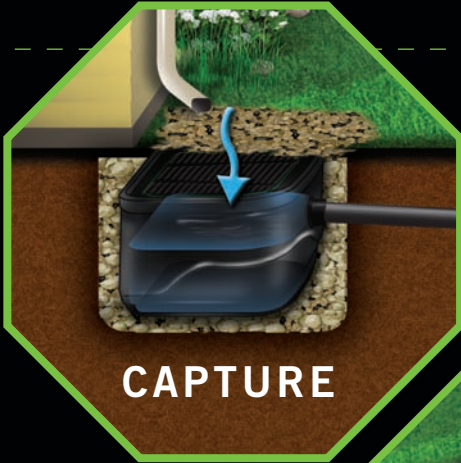


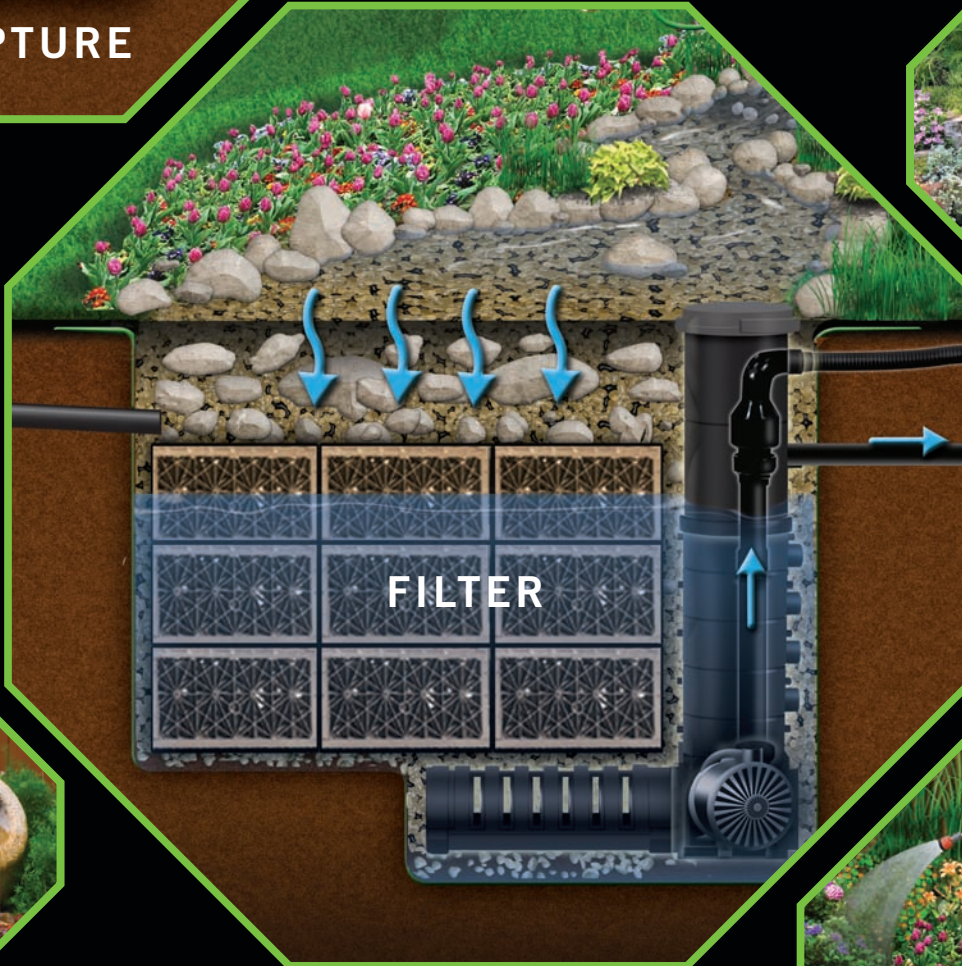


# RainXchange™

Rainwater Harvest Systems



**CAPTURE**



**FILTER**



**REUSE**


**RAINWATER HARVEST SYSTEMS  
SOLUTIONS GUIDE**



ACCORDING TO A GALLUP POLL MARCH 2008, WHEN AMERICANS ARE ASKED TO RATE THEIR LEVEL OF WORRY ABOUT EACH OF 12 ENVIRONMENTAL CONCERNS, THE TOP 4 RELATE TO THE QUALITY OF WATER.



## WHY RAINWATER HARVEST?

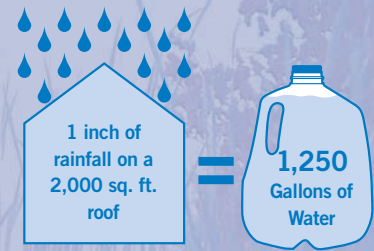
 The earth is known as the Blue Planet for a reason, it's no surprise that water is a dominant part of our everyday lives. The world's current challenge is to improve the planet's water quality and then maintain clean and healthy water that supports all life forms in our diverse environment.

### CAPTURING AND REUSING RAINWATER MAKES DOLLARS AND "SENSE"

- Reduce water bills including city storm sewer charges
- Alleviate demand on municipal systems
- Avoid strict watering schedules

### BETTER FOR YOUR LANDSCAPE THAN MUNICIPALLY TREATED WATER

- Rainwater is extremely rich in nutrients
- Using rainwater to irrigate will reduce fertilizer use
- No chemicals have been added to rainwater



### DID YOU KNOW?

- 1 inch of rainfall on a 2,000 sq. ft. residential roof generates 1,250 gallons of water that can be reused.
- That same roof in a region receiving 30 inches of annual rainfall generates 41,000 gallons of reusable water.
- The average US household with a 10,000 square foot lot uses 5,000 gallons of water **weekly** for landscape irrigation.
- Running a sprinkler for 2 hours can use up to 500 gallons of water.
- The RainXchange<sup>TM</sup> allows you to collect thousands of gallons of water anywhere, even in the Desert!

### HOW CAN YOU REUSE RAINWATER USING AQUASCAPE'S RAINXCHANGE<sup>TM</sup>?



Landscape irrigation for your lawn and flowerbeds

Washing your car, patio or deck



Topping off water features, swimming pools, & hot tubs

Protect property from wildfires



Toilet and laundry water supply



OR



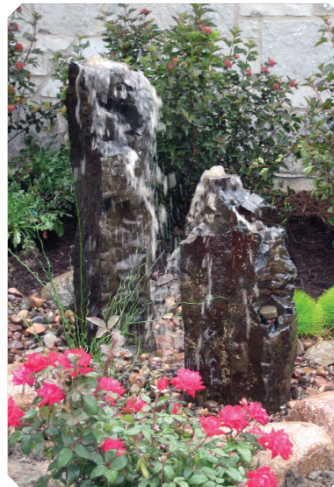
Traditional ways of rainwater harvesting do not add beauty or value to your home or office setting.

RainXchange™ by Aquascape Inc. adds the beauty of a water feature to a revolutionary system for capturing and reusing our most precious resource, water.

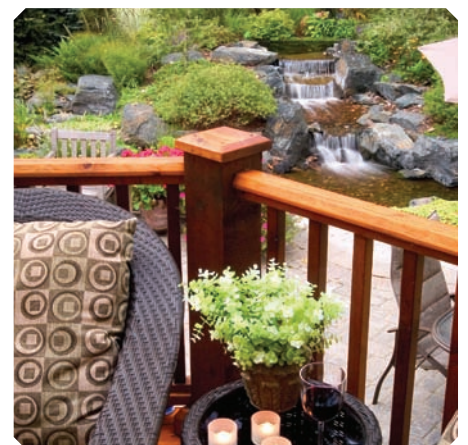
## THE RAINXCHANGE™ SYSTEM IS REVOLUTIONARY!

The Aquascape's RainXchange™ System is a revolutionary design that combines a recirculating decorative water feature with a sub-surface rainwater harvest storage system.

- **Clean, Filtered Water Storage** - While you enjoy the benefits of a decorative water feature, the RainXchange™ System filters the stored water to prevent stagnation and growth of unhealthy bacteria.
- The RainXchange™ System reveals only a **beautiful water feature** that integrates easily into existing landscape.
- Locating and **storing the water underground** maintains the integrity and beauty of your home and landscape.



- **Wildlife Habitat**  
Because the water stored in the RainXchange™ System is constantly moving and being aerated, it becomes a sanctuary for wildlife.
- **Water Feature Lifestyle**  
Enhanced landscaping improves property value and water features provide soothing sights and sounds that help you relax and de-stress in today's busy world.
- **Environmental Conservation**  
Capturing rainwater to operate the water feature creates true self-sustainability, drastically reducing the need for chemically-treated traditional water sources.



Rainwater harvesting with Aquascape's

# RainXchange™

Rainwater Harvest Systems

shown with  
Pondless® Waterfall

## 10 IRRIGATION SYSTEM

- Natural water is loaded with micronutrients and compounds that will make your plants flourish.
- A healthy garden consumes more greenhouse gases and properly irrigated soils allow for greater water infiltration and better overall soil profiles.

## 9 AQUATIC PLANTS

- Providing food and shelter for a great number of birds, insects and amphibians and the cornerstone for maintaining our biodiversity.

## 2 CONNECTING PIPE

- Carries the water via gravity to the main storage chamber. (sold separately)

## 1 RAIN FILTER

- Captures and removes pollutants flushed into the system during a rain event.
- Coarse filter screen removes leaves, twigs, and seeds.
- Smaller suspended particles are captured in a fine mesh which can easily be removed for cleaning.

## 3 MODULAR STORAGE BASIN

- Modular design can be configured to fit a wide variety of applications and settings.
- The storage basin consists of modular plastic tanks that are assembled on-site.
- EPDM rubber membrane creates a water-tight basin.

Please note: The numbers represented in this drawing show the stages of rain water harvest.

### 8 BIOLOGICAL FILTER

- Beneficial bacteria and enzymes reduce organic wastes and pollutants to less toxic substances that can be absorbed by plants, thereby creating a perfect cycle of nutrient re-use.

### 6 FLEXIBLE PVC

- Easy installation with minimal head pressures, which equates to overall efficiency.

### 4 SNORKEL™ VAULT & CENTIPEDE™ MODULE

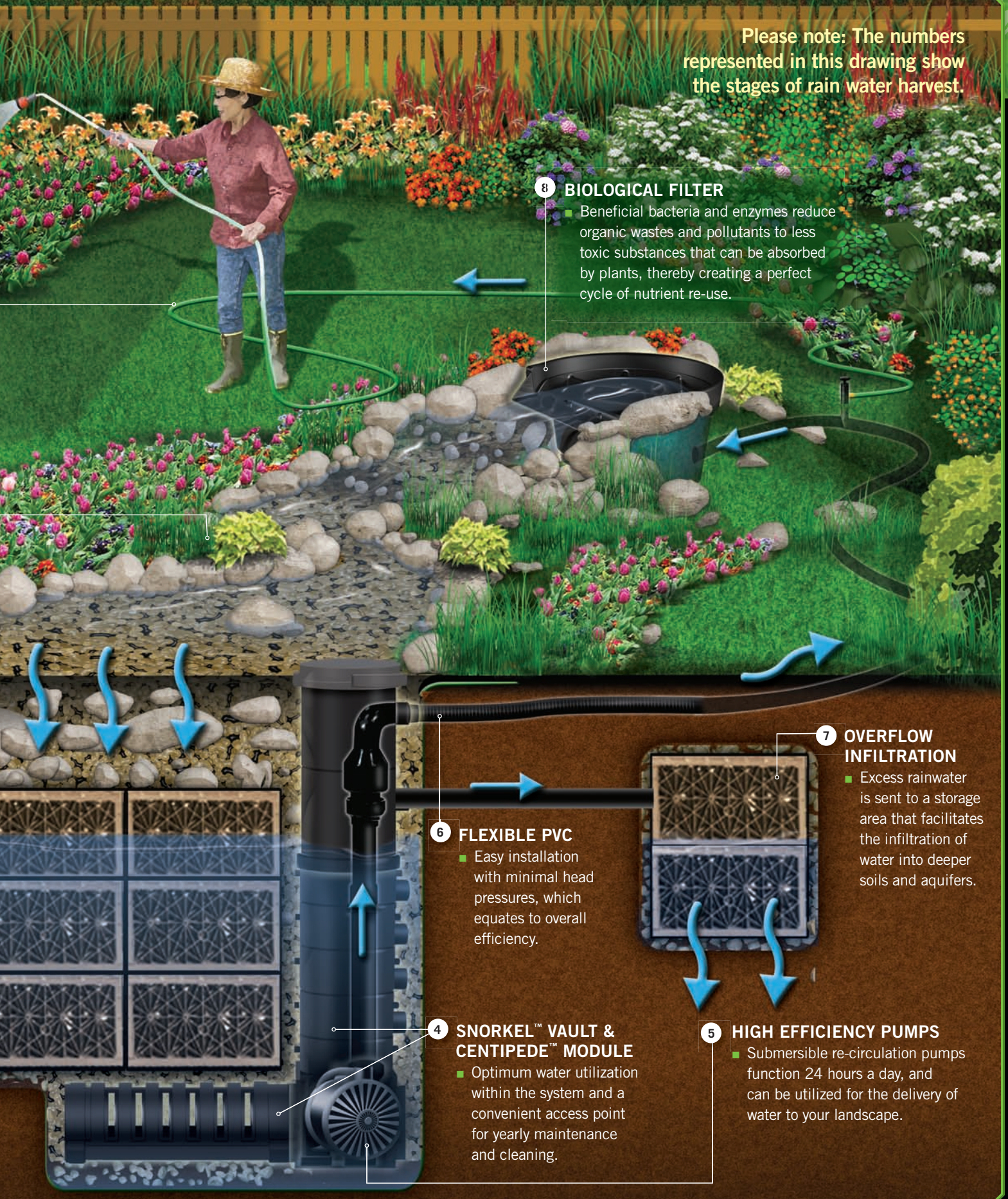
- Optimum water utilization within the system and a convenient access point for yearly maintenance and cleaning.

### 5 HIGH EFFICIENCY PUMPS

- Submersible re-circulation pumps function 24 hours a day, and can be utilized for the delivery of water to your landscape.

### 7 OVERFLOW INFILTRATION

- Excess rainwater is sent to a storage area that facilitates the infiltration of water into deeper soils and aquifers.

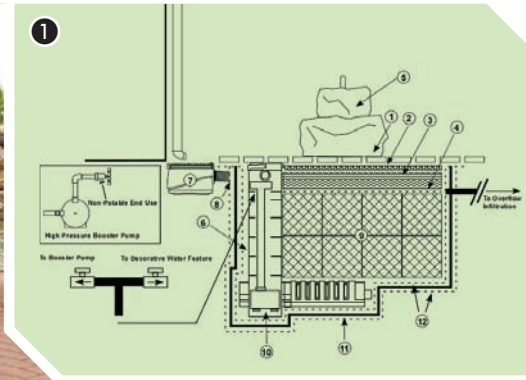


# SUSTAINABLE DESIGN SOLUTIONS

Architects, Builders, Developers, Land Planners, the RainXchange™ System is an ideal solution for your next green building project. Most residential and commercial developments require some degree of an effective stormwater management strategy. This creates an amazing opportunity to not only store excess water, but to cherish its presence by understanding it and turning it into an asset of the design, as opposed to an afterthought. The water feature then becomes a destination point for a family or an outdoor classroom for children.



**Project Design Goal:**  
Capture and reuse the rainwater that falls on a 2,500 sq.ft. patio for irrigation.



**Project Design Solution:** A 3,000 gallon RainXchange™ System was used in combination with a permeable paver patio. A fountain stone was incorporated into the design for filtration while adding a decorative element to the landscape design. A ½ HP booster pump provides water from the storage chamber to the sites irrigation system.



**LEED® POINTS** LEED® (Leadership in Energy and Environmental Design) Points – Using the RainXchange™ System with the AquaBlox™ Matrix® in a project design can earn as many as 12 LEED credits for your project. Contact us for more information on using the AquaBlox™ Matrix® in your next LEED® project.

- **Sustainable Sites** - up to 4 Credits
- **Water Efficiency** – up to 4 Credits
- **Materials and Resources** – up to 3 Credits
- **Innovation & Design Process** – up to 1 Credit

Let our technical agents assist you in meeting your project goals.

# RAINXCHANGE™ SPECIFICATION CALCULATOR

Aquascape's RainXchange™ calculator will walk you through the project requirements and let you know what the application requires

- Tells you what size RainXchange™ System the project will require
- Calculates how much water is generated during a rain storm
- Includes 30-year average rainfall data for your region
- Demonstrates numerous scenarios:
  - The effect of adding or removing downspout filters
  - Water requirements based on different irrigation square footage
  - The impact of different storage basin sizes on overall water savings annually

**VISIT** [www.rainxchange.com](http://www.rainxchange.com)

to utilize our on-line product specification calculator.

## AQUASCAPE'S TECHNICAL SERVICE

We'll take the guesswork out of estimating your project!

Ph: 1.877.766.3489 (U.S.)  
or 1.866.766.3426 (CAN)

Fax: 1.877.329.2348 (U.S.)  
or 1.905.454.7310 (CAN)

E-mail: [tech@aquascapeinc.com](mailto:tech@aquascapeinc.com)

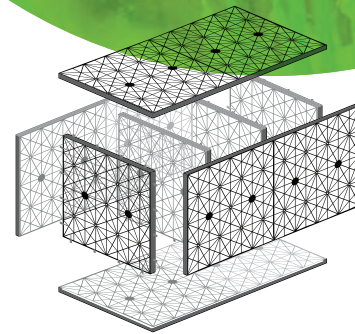
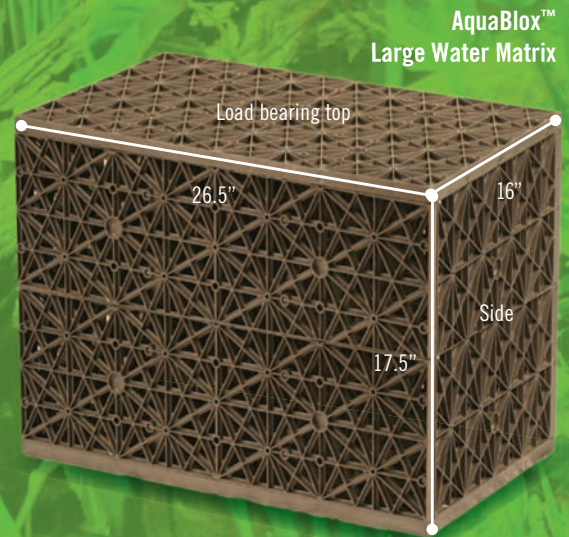


# AQUABLOX™ WATER MATRIX® TANK MODULE

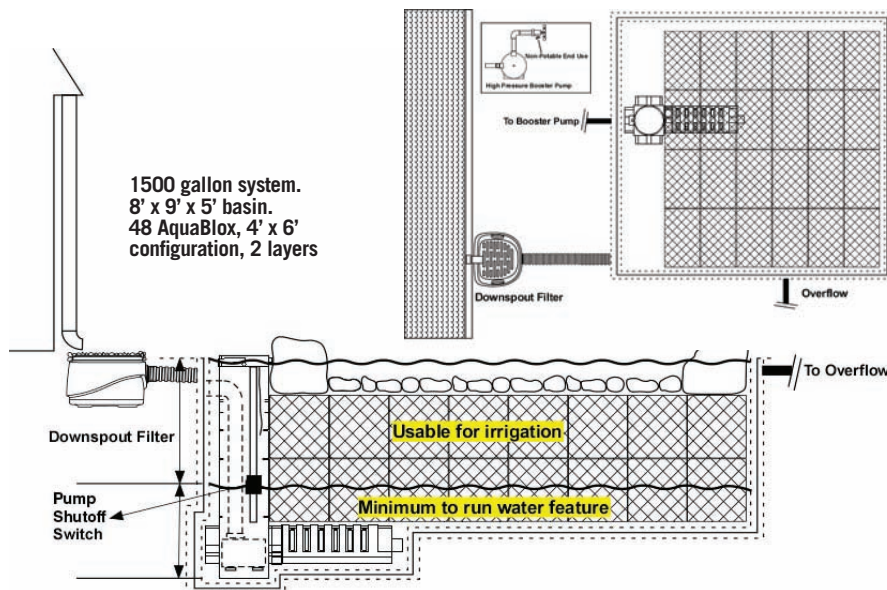
Manufactured using recycled materials, the AquaBlox™ Water Matrix® Tank Module is a lightweight structural component developed through years of research and development.

## PRODUCT FEATURES

- **High Capacity** – 95% void space maximizes water storage.
- **Modular** – Easily create any shape and size reservoir to meet the project's requirements.
- **Use Valuable Space** – The tanks are installed underground preserving the look of your home & garden.
- **Strong Structural Design** – Designed for car loadings up to 38 psi
- **Easy to Transport** – The tanks are efficiently shipped as unassembled panels thereby reducing shipping cost.
- **Lightweight and Quick to Install** – No need for cranes or heavy lifting equipment! Assembled and installed by hand.



Product #	Matrix Size	Matrix Dimensions	# of Parts / Dimensions	Volume	Weight	Load Bearing Weight
29492	Large	26.5"L x 16"W x 17.5"H	4x (26.5" x 16"), 4x (14.5" x 16")	32 Gallon	15.4 lbs.	38 psi (Installed)



## Ultimate Load / Unconfined Crush Testing:

	Imperial	Metric
Crush Load	34 psi	24 t/m <sup>2</sup>
Displacement	0.433"	11 mm
Temperature	46.4-57.2°F	8-14°C

## Side Load:

	Imperial	Metric
Crush Load	3.58 psi	2.5 t/m <sup>2</sup>
Displacement	0.394"	10 mm
Temperature	62.6°F (± 37.4)	17°C (± 3)

Surface Area	95% void
Material	85% recycled Polypropylene + 15% propriety selected materials
Biological & Chemical Resistance	Unaffected by molds, algae, soil-bourne chemicals, and bacteria
Service Temperature	-21.2°F to 131°F (-6°C to 55°C)



# DOWNSPOUT FILTER

- First Stage in Properly Filtering Rainwater -**  
 The downspout filter is installed at the base of the downspout ready to capture and remove a variety of pollutants that may be flushed into the system during a rain event. Incoming rainwater is passed through a series of mechanical filters that remove leaves, twigs, seeds, and small sediment that accumulate on the surface of the roof between rain events.
- Out of Sight** – Traditional rainwater roof filters look like a science experiment off the side of a home. Aquascape's Downspout Filter is buried out of sight at the base of the downspout.
- Utilize our **RainXchange™ Calculator** to determine how many Downspout Filters your project will require. **See page 7 for more details.**



Large surface able to handle up to a 750 sq.ft. roof and more than 50 gallons per minute flow rate.

Grated lid and layer of gravel removes large debris, such as leaves and twigs.

Smaller particulates are captured in a 300 micron, easy to clean debris net.

Molded hose-tail stub fits 3" or 4" corrugated drain pipe.



Durable rotationally-molded unit withstands freeze/thaw conditions.

Small percolation holes at the bottom of the filter allow water remaining after a rain event to slowly percolate out of downspout filter preventing stagnant mosquito-harboring water accumulating in the filter between rain events.

Catalog Code	Product Description
30166	Downspout Filter
30095	Replacement Debris Net for Downspout Filter

# BOOSTER PUMPS

- The Booster Pump is designed to increase the water pressure for basic irrigation.
- The RainXchange™ System is an ideal partner to combine with professionally-installed drip or high pressure irrigation systems.
- Booster Pumps are external pumps that can be located in several areas.
- The Booster Pump plumbing kit includes pipe and a number of fittings to plumb the system for basic irrigation supply.



Booster Pump Plumbing Kit



Catalog Code	Product Description
30084	Booster Pump ¼ HP
30085	Booster Pump ½ HP
30094	Pondless® Booster Fitting Kit
30170	Decorative Booster Fitting Kit

Model	Power (HP)	Cycle (Hz)	Phase (Ø)	Voltage (V)	Amp's (A)	Inlet (NPT)	Outlet (NPT)	H max. (ft)	Q max. (GPM)
Booster Pump ¼ HP	¼	60	1	115 or 230	4.0 or 2.0	1"	1"	72	16.9
Booster Pump ½ HP	½	60	1	115 or 230	6.0 or 3.0	1"	1"	90	18.5

Note: The Booster Pump and Booster Pump plumbing kit are sold separately from the RainXchange™ systems.

# RainXchange™ SYSTEMS

With our easy-to-use, prepackaged RainXchange™ System Kits, you have the flexibility to choose the water storage size and decorative style that suits you! Simply follow the step-by-step selection chart to determine the products required to complete your RainXchange™ System.

## STEP 1 CHOOSE THE RAINXCHANGE™ SYSTEM WATER STORAGE KIT.

### RainXchange™ Water Storage Kits

Each RainXchange™ Water Storage System Includes: AquaBlox™ Water Matrix® Tanks, 45 mil EPDM rubber liner membrane, and two panels of non-woven geotextile underlayment (one to surround the AquaBlox™ Water Matrix® & one to surround the exterior of the EPDM rubber liner)



*Note: the 3000 Gallon RainXchange™ Water Storage Systems also includes the Snorkel™ Vault Extension.*

#### 500 Gallon Water Storage Kit Catalog #30097

- Basin Size: 6'x9'x4'
- 16 AquaBlox™ Water Matrix®
- 15'x 20' Liner and Underlayment

#### 1000 Gallon Water Storage Kit Catalog #30099

- Basin Size: 6'x9'x5'
- 32 AquaBlox™ Water Matrix®
- 20'x 25' Liner and Underlayment

#### 1500 Gallon Water Storage Kit Catalog #30102

- Basin Size: 8'x9'x5'
- 48 AquaBlox™ Water Matrix®
- 25'x 25' Liner and Underlayment

#### 2000 Gallon Water Storage Kit Catalog #30105

- Basin Size: 9'x11'x5'
- 64 AquaBlox™ Water Matrix®
- 25'x 30' Liner and Underlayment

#### 2500 Gallon Water Storage Kit Catalog #30108

- Basin Size: 11'x12'x5'
- 64 AquaBlox™ Water Matrix®
- 25'x 30' Liner and Underlayment

#### 3000 Gallon Water Storage Kit Catalog #30112

- Basin Size: 9'x11'x6'
- 96 AquaBlox™ Water Matrix®
- 25'x 30' Liner and Underlayment
- Snorkel™ Vault Extension

## STEP 2 CHOOSE YOUR WATER FEATURE.

### Decorative Fountains

Select from a number of decorative bubbling urns and stone fountains that sit on top of the RainXchange™ Water Storage System. The water spills over the top of the decorative piece and flows back down into the RainXchange™ Water Storage System where it is re-circulated.



#### Decorative Fountain Pump and Vault Components Catalog #30170

- Snorkel™ Vault and Centipede™ Module
- One Downspout Filter (additional units may be purchased separately)
- AquaSurge™ 2000 High Efficiency Pump
- Decorative Fountain Plumbing and Installation Kit



### Pondless® Waterfall

This water feature is made up of a waterfall or stream that flows and then disappears gracefully into the gravel.

**Please note:** Determine the desired length of stream and waterfall, then choose the appropriate stream liner found on the next page.



#### Pondless® Waterfall Pump and Vault Components Catalog #30098

- Snorkel™ Vault and Centipede™ Module
- One Downspout Filter (additional units may be purchased separately)
- AquaSurge™ 4000 High Efficiency Pump
- Pondless® Plumbing Kit in includes assortment of fittings and ¾"x25' Kink-Free Pipe

## STEP 3 CHOOSE THE DECORATIVE FOUNTAIN OR PONDLESS® WATERFALL FILTER

Utilize the RainXchange™ Specification Calculator at [www.rainxchange.com](http://www.rainxchange.com) to determine the water storage requirements for your project or call our Technical Department at 877.766.3489 (U.S.) or 1.866.766.3426 (CAN) and let one of our Technical Agents help you estimate your next project.



**Tan/Black Ceramic Angled Top Urn**

Catalog #98470

- 18" Dia. x 35" H
- Unit Weight 64 lbs.



**Natural Mongolian Basalt Column**

Catalog #98503

- 12" Dia. x 30" H
- Unit Weight 330 lbs.



**Pouring Stone Roman Vase**

Catalog #98550

- 20" Dia. x 19" H
- Unit Weight 295 lbs.



**Blue Vertical Grooved Ceramic Pot**

Catalog #98479

- 22" Dia. x 23" H
- Unit Weight 90 lbs.



**Cascading Twisted Stone Water Column Fountain**

Catalog #98547

- 12" L x 12" W x 30" H
- Unit Weight 228 lbs.



**Tan/Green Ceramic V-Shaped Urn**

Catalog #98477

- 23" Dia. x 26" H
- Unit Weight 66 lbs.

For a wider selection of Aquascape's Decorative Fountains please refer to the Aquascape™ Water Garden Products Catalog (Catalog # 98623)



**Pondless® Waterfall Filter Components** Catalog #29634

- Signature Series™ BioFalls® Filter 2500
- 2x 12 Volt 10-Watt Waterfalls Lights
- 1x 12 Volt 60-Watt Photocell Transformer
- 2" x 25' Flexible PVC water pipe



### ADD-ON STREAM LINERS

**Box Contents:** 10' wide by 10', 20' or 30' long stream liner (not included in any box listed above)  
(NOTE: when adding stream, additional pipe and coupling may be needed)

- 29607** Stream Liner 10x10 29 lbs.  
**29612** Stream Liner 10x20 58 lbs.  
**29616** Stream Liner 10x30 87 lbs.



# RainXchange™

Rainwater Harvest Systems

By Aquascape Inc. market leader in water features.

Aquascape's ecosystem approach to water gardening is based on recreating a naturally functioning ecosystem. Water circulation, filtration, fish, plants, rocks and gravel all used to ensure a balanced system and long term sustainability.

Aquascape is committed to further expand its environmental position by developing innovative new products with a focus on the environment and the long term sustainability of the world's most precious resource, water.

The RainXchange™ System offers companies, as well as consumers the opportunity to do their part to address some of the challenges associated with drought and the increasing problem of excessive rainwater run-off.

To learn more about Aquascape as a company and our initiatives please log onto our website at [www.aquascapeinc.com](http://www.aquascapeinc.com).

For more information on the RainXchange™ System,

**VISIT** [www.rainxchange.com](http://www.rainxchange.com)

**Do you qualify for government assistance?** More and more government municipalities and agencies are requiring residential on-site storm water management; some even offer rebates and tax incentives. Let us help you determine if the RainXchange™ System is a solution to these regulations and programs.



Aquascape Inc. headquarters  
St. Charles, Illinois



U.S. 901 Aqualand Way • St. Charles, IL 60174  
Toll Free: 866.877.6637

CAN 100 West Creek • Brampton, ON, L6T 5V7  
Toll Free: 866.766.3426

Item #30169  
IDD 08086645-080181

[www.aquascapeinc.com](http://www.aquascapeinc.com)

©2008 Aquascape, Inc. All Worldwide Rights Reserved