

# Innovative Process Improves Digestion and Reduces Energy Demand

In 2005, Baswood installed its proprietary BioVore™ biosolids reduction system at the Glasgow Water Company (GWC), treating the waste activated sludge (WAS) from the facility's activated sludge wastewater treatment system. The system has an average biosolids digestion rate of 60%. Utilizing Baswood's patented Aerobic/Anaerobic Integrated Microbial Succession (AIMS) technology and innovative 'Dry Cycle' process, the system maximizes digestion with limited energy demand. Installed as part of a technology demonstration project championed by the State of Kentucky, the system soon became an active part of GWC's treatment works. The BioVore™ has effectively treated more than 12 million gallons of biosolids to date.

## Process Overview

The Baswood BioVore™ was seamlessly integrated into GWC's existing plant to improve the biosolids management practices of the facility. A series of fixed film reaction vessels with aerobic, facultative, and anaerobic zones promote maximum biological digestion. The high quality clarified effluent can be discharged to tertiary treatment and any residual solids are suitable for land application.

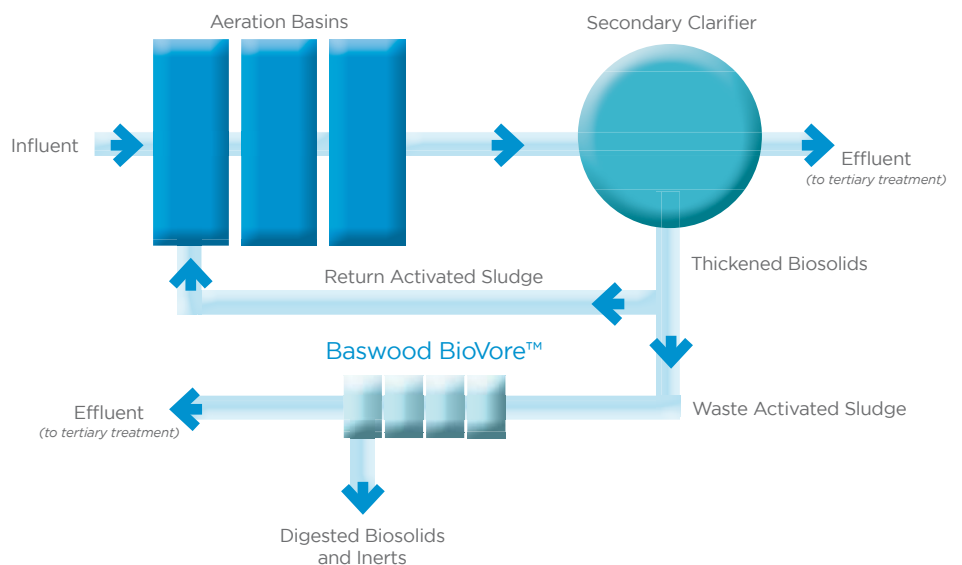
The innovative AIMS biological process has proven to be more effective for digestion of WAS, when compared to the facility's existing aerobic digestion system. The BioVore™ uses less than 50% of the required power and has a hydraulic retention time (HRT) of less than 24 hours.

In addition, any biosolids discharged from the BioVore™ have improved dewatering characteristics. Installation of a belt press would further reduce the net volume of material requiring disposal.

The system utilizes Baswood's patented 'Dry Cycle' process that increases solids retention, reduces hydraulic retention, and maximizes biological digestion. The overall treatment process is reliable and has a low cost of operation and maintenance. A proprietary SCADA control system provides automated operation and remote monitoring/operating capabilities and requires minimal operator training.

The BioVore™ can be sized to process the biosolids produced by a 0.5 mgd – 8 mgd wastewater treatment system. It is modular and scalable in design, requiring minimal capital investment if expansion is needed to accommodate growth in existing plant capacity.

*The BioVore™ easily integrates into existing wastewater treatment facilities*



## Performance

PARAMETER	INFLUENT (mg/l)	EFFLUENT (mg/l)*	REDUCTION
VSS	6,187	1,920	69.0%
COD	10,144	2,540	75.0%
TKN	394	181	54.0%
Phosphorus	340	102	70.1%

\*prior to clarification

*Settling tests show the effectiveness of the BioVore™ WAS digestion and clarification*



*Influent*

*Post Digestion*

*Post Clarification*

## Advantages/Benefits

The Baswood BioVore™ has unique advantages over other systems:

- Superior digestion rates compared to other treatment options (60%+), translating to less material to manage and lower transportation and disposal costs
- Low HRT (<24 hours) allows for more biosolids to be processed in a smaller footprint
- An efficient, scalable process that can be quickly mobilized to decrease the cost of biosolids processing and handling or eliminate existing “bottle necks”
- A breakthrough biological process that is robust, with low energy requirements (>50% less) and limited operational oversight, translating to lower life cycle costs and less environmental impact
- Low to no odor process that eliminates community concerns and the added cost of odor treatment equipment
- High quality clarified effluent that can be blended with treatment system discharge

## About Baswood

Baswood offers an environmentally responsible, lower cost alternative to biosolids management. In addition, our proven, patented technologies provide effective treatment of municipal and industrial wastewater streams.

Founded in 2004, the company delivers innovative, technology-based solutions that are economically and environmentally sound. Our systems are compact, customizable, and require less energy and manpower to operate.

The Baswood AIMS technology has a wide range of municipal, industrial, and agricultural applications, particularly where issues with cost, capacity, or energy exist.

## For additional information

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