



The Purified Water System

Water Reuse Workshop: May 2016



~ dedicated to ~ **healthy** food, families & farms

Maker of these premium natural chicken brands:





Overview

- Company overview
- Background on our value chain and water risks
- Past actions to improve effluent quality and conserve water
- Context of the challenge
- Opportunity for the Purified Water System

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Company Overview

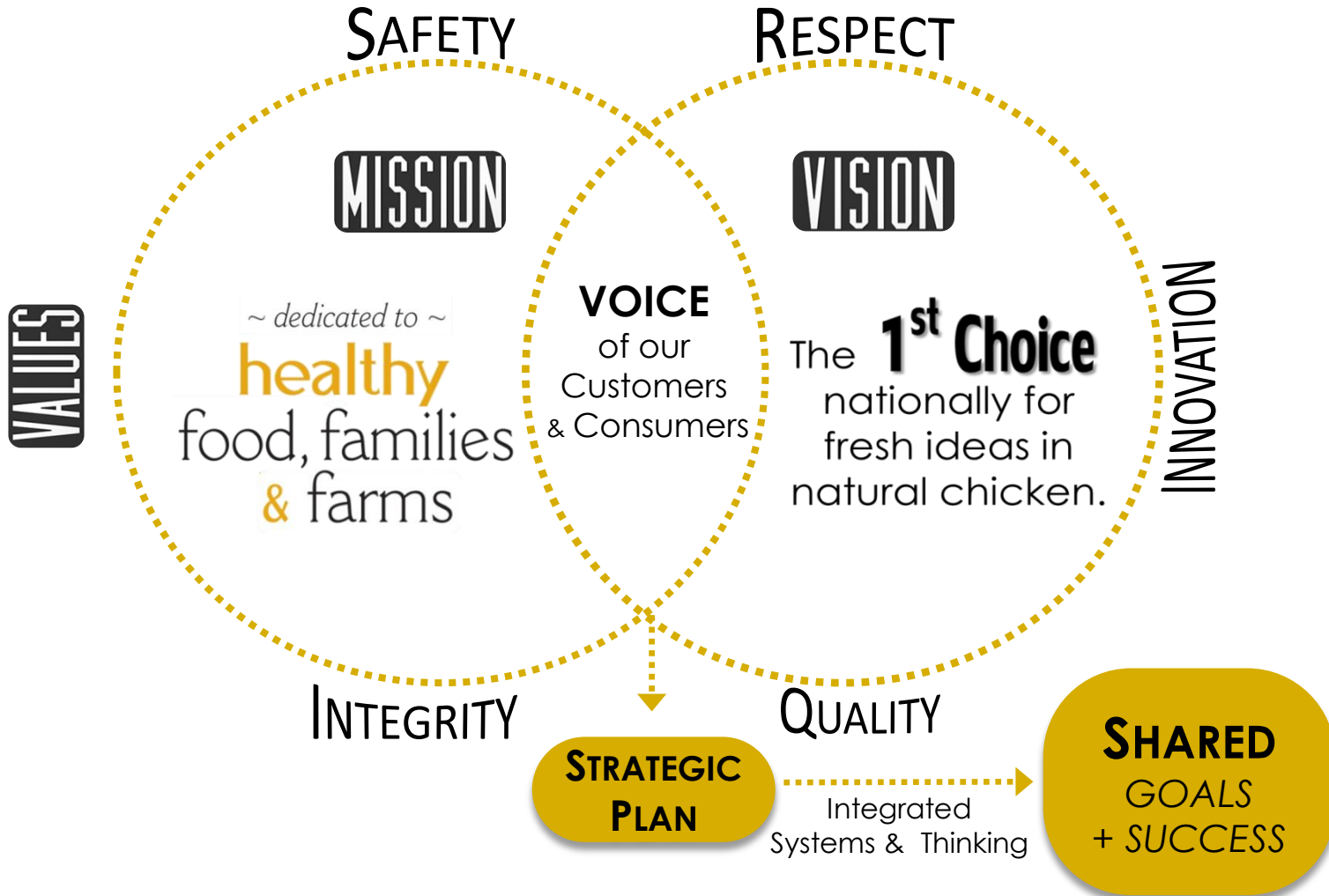
- Founded in 1926 and family owned
- The Midwest's leading provider of premium quality chicken under the Gold'n Plump® Just BARE® Chicken brand labels
- Partnerships with over 350 family farmers and operations in Minnesota and Wisconsin
- Headquartered in St. Cloud, Minnesota
- Process approximately 100 million chickens annually
- 2014 Sales: \$457 million
- National distribution and competition



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Values Based Company



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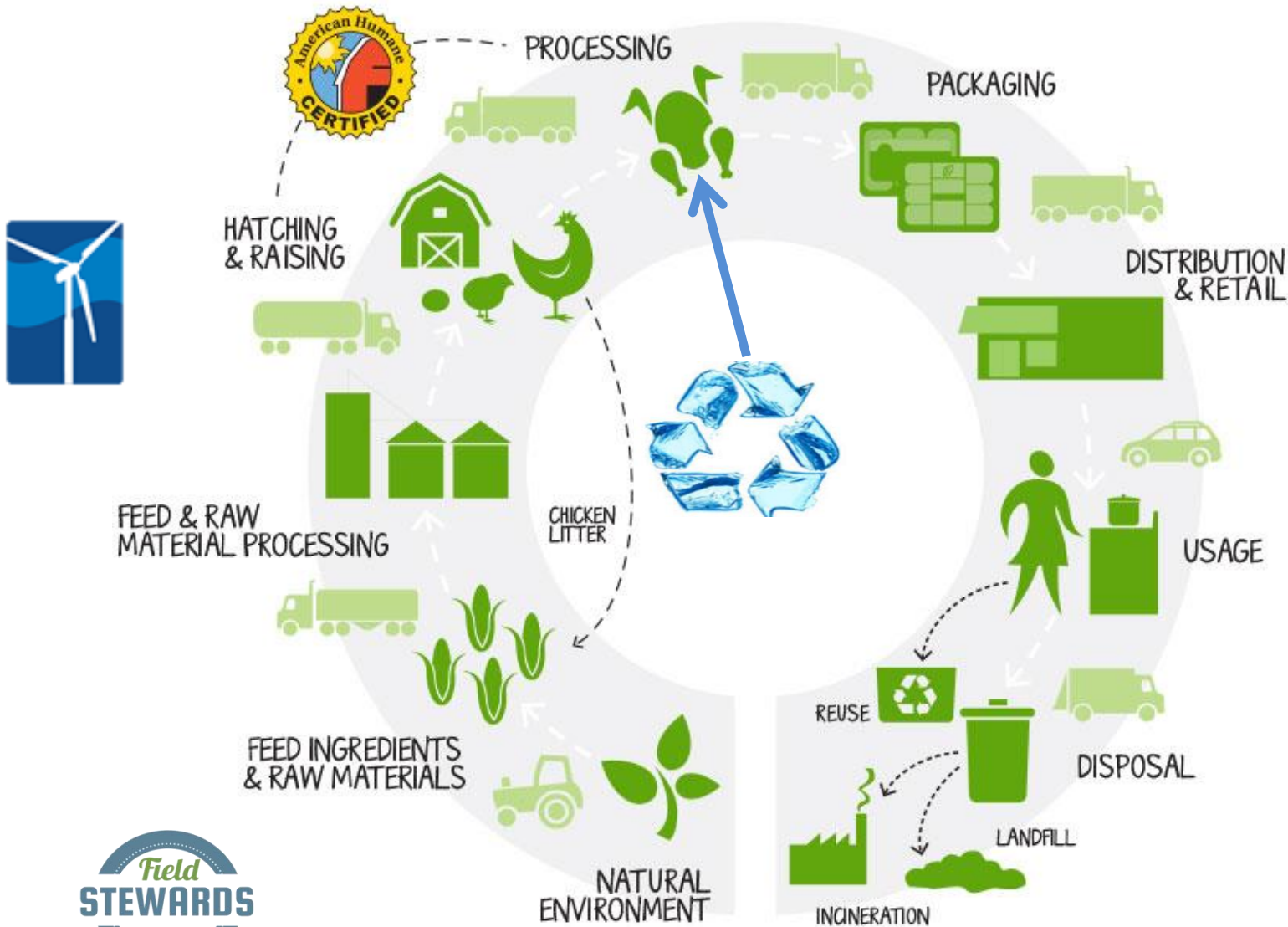
Our Commitment to Sustainability

We thrive by embracing safety and balancing the need for economic Progress with the needs of our People, Planet and Poultry.





Our value chain



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Cold Spring Wastewater Facility





Current Water Use

- Daily use is close to 1.2 million gallons of potable water
 - ~1 million from company wells and 200k from the city's water supply
- We use 25% again as reconditioned in non-food contact areas
 - Watering lawns, compressor cooling, truck washing
- Discharge clean water into the Sauk River.
- Award-winning water treatment facility, with state-of-the-art technology.



High Efficiency Turbo Blowers



Gluten free noodles



Effluent exceeds regulated standards



	Regulated Standard	Performance
Total Suspended Solids	8 mg/l ~ 80 lbs/day	<2 mg/l ~ < 10 lbs/day
Biological Oxygen Demand	6 mg/l ~ 60 lbs/day	< 2mg/l ~ 1 lbs/day
Phosphorus	9 mg/l ~ 90 lbs/day	.6 mg/l ~ .7 lbs/day
Nitrate	10 mg/l ~ 100lbs/day	1 mg/l ~ 10 lbs/day

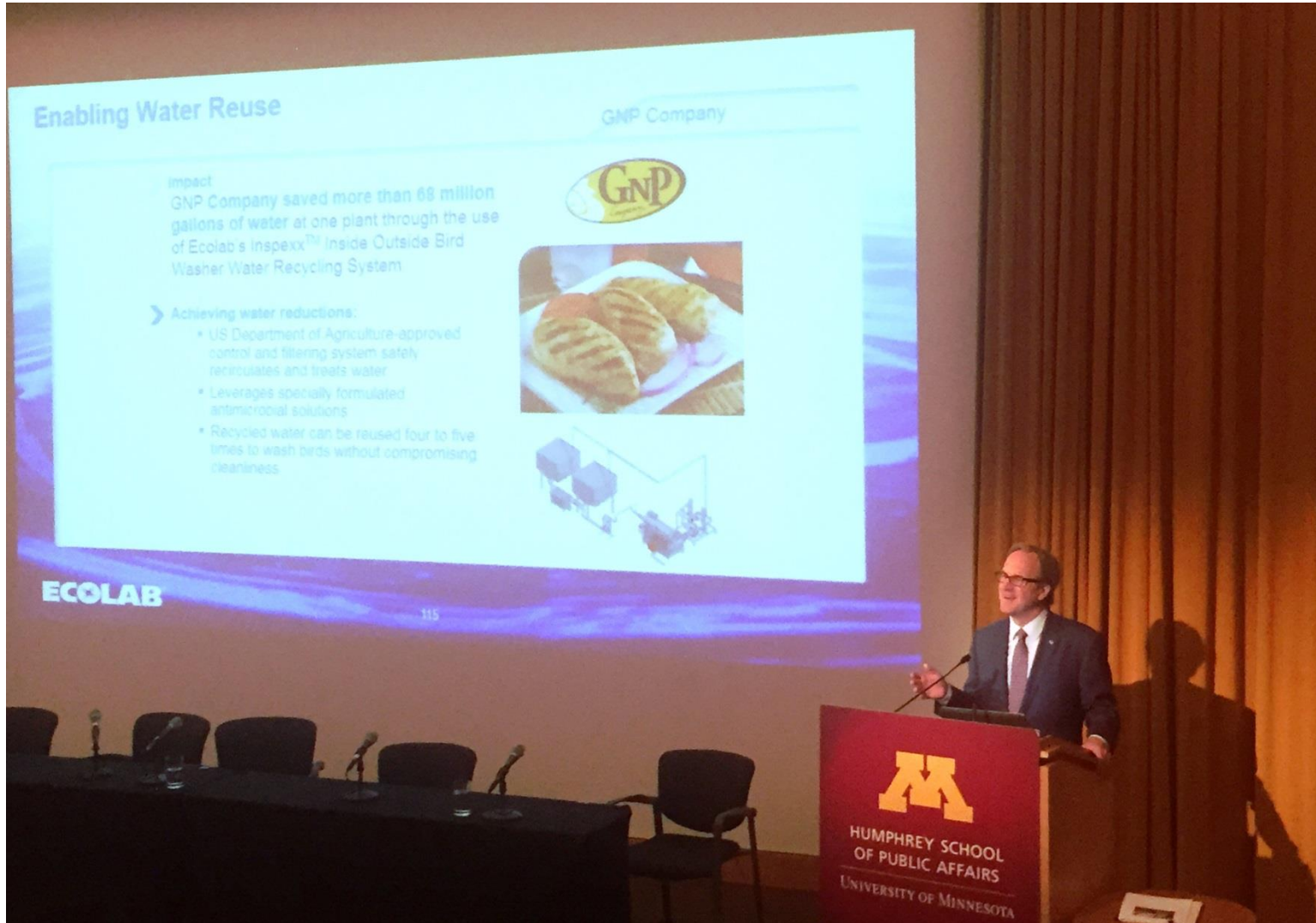


Water efficiency

- Water recycling and use of reconditioned water
 - Saved 68 million gallons with our Ecolab water reuse system.
 - Reconditioned water makes up almost a third of total facility water use, 113 million gallon in 2014.
 - Reconditioned water used for 1st rinse of birds, as well cooling towers.
- Monthly team meetings
 - Review performance indicators
 - Discuss improvements that can help us reach our goals.



Eco Lab's CEO discussing our water reuse project at the water tech summit





Water challenges facing Cold Spring



The area's geology makes their ground water resources susceptible to draught and nitrate infiltration. The Sauk River is a designated trout stream and a major tributary to the Mississippi River. There are many factors influencing the need for effective solutions to conserving ground water and protecting surface water.



PURIFIED Water System

Circular water conservation

The Purified water system will use advance filtration technologies to **treat GNPs effluent water to a potable standard**. This purified water can then be use across the food process facility. By treating the water GNP **can reuse it five times**, thus reducing its impact on the environment by up to eighty percent.

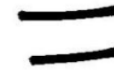


PURIFIED Water System

Circular water conservation



Water
Technology



The **PURIFIED Water System** is a collaboration of Midwest-based GNP Company, water technology companies, and the Minnesota Department of Health to create superior quality water standards and **circular water conservation** for purified use in food production.



PURIFIED Water System

Circular water conservation

BENEFITS TO THE STATE OF MINNESOTA



- ✓ Develop regulatory framework that helps state agencies work with private industry for increased sustainability.
- ✓ Proven technology and best practices for ALL state water users.
- ✓ A Minnesota “first” to lead the country in water reuse best practices, innovation, and technology.
- ✓ Supports Governor Dayton’s water goals.
- ✓ Supports Minnesota’s food and agriculture industries.
- ✓ **Creates a model to preserve Minnesota’s valued water resources.**





PURIFIED Water System

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BENEFITS TO OUR LOCAL COMMUNITY COLD SPRING, MN

- ✓ **Reduced ground water withdrawal rate** and demands from natural environment.
- ✓ Aquifer preservation and resilience.
- ✓ Supports best management practices that reduce nitrates in groundwater.
- ✓ Increased water sources for other stakeholders, supporting area growth and economic development.
- ✓ **Preservation of sensitive ecosystems** like designated trout streams.
- ✓ **An alternative water source** in a geologically challenging area.



PURIFIED Water System

Circular water conservation

BENEFITS TO GNP COMPANY™

- ✓ **Purified Water System creates potable water supply;** superior testing, oversight and quality as compared to well water.
- ✓ **Reuse water up to 5 times including food contact,** making the most of our resources.
- ✓ Increased water independence and self-sufficiency.
- ✓ 1,200 gallons per minute purification & reuse system.
- ✓ Increased water quality and quantity in production facility.
- ✓ Better **control and containment of water costs, quality and availability.**



PURIFIED Water System

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PURIFIED Water System

Circular water conservation

The **PURIFIED Water System** aims to create superior quality water through **circular water conservation**.

Opportunity for Minnesota's to demonstrate innovative water technologies, which could preserve this resources in a way that supports the Governor's water goals and the needs of private industry.

An alternative water source that can reduced ground water withdrawal rate and help preserve the local ecosystems.

Purified Water System allows us to reuse water up to 5 times and have better water quality and availability.



Barriers to Water Reuse

- Not a core part of our business
 - We are in the chicken business
 - We do not want to be a utility or water tech company
- Challenges related to focusing on strategic goals
 - “14 number one priorities”
 - Competing demands for time and money
- Customers haven’t placed a high value on environmental sustainability
 - We respond to the voice of customer



Questions?

Thank you