





SKYHARVESTER | TURNKEY WATER HARVESTING SYSTEMS



A SINGLE SOURCE SOLUTION FOR WATER HARVESTING & RE-USE



REMOTE MONITORING WITH WATERVISION CLOUD



Watervision Cloud is a remote monitoring system that's accessible from any webenabled device or computer, with no software required. Remote monitoring technology allows you to easily access your water harvesting system data anywhere, anytime.



FEATURES AND BENEFITS OF WATERVISION CLOUD

- Alerts for alarm conditions, water levels, pump status, etc. via email or text
- Graphing of historical data to analyze system trending
- Report generation for ROI justification of water and energy savings
- Manage data from multiple properties/systems in one easy-to-use website
- Compile cumulative data over time and multiple properties for total system management
- Works with all types of water harvesting systems including rainwater, stormwater, cooling tower blowdown, and AC condensate
- Reduces costs by minimizing down-time & optimizing operational efficiency
- Turns the end user into a true water manager



THE SUSTAINABLE, COST-EFFECTIVE WATER MANAGEMENT SOLUTION

"Single Source Responsibility: to the greatest extent possible, obtain the system components from one source and from a single manufacturer."

Excerpt from The Federal Green Construction Guide for Specifiers, 2010

WHAT IS A SKYHARVESTER[™] SYSTEM?

Watertronics, a Lindsay company, offers SkyHarvester - a singlesource solution for commercial water harvesting systems for new or existing building sites. A water harvesting system gathers water from one or more building locations such as rooftops, parking lots, and air conditioning units to store, filter and distribute water for your specific use.

Our team of engineers will work with you to develop a customized SkyHarvester system, supported by detailed drawings and complete design documentation. As a result, your system will provide dependable, cost-effective performance for years to come.

A COMPLETE SKYHARVESTER SYSTEM INCLUDES:

- Tank pre-filter selected depending on water collection source
- Above or below ground storage tank with capacityranging from 3,000 to 1 million gallons
- Pre-packaged engineered Watertronics pump station
- UL-508 Motor Control Panel with intuitive touch screen operator interface
- The ability to control up to three replenishment water sources
- Optional automatic discharge filtration & water treatment
- Optional ability to connect to building management system via serial MODBUS
- Reliable service for the life of your system with Pump Service Network's certified technicians



The Water Harvesting Process

Each project should begin with a complete analysis of available water sources to maximize potential and desired end use. The following steps will lead to a successful water harvesting system.



1. CATCHMENT

The catchment area can be any surface that water falls upon or any device that discards water.

Depending on what surface we're collecting water from, the level of filtration necessary may vary. This is where pre-filtration comes in.

- Hard surface roofs
- Cooling towers
- Parking lots
- Air conditioning units
- Synthetic turf
- Children's splash pads



2. PRE-FILTRATION

A pre-filter is used to remove dirt, debris and organic matter from the harvested water in order to keep the storage tank clean, resulting in better water quality and less tank maintenance. The level of filtration depends on what surface the water is collected from. Here are a few things to remember when following the pre-filtration step:

- Some filters have oil-water separation; others offer automatic self-flushing capabilities
- The best way to filter is at the source
- The better the filtration upstream, the less money/effort is required for filtration downstream





3. STORAGE

Selecting the proper storage vessel is one of the most important decisions in the harvesting process. An improperly sized tank can mean running on 5% vs. 95% harvested water. Tank placement on the property is a key factor and should optimize commercial land values. Criteria in selecting the tank size include:

- Average rainfall
- Collection area
- Other available water sources
- Water consumption requirements



4. PUMPING

The pump station is the heart of the water harvesting system. The leader in pump station manufacturing, Watertronics has over 30 years experience and 7,000 pump station installations worldwide. Each unit is dynamic factory tested and will arrive ready to perform as promised.

- Pumps can be submersible (inside the tank or wet well) or self-enclosed horizontal centrifugal units
- Pump stations can be Variable Frequency Drive (VFD) driven or constant speed



5. CONTROLS

SkyHarvester systems operate independently without human intervention and are self-protecting. Our intuitive advanced control technology provides the following information:

- Tank level in inches, gallons and percent full
- Run-time hours
- 14 different alarms with time/date-stamp log
- Filtration status and set-points
- Replenishment water status and set- points
- Lifetime total and user-resettable counters for:
 - Total harvested water used
 - Total replenishment water used, up to 3 sources
 - Total power consumption data (when selected)
- Real-time flow and pressure display of harvested water
- Real-time flow display and on/off status of replenishment water

- Real-time power consumption (optional)
- Ability to adjust all system parameters/set-points, including:
 - Pressure regulation: Single setpoint mode or flow-based mode
 - Water level set-points: pump alarm level, pump reset level, alternate source on/off
 - Post-filtration set-points: Pressure differential based on flow or single set-point, total gallons pumped through filter, timed interval, flush duration, flush dwell time (multiple filters)
- Ability to communicate with building management system via Serial MODBUS



6. POST-FILTRATION & WATER TREATMENT

Post-filtration and water treatment are custom designed to meet each project's final water use requirements. Discharge filters are fully automated by the system controls.

Standard drip irrigation typically requires filtration to the 100 micron level, while UV can require screen sizes down to 5 micron.

For particulate screening (TSS), the automatic suction scanner filter utilizes an internal cleaning mechanism that doesn't require manual disassembly like other traditional filters. SkyHarvester systems use a real-time injection method proportional to the flow rate for precise, consistent concentrations of dye.

Various treatments include:

- UV
- Chlorination
- Media filtration
- Ultra-filtration
- Reverse osmosis

7. REPLENISHMENT WATER

Most customers include a replenishment water source to prevent water shortages and protect valuable investments such as expensive landscape plantings. It is important to consider the design of the replenishment water system, as errors could lead to major liabilities particularly in toilet-flushing applications. If a backup water supply is determined to be necessary, there are two options available:

- Direct plumbing to water distribution system, or
- Routing to storage tank for filling as necessary





A 20,000-gallon composite tank buried beneath a parking lot at UNUM Insurance stores rainwater without compromising valuable real estate.

SOME OF OUR CUSTOMERS

Coca-Cola Distribution Center, Lexington KY Walmart, multiple locations Radio Flyer, Chicago IL **TDAmeritrade** Corporate Headquarters, Omaha NE Tactical Unmanned Aerial Support Facility, US Military UNUM Insurance, TN Carmax, Potomac Mills VA Kansas City Performing Arts Center parking garage Project Rainbow at the Bemis Center, Omaha NE Georgia World Congress Center Old Dominion University, VA

- Penn State Millennium Building
 Penn State Henderson Building
 Haas Park, Chicago IL
 Cedar Rapids Library, IA
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 Dale City Fire Department, VA
 Salvation Army Kroc Center, Memphis TN
 Piedmont Natural Gas, TN
 US Embassy, Tijuana
 Utah Natural History Museum
 Klein School Park Elementary, TX
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- Texas State University North Dormitory University of Wisconsin, Milwaukee Residence Hall Milwaukee Clock Shadow Building Northwestern University SIlverman Hall Staten Island Court House Nashville Play Park, TN Ocean Springs Splash Pad, MS Lancaster General Hospital, PA Memphis Airport, TN Cottage Grove City Hall, MN City of Oakville Transit, Ontario W.L. Gore Manufacturing Facility, ΑZ



Service backed by PSN with over 200 certified technicians in the field proudly supporting over 7,000 installations worldwide.





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Lean, Clean and Green. Lindsay Corporation is committed to developing environmental awareness and implementing sustainable practices to reduce the use of and protect energy, water, and all other resources.



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