Based on a filled size of 27 in long x 15 in wide x 6 in high. \*\*Based on 50 lbs per bag.

\*\*\*Based on 20 bags per cubic yard. ©2003 HYDRO-SOLUTIONS, INC. All rights reserved.

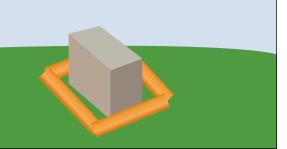


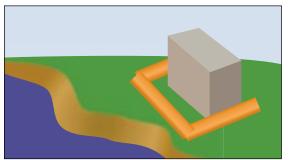


### **WIPP™ Installation Configurations**

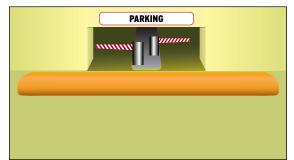


**Loading Docks** 





**Near Rivers and Streams** 



Complete Enclosure Parking Garages WIPP™ barriers are joined together using a simple overlapping technique.



Fill Ports WIPP™ barriers are equipped with <sup>3</sup>/4- to 4-inch ID, industrialgrade, threaded fill ports. Fill ports are installed in pairs near each end of the barrier.

### WIPP<sup>™</sup> Accesso<u>ries:</u>



### Overflow Fitting

Overflow fittings, located and centered along the top of the WIPP<sup>™</sup> system, are used as overinflation indicators (see installation procedures for detailed use).



#### Drain Ports

There are 3/4- to 8-inch ID drain ports on each end of the barrier. Additional drain ports are also located along both sides of the unit; the number and position vary depending upon barrier length.

### Call 800-245-0199 today or visit www.wippsystem.com GS-07F-0543N effective June 16, 2003

#### The WIPP™ System Release Statement

The WIPP<sup>™</sup> System when properly used is a temporary barrier against surface water. Due to the unknown variables involved with the complex task of preventing floodwater from entering a facility, Hydro-Solutions, Inc. accepts no responsibility for floodwater infiltration under or around a properly inflated WIPP<sup>™</sup> System. The WIPP<sup>™</sup> System cannot prevent water from migrating underneath the system via cracks, crevices, pipes, etc., and/or porous soil conditions. Preparations should be made prior to a flood event and the installation of the WIPP System to make sure any area where water can infiltrate is properly sealed.



This depth of water repre-

sents 75% of the height of a

fully inflated WIPP<sup>™</sup> barrier. It is <u>required</u> that a minimum 25% freeboard capacity be maintained during all phases of a project. Excess slope and grade, soil composition, mov-

ing water, and related hydrological criteria may increase

or decrease the ability of the WIPP™ System to perform as

projected.

# WIPP<sup>TM</sup> Stabilization Components

#### Surface friction

WIPP™ barriers require surface friction to stabilize when exposed to uneven hydrostatic pressures. Barriers exposed to weak soils or slick soils may require additional freeboard.

#### Freeboard

(amount of inflated barrier above water level) A minimum of 25% freeboard is required in all WIPP™ installations. Freeboard requirements may increase if the barrier is exposed to, or has the potential of being exposed to, high water velocities (3 ft/sec or greater), slick soil conditions or other relevant hydrostatic conditions.

The internal baffle system The patented internal restraint baffle locks into place when the barrier is exposed to greater hydrostatic pressure on one side.

### Water-Inflated





### WIPP<sup>™</sup> Accessories:



**Fill Ports** 

WIPP™ barriers are equipped with <sup>3</sup>/4- to 4-inch ID, industrial-grade, threaded fill ports. Fill ports are installed in pairs near each end of the barrier.



#### **Drain Ports**

There are <sup>3</sup>/4- to 8-inch ID drain ports on each end of the barrier. Additional drain ports are also located along both sides of the unit; the number and position vary depending upon barrier length.

Hydro-Solutions, Inc. Harnessing the Power of Water 12777 Jones Road, Ste. 465 • Houston, Texas 77070

phone 281-807-0890 • fax 281-807-1218

### www.wippsystem.com

Call 800-245-0199 today for more information.

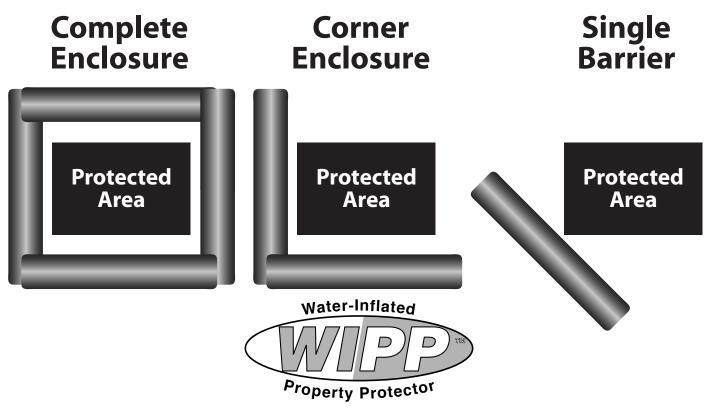
## WIPP™ Standard Heights & Dimensions

Inflated Height (ft)	Layflat Width Inflated (ft)	Gallons per Linear Foot	Weight per Linear Foot (Ib)	Maximum Water Depth* (in)
1.0	2.50	15.5	1.15	9.0
1.5	3.75	35.0	1.49	13.5
2.0	5.00	62.0	1.88	18.0
2.5	6.25	98.0	2.20	25.0
3.0	7.50	151.0	2.70	27.0
3.5	8.75	192.0	3.23	31.5
4.0	10.0	256.0	3.75	36.0

\* This depth of water represents 75% of the height of a fully inflated **WIPPTM**. It is <u>required</u> that a minimum 25% freeboard capacity be maintained during all phases of a project. Excess slope and grade, soil composition, moving water, and related hydrological criteria may increase or decrease the ability of an **WIPPTM** to perform as projected.

### **Standard WIPP™ Configurations**

WIPP<sup>™</sup> can be used in a variety of configurations to meet your specific flood protection needs.



### The WIPP™ System Release Statement

The WIPP System when properly used is a temporary barrier against surface water. Due to the unknown variables involved with the complex task of preventing floodwater from entering a facility, Hydro-Solutions, Inc. accepts no responsibility for floodwater infiltration under or around a properly inflated WIPP System. The WIPP System cannot prevent water from migrating underneath the system via cracks, crevices, pipes, etc., and/or porous soil conditions. Preparations should be made prior to a flood event and the installation of the WIPP System to insure that any area where water can infiltrate is properly sealed.

For more information, visit www.wippsystem.com

www.hydrologicalsolutions.com