

“Production agriculture, environmental necessities and raw economics are coming together like never before. Companies on the cutting edge of these efforts, like Bion, can change the entire way farming and natural resources management have been done throughout our history.”

Dan Glickman

U.S. Secretary of Agriculture, 1995 – 2001



Investor Presentation  
Week of July 12, 2010

# Forward Looking Statements

*This presentation contains, in addition to historical information, forward-looking statements regarding Bion Environmental Technologies, Inc. (the "Company"), which represent the Company's expectations or beliefs including, but not limited to, statements concerning the Company's operations, performance, financial condition, business strategies, and other information and that involve substantial risks and uncertainties. The Company's actual results of operations, most of which are beyond the Company's control, could differ materially. For this purpose, any statements contained in this presentation that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the generality of the foregoing, words such as "may," "will," "expect," "believe," "anticipate," "intend," "could," "estimate," "projected" or the negative or other variations thereof or comparable terminology are intended to identify forward-looking statements. Factors that could cause or contribute to such difference include, but are not limited to, limited operating history; uncertain nature of environmental regulation and operations; risks of development of first of their kind Integrated Projects; need for additional financing; competition; dependence on management; and other factors. Investors are urged to also consider closely the disclosures and risk factors in the Company's current Form 10-KSB, filed with the Securities and Exchange Commission, available at [www.sec.gov](http://www.sec.gov).*

# Bion Overview

- Bion's technology largely eliminates environmental impacts of large-scale livestock production (CAFO: concentrated animal feeding operation)
- ONLY technology that provides comprehensive environmental treatment of livestock waste
- Reclaims renewable energy and nutrients from the waste stream
- 30 first-generation systems installed through 2003
  
- Next-generation technology: 20 years and approx \$50 million
- Proven, scalable, commercially-tested
- Being deployed in initial permanent installation: Kreider Farms Project - Phase 1 (Chesapeake Bay)

# Market Overview

OTC BB: BNET

## SHARES (3/31/10)

Outstanding	12M
Fully diluted	22.6M
Est. Public Float	7M

## MARKET SUMMARY (7/8/10)

Market Cap	\$19M
Market Cap FD	\$32M
52-Wk High	\$2.77
52-Wk Low	\$0.85
Recent Price	\$1.50

# Livestock Production: Primary Impacts

## Eutrophication:

A process by which an excess of plant nutrients (eg, nitrogen and phosphorus) reduces the oxygen dissolved within a body of water, producing an environment that does not readily support aquatic life. [Excess nutrients originate from run-off in upstream watersheds. A primary source of N is livestock waste both used as fertilizer and atmospheric deposition of N that originates as ammonia emissions from the waste.]

[www.dnr.state.md.us/criticalarea/glossary.html](http://www.dnr.state.md.us/criticalarea/glossary.html)

## Greenhouse Gas Emissions:

Livestock account for 18% of world total

[2006 UN FAO Report](#)

# Mississippi River Collaborative Report

## March 2010



### CULTIVATING CLEAN WATER

STATE-BASED REGULATION OF  
AGRICULTURAL RUNOFF POLLUTION



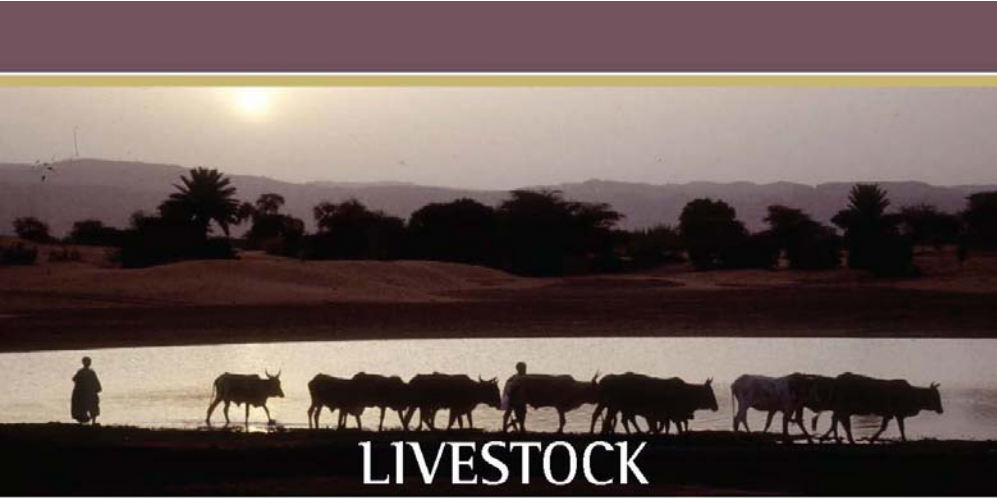
MISSISSIPPI  
**RIVER**  
COLLABORATIVE

According to a task group made up of U.S. EPA staff and state regulators, nitrogen and phosphorus pollution has the potential to become...

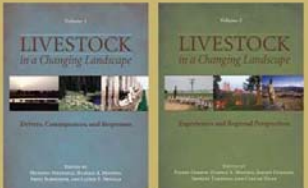
*“one of the costliest, most difficult environmental problems we face in the 21st century.”*

# United Nations Food and Agriculture Organization

## March 2010



**LIVESTOCK**  
**IN A CHANGING LANDSCAPE**



Launch of Publication and Way Forward Workshop  
4-5 March 2010 • Swiss College of Agriculture, Zollikofen, Switzerland

Provisional agenda

The rapid increase of intensive (confined) livestock production and the land and livelihood needs of extensive production (rangeland grazing) are crucial challenges.

The livestock sector emerges as a very significant contributor to environmental problems at every scale from local to global, including land degradation, climate change and air pollution, water shortage and pollution and loss of biodiversity.

# Increased Watershed Density and Concentration



From a couple cows...

To more cows...



- More than half of U.S. livestock now reside on CAFOs
- US EPA estimates over 20,000 CAFOs in US today
- Many, scattered smaller farms are just as bad, in some ways worse

...to **CAFO's**

# US Livestock Census

2006 USDA-NASS

- Dairy cows: 9,112,000
- Cattle/calves: 105,200,000
- Swine: 61,687,000
- Poultry: 1,800,000,000

US livestock produce more than 1.4 billion tons of effluent waste annually that is essentially untreated

# Global Livestock Census

FAOSTAT.com - 2008 values

- Dairy cows: 247,000,000
- Cattle/calves: 1,300,000,000
- Swine: 1,200,000,000
- Poultry: 60,000,000,000

Global livestock produce more than...

# Traditional Livestock Waste Disposal

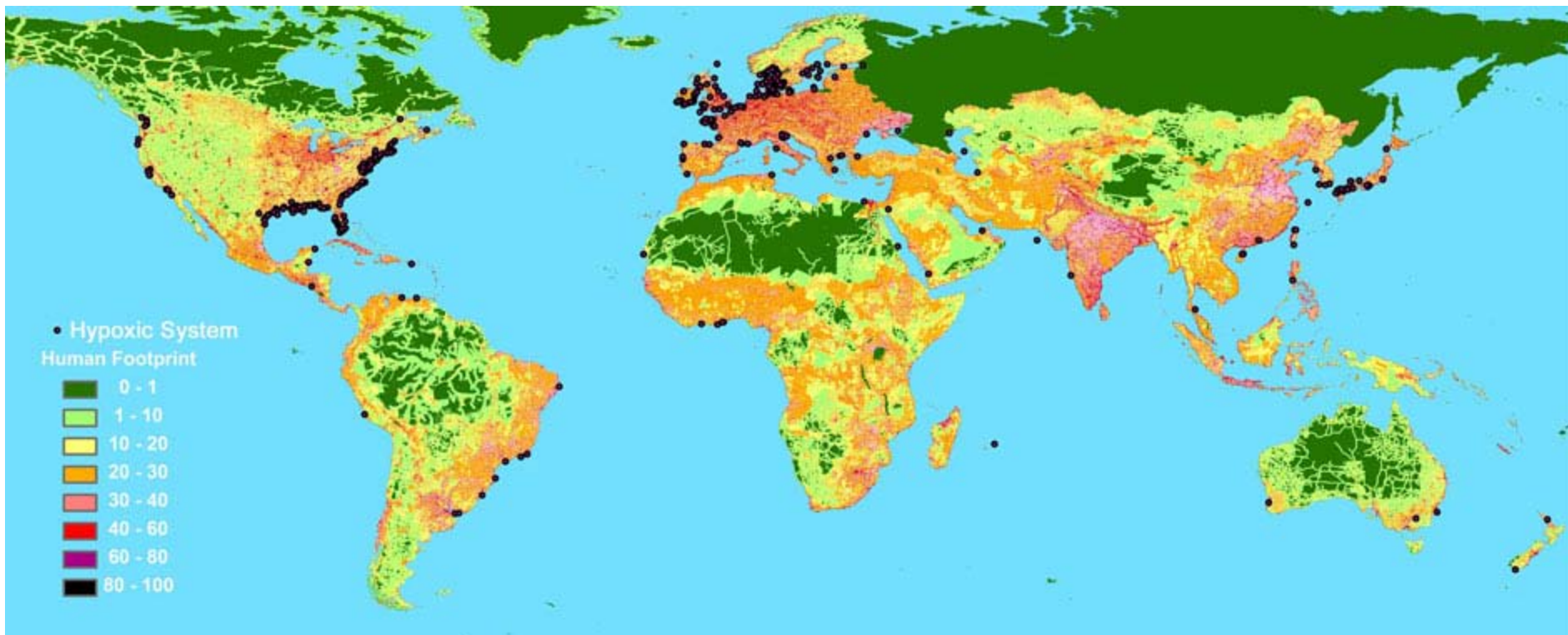


- Untreated livestock waste is “land-applied” for its fertilizer value (N & P)
- ~50% of the N volatilizes (as ammonia) prior to and after land-application
- All of the ammonia is re-deposited downwind as water-soluble N
- Much of remaining N runs off to contaminate ground or surface water
- N is increasingly concentrated as it travels downstream
- US: livestock among top-six greenhouse gas-producing industries

# Gulf of Mexico 'Dead Zone'



# Global Dead Zones



“The number of such seabed zones – caused when massive algal blooms feeding off pollutants such as fertiliser die and decay – has boomed in the last decade. There were some 405 recorded in coastal waters worldwide in 2007, up from 305 in 1995 and 162 in the 1980s.” - [guardian.co.uk](http://guardian.co.uk)

# Livestock Waste Environmental Impacts

1998 EPA Report: livestock waste had already polluted 35,000 miles of rivers in 22 states and contaminated groundwater in 17 states.

2000 [EPA Water Quality Inventory](#): agriculture is the leading source of pollution in 48 percent of river miles, 41 percent of lake acres (excluding the Great Lakes), and 18 percent of estuarine waters found to be water-quality impaired.

2003 [Pew Oceans Commission Report](#): “runoff of excess nitrogen from animal feedlots is one of the greatest pollution threats to coastal marine life today.”

2005 University studies: ammonia emissions from livestock facilities identified as a major source of nitrogen contamination in the Chesapeake Bay Watershed, [Rocky Mountain National Park in Colorado](#), and many other areas.

2006 [UN FAO Report](#): global livestock sector "one of the top two or three most significant contributors to the most serious environmental problems at every scale.”

2008 [Pew Commission on Industrial Farm Animal Production Report](#): “The IFAP system often poses unacceptable risks to public health, the environment and the welfare of the animals themselves.”

# Livestock Waste Environmental Impacts

2008 US GAO Report: [Concentrated Animal Feeding Operations: EPA Needs More Information and a Clearly Defined Strategy to Protect Air and Water Quality from Pollutants of Concern](#)

2010 World Resources Institute: [How Nutrient Trading Could Help Restore the Chesapeake Bay](#)

2010 Environmental Law & Policy Center/Mississippi River Collaborative: [Cultivating Clean Water - State-based regulation of agricultural runoff pollution](#)

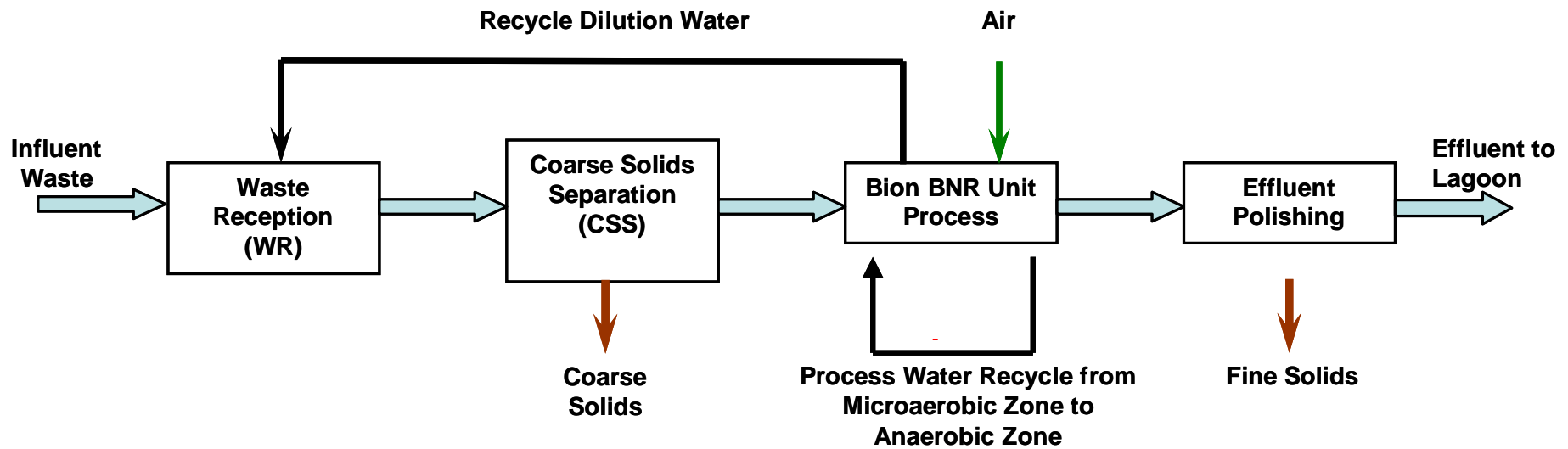
2010 UN FAO: [Livestock in a Changing Landscape](#)

# Bion Nutrient Management System

- Biologically stabilizes and treats N&P to substantially reduce volatilization and run-off
  - Preserves valuable nutrients (now stabilized for slow-release) for re-use
- Reduces greenhouse gases 90%; H<sub>2</sub>S removal >80%
- Largely eliminates pathogens and suggests removal of antibiotics, hormones
- Provides platform for efficient renewable energy recovery
  - modular, adaptable to current best-technology
- Proven – [peer-reviewed study](#), scalable, commercially-tested
- 10 US/5 international patents issued; 3/6/16 pending

ONLY COMPREHENSIVE ENVIRONMENTAL SOLUTION  
AVAILABLE

# Simplified Bion System Diagram



# Waste Biomass to Energy

- There is NO proven scalable technology that can provide profitable renewable energy production from 'wet waste'
- Bion approach: renewable energy from 'coarse' solids
  - Today: solid combustible fuel for on-site use
    - 25 net MBtu (~MCF) per dairy cow per year
    - 10 net MBtu per beef cow
  - Proposed Dairy Project (~80K milkers/140K total)
    - Replace ~2,700,000 MCF natgas use annually
  - Tomorrow: syngas, transportation fuel, ?
- High-volume, repeatable and consistent cellulosic/biomass feedstock

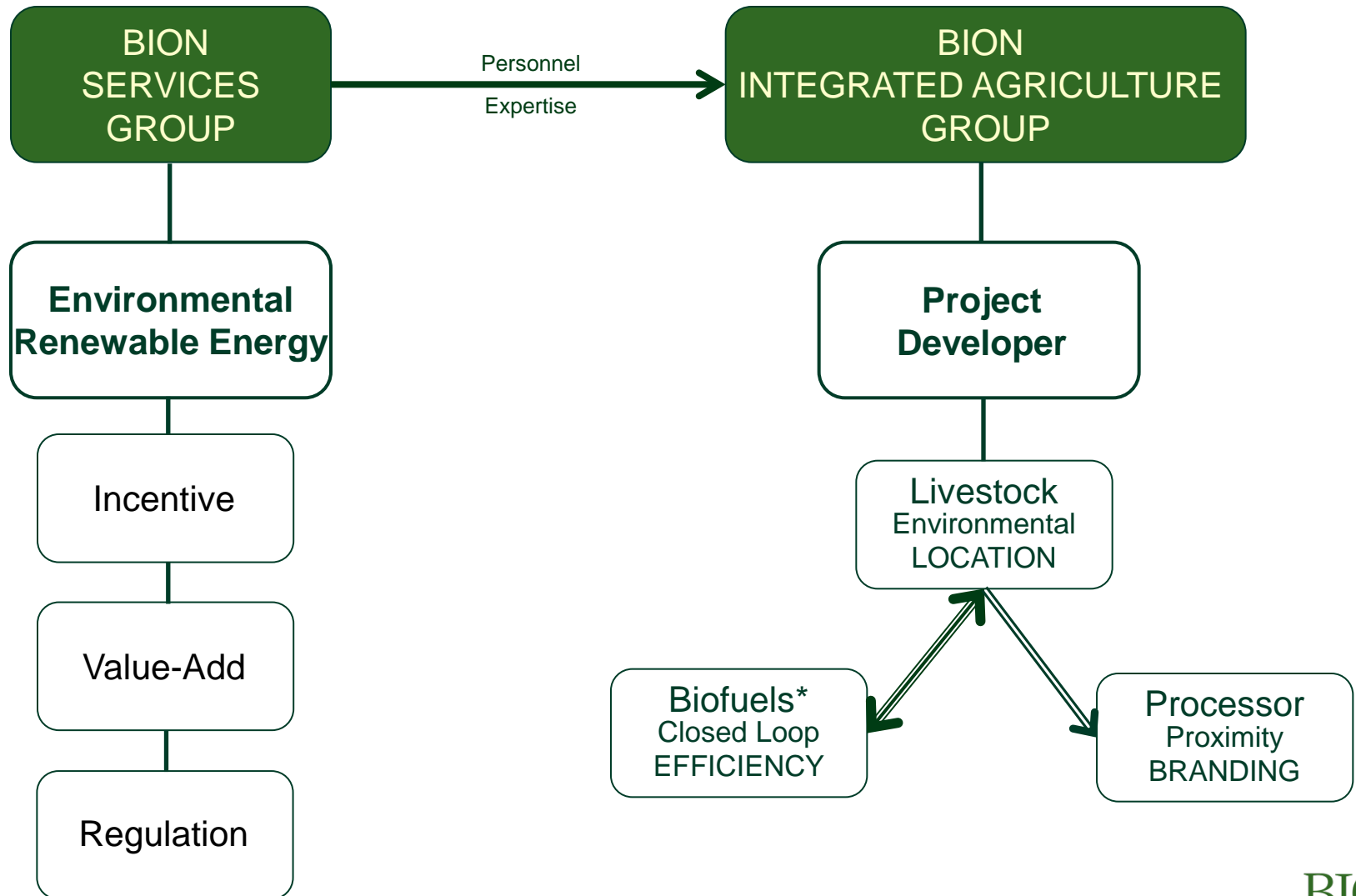
**BION WILL UTILIZE THE MOST EFFICIENT RENEWABLE ENERGY RECOVERY PROCESS AVAILABLE AT THE TIME**

# Competition

*“There has been continuing significant process development activities addressing various bio-conversion, combustion, gasification and other methods to deal with livestock waste. These efforts face substantial hurdles to apply technically feasible technologies to manure streams contaminated by materials introduced by typical animal production (dirty feed-stocks) and the inherent variability of the material generated. Processes that have worked in a lab just haven’t translated to the rigors and reality of the field because they cannot cope with the normal or even low levels of contaminants at typical variability. The Bion process and treatment systems apply a fundamental approach that accommodates the dirty feed-streams and variability in a manner similar to those applied to municipal wastewater treatment, while adapting our designs to deal with concentrations three to five times that (or greater) of a raw municipal wastewater. Successful nutrient and atmospheric emission control is thereby achieved at a substantially reduced cost compared to conventional municipal technologies, by this robust and effective system that performs as well on the animal production facility, at scale, as it does at pilot-scale.”*

James A Morris, PhD, Bion CTO

# Bion's Market Opportunities

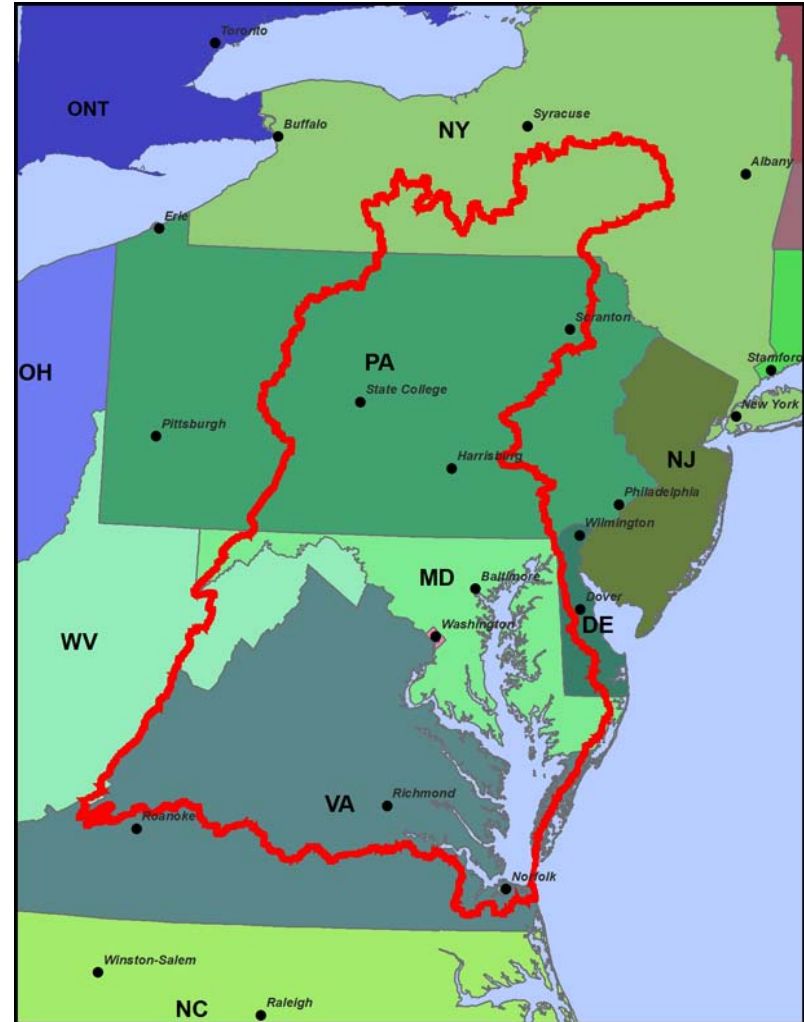


# Bion Services Group Opportunity



# Chesapeake Bay Program

- Chesapeake Bay Program
- Began in 1985 to reduce excess nutrients
- Restore serious declines in oyster, crab, fish stocks
- Missed all targets to date
- **ONLY POINT-SOURCES CAN BE REGULATED**



# Chesapeake Bay Executive Order



- Executive Order 13508 (May 12, 2009) recognizes the Chesapeake Bay as a national treasure and calls on the federal government to lead a renewed effort to restore and protect the nation's largest estuary and its watershed.
- 2025 requirement to reduce 60M pounds N
- Estimated cost: \$15B to \$28B

Executive Order 13508

Strategy for  
Protecting and Restoring  
the Chesapeake Bay  
Watershed

May 12, 2010

Source: Adrian Jones/Wikimedia Library

Source: NPS

Source: NPS

Source: NPS

Developed by the Federal Leadership Committee for the Chesapeake Bay

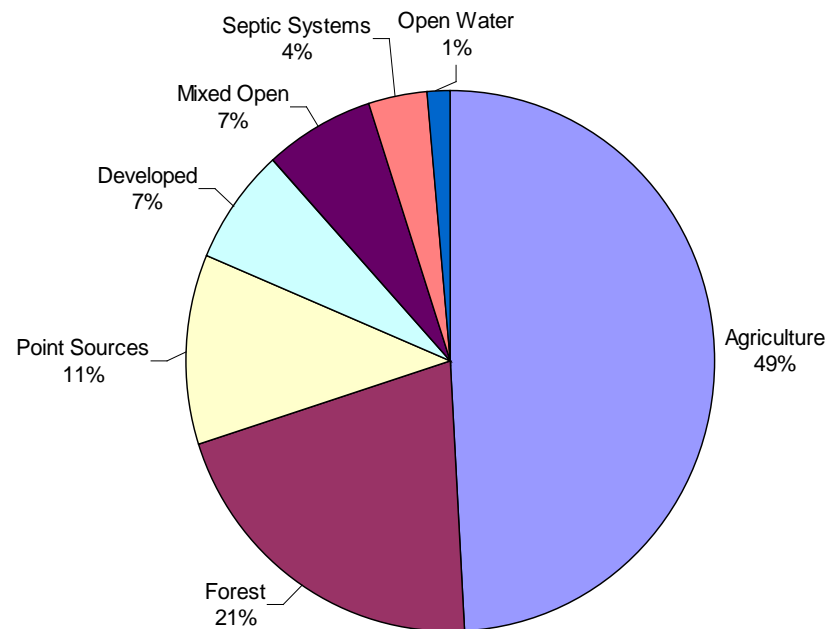
The cover page features a blue header with the title and date. Below the header is a collage of four images: a person in a yellow kayak on a river, a large crowd of people on a sandy beach, a scenic view of a river flowing through a forested area, and a man in a green shirt showing a fish to a young child. At the bottom, there are logos for the Environmental Protection Agency (EPA), the United States Department of Agriculture (USDA), the Department of the Interior, the National Oceanic and Atmospheric Administration (NOAA), the National Park Service (NPS), and the United States Department of Transportation.

# PA Chesapeake Bay Nitrogen Loading

## Point vs. Non-Point Source Contribution\*

- Non-point sources are responsible for 89% of N loading to the CB but are not regulated under US Clean Air and Clean Water Acts
- Absent point source nitrogen, modeling allocates 55.5% of non-point source contribution of nitrogen to agriculture

Total Nitrogen in Pounds Per Year	
<u>Land Use</u>	<u>Delivered Load</u>
Agriculture	53,663,000
Forest	22,659,000
Point Sources	12,487,000
Developed	7,538,000
Mixed Open	7,272,000
Septic Systems	4,023,000
Open Water	1,567,000
<b>Total</b>	<b>109,209,000</b>



\* Source: <http://www.depweb.state.pa.us/chesapeake/lib/chesapeake/pdfs/tribstrategy.pdf> Page 15

# PA Chesapeake Bay Tributary Strategy

## Municipal Wastewater Treatment Plants (MWTP)

- PA total N reduction commitment: ~35M pounds per year
- PA MWTP nutrient reductions (beginning 2010)
  - 7.5 million pounds of N
  - Estimated cost for PA MWTP (184) upgrades: \$1.4 Billion + \$60M/yr O&M
  - Average annual cost of \$21 per pound (incl O&M)
  - Many plants with much higher costs
- Stormwater treatment cost projected to be much higher
- Livestock/agriculture
  - largest source of nutrients: air- and water-borne
  - not effectively regulated
  - costs far less to clean up

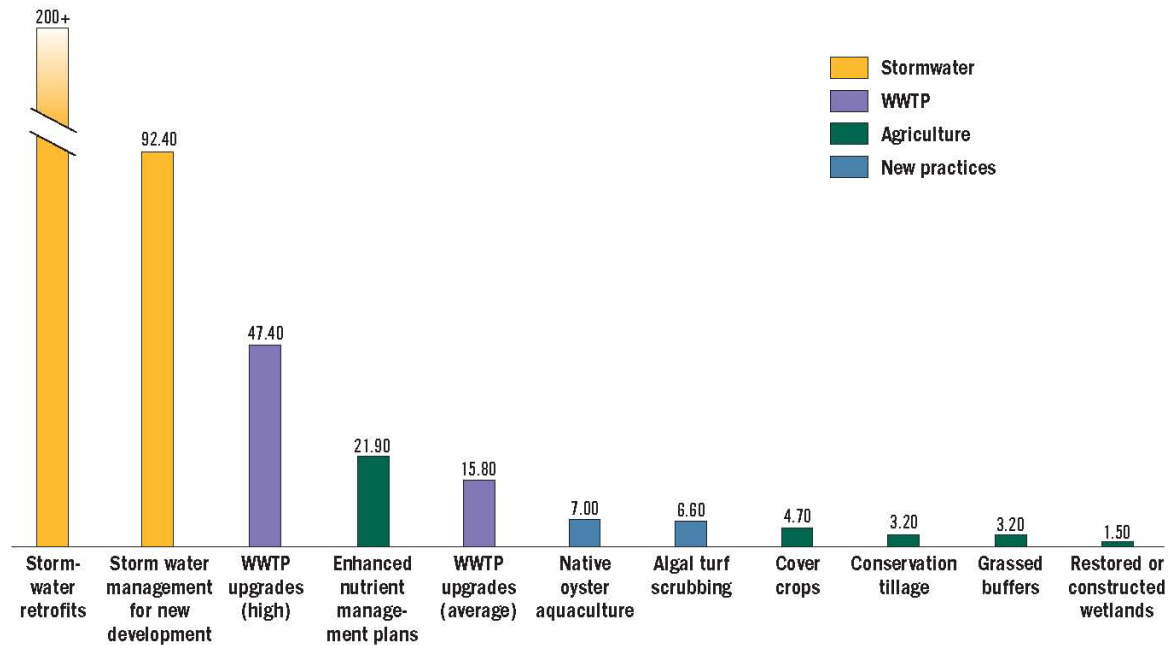
# PA Nutrient Credit Trading Program

- Non-point source (agriculture) voluntarily reduces nutrients and sells certified credits to point source (MWTP) facing much higher remediation costs
- Credit sale proceeds provide capital to fund low cost on-farm reduction projects
- Credit trading uses current regulatory framework to achieve least-cost solutions for required reductions
- Bion's system is the only technology-based solution approved by PA Department of Environmental Protection (PA DEP) for dairy (or any other livestock so far)
- Generates long-term 'certain' credits suitable for long range MWTP planning

# Annual Cost Per Pound to Reduce Nitrogen Loading

Figure 2 | Nitrogen Reduction Costs Differ Among Sectors and Practices, Creating Economic Opportunities for Credit Trading

Dollars per pound of annual nitrogen reduction



Source: U.S. EPA and Abt Associates, 2009; Wieland, et al., 2009; MDNR, 2008; Stewart, E. A., 2006; WRI analysis using WWTP upgrade costs from MDE and VDEQ.

World Resources Institute: [How Nutrient Trading Could Help Restore the Chesapeake Bay](#) (Feb 2010)

# Bion – Kreider Farms

- 2,000-head dairy; 4.2M chickens – largest farm in the region
- Phase 1: 1,200-head active milking herd
  - [Dairy technology credit protocols](#) approved by PA DEP - unique
  - [PENNVEST project financing](#) approved ~ \$7.8M
- Phase 2: renewable energy facility (poultry and dairy solids)
  - Anticipate financing on similar terms of \$10M to \$14M
- EBITDA (not a GAAP term) from current CB watershed projects (when fully operational) from nutrient credit sales (ex renewable energy sales) projected to be in the range of \$7 to \$10 million (Bion [8-K 8/17/09](#))
- Next steps (some simultaneous):
  - **Nutrient Credit Certification Letter: Notices** – [PA Bulletin](#)
  - **Demonstration water quality [permit application](#): submitted**
  - Submit poultry protocols to DEP: imminent
  - Phase 1 construction – anticipate initial system start-up summer 2010
  - Immediate verification/testing through PA DEP/US EPA begins
  - Phase 2 permitting and construction

# PENNVEST Project Financing



- PENNVEST (Pennsylvania Infrastructure Investment Authority)
- 20 years – over \$5 billion in loans and grants for water infrastructure improvement projects
- ‘Gatekeeper’ for PA MWTP capital needs
- Mandate to use least-cost nutrient reduction solutions including nutrient credit trading
- Low-interest loan approval followed lengthy technology review process by PA DEP and Penn State Univ. and stakeholder meetings involving US EPA

# Kreider Revenues

- Nutrient credits
  - 1 to 1.5 million total credits upon protocol approval and completion of Phase 2
  - additional credits for treatment of waste from area farms
  - initial value projected at approximately \$8.00 per credit per year
  - EBITDA (not a GAAP term) from current CB watershed projects (when fully operational) from nutrient credit sales (ex renewable energy sales) projected to be in the range of \$7 to \$10 million

(Bion 8K [8/17/09](#))

- Renewable energy: on-farm use and sales
- Greenhouse gas reduction credits
- Stabilized nutrient reuse
- Local watershed credits: phosphorus
- Tipping fees

# Bion Services Group

## Chesapeake Bay Opportunity

- Chesapeake Bay short term opportunity: 10 million pounds (credits) per year
- CB long term opportunity: 37 million (or more) pounds (credits) per year

Bion 8K [8/17/09](#)

- US EPA supportive of Bion with PA review process and Chesapeake Bay stakeholders
- Chesapeake Bay strategies will be applied to:

# Mississippi River Basin/GOM



- WASHINGTON, DC. September 24, 2009.  
**AGRICULTURE SECRETARY VILSACK ANNOUNCES MAJOR INITIATIVE TO IMPROVE HEALTH OF MISSISSIPPI RIVER BASIN**

\$320 Million Available for Conservation Projects in Arkansas, Kentucky, Illinois, Indiana, Iowa, Louisiana, Minnesota, Mississippi, Missouri, Ohio, Tennessee, and Wisconsin

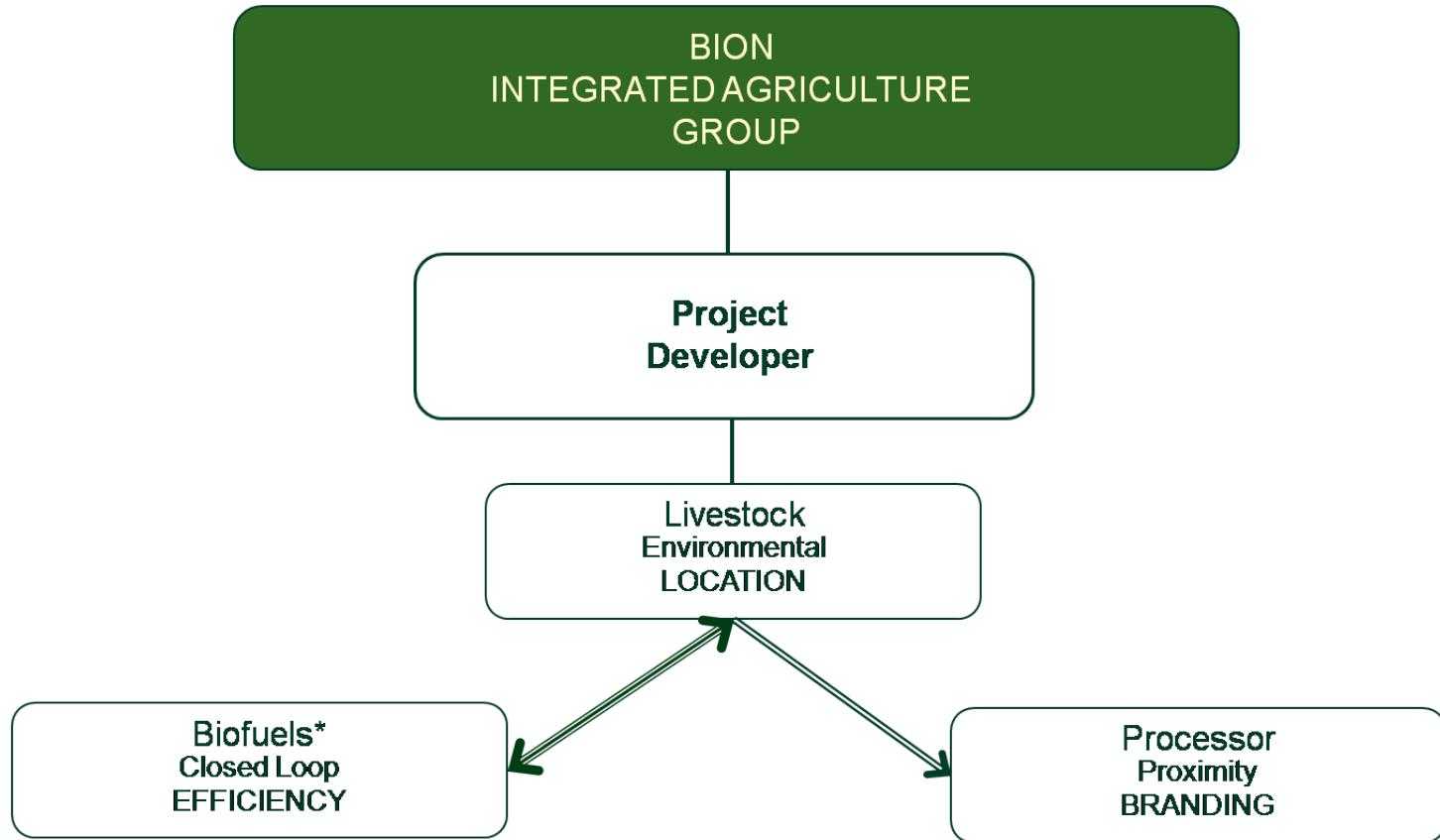
- WASHINGTON, DC. October 20, 2009.  
**MULTI-STATE WATER QUALITY TRADING EFFORT LAUNCHED IN OHIO RIVER BASIN**

American Farmland Trust and Others Receive \$1 Million EPA Targeted Watershed Grant to Improve Water Quality

- Drains 31 states (2 Canadian provinces)
- Drains 41% of the U.S.
- Watershed over 1,245,000 sq miles



# Integrated Projects



# Bion Integrated Projects

- Very large scale with substantially reduced physical footprint
- Can be permitted and constructed in strategic non-traditional locations not previously possible
- Large enough to support
  - Substantially more efficient renewable energy capture from waste stream biomass
  - Integration in proximity to complimentary agribusiness activities – food processing and biofuels production
- Bion believes that IP's with the scale and attributes we describe are only possible utilizing Bion's patented and proprietary technology

# Benefits of Integration

- Reduced capital and operations costs
- Substantially reduced transportation/fuel costs
  - Intermodal costs drastically reduced
  - Input and/or output transport-to-market costs reduced
- Increased resource efficiency
  - Production and on-site use of renewable energy
  - Efficient utilization of waste heat
- Processor can single-source – branding, food safety
- Improved margins and reduced risks for participants

# Bion's NYS Biofuels/Cattle Project Overview

- 72,000 beef cattle on feed (Phase 1)
  - Supplemental dairy as supported by local ag inputs
- 50 million gallon per year ethanol facility
- Bion comprehensive waste treatment system
  - Environmental waste treatment
  - Renewable energy production
- Slaughter/Further Process Facility
  - Coupled with increase in herd to ~200,000 head (Phase 2)
- Pre-development work conducted since 2007
- Schroepfel (Oswego County, NY) unanimously approved Project support – Dec 2009

# Bion's NYS Biofuels/Cattle Project

## Phase 1 Green Jobs/Rural Stimulus

- Construction Phase - projected one time impacts
  - Jobs 1,749
  - Regional total economic impact \$140.3 million
- Ongoing Operations - projected annual impacts
  - Jobs- total 483
    - Direct 198
    - Indirect 285
  - Regional spending \$32.3 million  
(employment, ag inputs & trucking services / fuel)
  - Net new regional economic activity \$64.5 million
  - Increased regional household earnings \$18.9 million
  - Resulting increased sales tax revenues \$1.4 million
  - Possible additional long-term increase in regional agricultural activity
  - Does not include multiplier from conversion of fallow cropland to producer, or impacts from potential beef cattle slaughter, processing and cook facilities

# Bion's Proposed Dairy Project Overview

- 80,000 dairy cattle (milkers)
  - Total 140,000 head (with dairy support herd and steers) located on several satellite farms
- Dedicated milk processing/cheese production
- One (or potentially more) existing ethanol plants
- Bion comprehensive waste treatment system
- Very preliminary development phases with one of the largest national/international cheese producers and distributors
  - Approximately \$750 million project
  - Up to 850 permanent rural jobs

# Bion's Integrated Projects

- Bion believes its Integrated Projects will increase EBITDA (not a GAAP term) annual returns by five percentage points (or more) over the existing industry metrics
- In addition to the upstate NY and the proposed dairy projects, Bion has had preliminary discussions with several nationally- and internationally-known food producers, processors, and distributors, regarding use of its technology to develop projects which integrate new livestock herds with both existing and new processing facilities

Bion 8K [8/17/09](#)

# Institutional Holders

March 31, 2010

Carret Asset Management	675,354 sh
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Primarily acquired through open-market transactions

Howard Capital Management	37,414 sh
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# Recent Significant Capital Raises

## Capital Financial Strategies

U.S.-based retail financial planning firm (FINRA B/D)

- **Series B 10% Convertible Preferred** **\$2,817,000**  
Converts at \$2.00/sh  
Bion can force conversion at \$3.00/sh  
Closed 7/30/09
- **Series C 10% Convertible Preferred** **\$1,800,000**  
Converts at \$4.00/sh  
Bion can force conversion at \$6.00/sh  
Closed first offering 3/31/10

# Current Capital Structure

as of March 31, 2010

Class	Net Common
Common	12,050,521
Series A convertible pfd	None Issued
Series B convertible pfd (28,170)	1,408,500
Series C convertible pfd (18,000)	450,000
Warrants (all classes) Avg weighted exercise price: \$2.03	5,347,616
Options (all classes) Avg weighted exercise price: \$2.90	2,753,333
Contingent bonus/Conv Debt	571,164
Fully Diluted	22,581,134
No significant changes since 3/31/10 10Q	

# Bion Summary

- Livestock industry is under the gun
- Proven and accepted technology
- No competitors at this time
- Short-term operating capital/project financing needs met
- High impact/visibility Chesapeake Bay project
- Integrated Projects activity
- Initiating exposure/marketing campaign
- Working towards national exchange listing
- Low market capitalization vs upside potential