

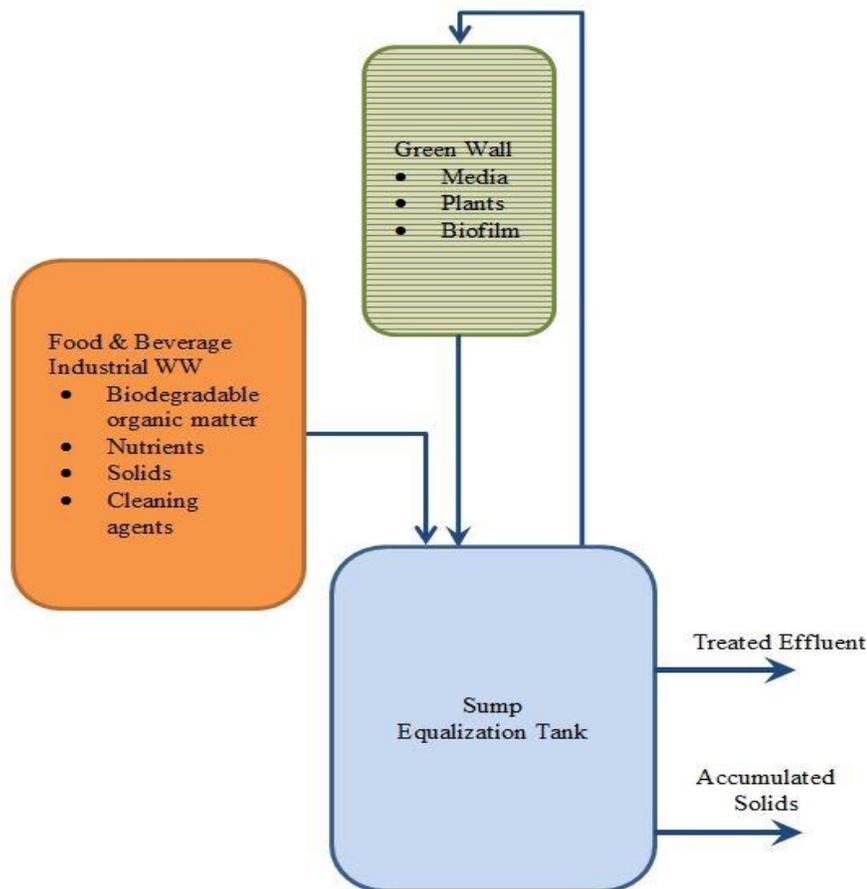
Technology Commercialization Opportunity

Green (aka living) Wall pretreatment process for wastewater generated by food and beverage manufacturers

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Background and Technology Description

The Green Wall pretreatment process was designed to treat wastewater (WW) generated by small to medium sized food and beverage manufacturers prior to discharge to sanitary sewers or onsite septic systems. The Green Wall pretreatment system includes an equalization (EQ) tank, pump(s), and wall(s) of parallel flow tubes that contain porous media and plants. The wall of parallel flow tubes that contain porous media and plants is referred to as the Green (aka living) Wall in this document.



Green Walls offer an attractive alternative to traditional pretreatment processes. It has lower capital and O&M costs, provides similar reduction in organic matter and solids, simple operation and maintenance, provides a “green” alternative to sometimes energy intensive pretreatment processes, and could possibly be used to produce plants and/or parts of plants that can be harvested. Also, Green

Walls require minimum floor space because they are located on vertical surfaces. If the climate allows, the Green Walls can be installed on exterior walls.

A Green Wall used as a treatment system also offers many of the same benefits of architectural Green Walls, namely reduction of urban heat island effect, improved air quality, aesthetic enhancement, improved energy efficiency, building structure protection, local job creation, improved energy efficiency, noise reduction, green marketing potential, source of Leadership in Energy & Environmental Design (LEED) points, increased biodiversity, improved health and well-being, and urban agriculture.

Keywords: Green wall, living wall, wastewater, pretreatment, fermentation

Technology Readiness

The Green Wall pretreatment system has been tested at a conceptual level.

Idea	Concept	Prototype	Alpha Version	Beta Version	Released
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The developers of the Green Wall pretreatment process could be available to work with licensees to further develop the technology.

Intellectual Property

This Green Wall technology is the subject of a pending US Patent Application.

Applications

Green Walls could be used to provide pretreatment to WW generated by small to medium sized food and beverage manufacturers that can be characterized by variable flow rates, high organic loading (biochemical oxygen demand (BOD) or chemical oxygen demand (COD)), low pH and high carbon-nitrogen ratios. The Green Wall system may be installed at the manufacturer's facility and upstream of their discharge to municipal sanitary sewer system or existing septic system. Potential users of Green Walls for WW pretreatment includes, but is not limited to fermentation industries.

Target Customers/Uses

Craft breweries, wineries, distilleries, cideries, meaderies, creameries, yogurt companies, cheese makers, ice cream manufacturers and etc.

Opportunity

RIT's Intellectual Property Management Office (IPMO) is interested in working with those parties who are qualified and interested in the commercialization of this Green Wall technology. Arrangement types include licensing the application to existing organizations or new organizations that have expertise in the field or related fields.

Contact

Those interested in learning more about this opportunity should contact:

Mr. William E. Bond, Director of Intellectual Property Management at RIT (585) 475-2986, bill.bond@rit.edu. Please Refer to ID 2017-006