HEEMER ENGINEERING
108 Stoney Creek Court
Pewee Valley, KY 40056

April 14, 2006

Mark Sanders
Chairman
WaterSaver Technologies, Inc.
13450 US Highway 42
Suite 214
Prospect, KY 40059

Subject: Contribution of AQUS System relative to USGBC LEED

Dear Mr. Sanders:

As requested we have reviewed the AQUS System as it applies to the United States Green Building Council LEED certification. The LEED program was developed by the USGBC to encourage building owners and other vested parties to build and maintain buildings that provide for a sustainable environment. The AQUS System utilizes waste water from bathroom lavatory sinks and reuses this water for flushing toilets. This allows for both a reduction in waste water generated and a reduction in the use of potable water. Both points are recognized by LEED-NC 2.2 as a source of points to obtain LEED Accreditation.

The AQUS system is a device that stores what would normally be waste water drained from bathroom lavatory sinks and routes this to a storage reservoir under the sink. Prior to entering the reservoir the water is run through a sanitizing device. Upon toilet flush the system recognizes the need to refill the toilet flush tank and pumps water from the storage reservoir to the flush tank. This reduces the amount of waste water that would otherwise go directly from the lavatory drain to the sewer and also reduces the amount of clean potable water needed to flush toilets.

One of the two LEED points this system helps the building achieve is the “Innovative Wastewater Technologies” credit. One point is awarded for reducing sewage conveyance from the building by 50% over what is considered a standard building. The reduction in waste water by using the AQUS System will vary by building type and occupancy. This review looked at two cases; Residential building with a 4 person family, and a small office building with 8 occupants working 8 hour days 5 days per week with no urinals in the building. Calculations are enclosed with this letter. All conclusions were based on the assumptions and calculations as dictated by LEED-NC 2.2 to determine reduction in waste water.

The analysis indicated a 12 percent reduction in waste water for the residential building, and a 26 percent reduction in waste water for the office building. For both cases the

AQUS System shows a large reduction in sewage waste discharged from the building. This system coupled with other strategies, such as low water rate fixtures, can get the waste water conveyance reduction above 50% providing for 1 point towards LEED Accreditation.

The second LEED credit that the AQUS System applies to is the Water Efficiency Credit (WE) 3.1 and 3.2 "Water Use Reduction". One point is obtained under credit WE 3.1 for a 20% reduction in potable water use as compared to what is defined as a standard building under LEED-NC 2.2. One additional point may be obtained under credit WE 3.2 if the potable water use reduction is 30% or more.

The reduction in waste water is equivalent to the reduction in potable water use for the AQUS System. For this reason, the residential case shows a 12 percent reduction in water use, and the office building shows a 26 percent reduction in water use. The office building would qualify for 1 point as it applies to Credit WE 3.1 and falls just 4% short of additional point for Credit WE 3.2. The AQUS system used with other water using strategies provides a viable option for water use reduction as required by LEED-NC 2.2.

In conclusion, the AQUS System could be used successfully alone, depending on building type and use, or with other water savings and waste water reduction technologies in an overall strategy to reduce waste water and potable water demands of a building to comply with and achieve points under the Water Efficiency Section in a submittal to the USGBC in an attempt to obtain LEED Certification. As with any waste water reuse system local codes as it applies to the use of such systems should be reviewed to ensure the system is in compliance with local jurisdiction codes and requirements.

I have been a Licensed Professional Mechanical Engineer since 1992 working in plumbing building design and construction throughout my 20 year career. I am also a LEED Accredited Professional and have worked on various LEED and SPiRiT, Sustainable design program based on LEED-NC 2.0 for the Army Corps of Engineers. The views in this letter are based on my professional opinion and on the calculations provided. If you should have any questions on this report or the assumptions and calculations as required for LEED submittal requirements, please call me to discuss.

Sincerely,

Jim Heemer, P.E., LEED-AP
Mechanical Engineer

Enclosure