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The Panama Canal in Transition:

Assessing a Key Link in the Supply Chain

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The Panama Canal in Transition:

Assessing a Key Link in the Supply Chain

hen you think about Midwestern ag, it's easy to focus on corn and soybean fields rather than export markets. You're probably aware that President Trump has been shining the spotlight on a critical link in the global ag infrastructure chain—the Panama Canal.

It's no secret the Panama Canal is vital to American agriculture. Millions of tons of grain pass through the Panama Canal each year. In fact, 70% of all freight passing through the Panama Canal is going to or from America. (Fun fact—did you know Panama uses the U.S. dollar as their currency?)

The Panama Canal came into sharp focus in late 2024, when Donald Trump began talking about China's role with the canal and his interest in taking back the Panama Canal. What might this mean for U.S. ag?

We reached out to Mike Steenhoek,

executive director of the Iowa-based Soy Transportation Coalition (STC) for insight. The STC and the Panama Canal Authority signed a memorandum of understanding in 2011. The STC has held various board meetings in Panama through the years, most recently in December 2023.

Let's start by taking a quick "timeline tour" to better understand the history of the Panama Canal and what it means to Midwest ag.

1534: The earliest discussions about building a canal in what's now Central America emerge during the Age of Exploration, 42 years after Christopher Columbus sailed to the New World.

1848: The California gold rush unleashes one of the largest mass migrations in U.S. history. This ignites new interest in building a canal through Central America. It's no wonder, since the only choices for traveling to California at this time included 1.) overland wagon trails (a 6-month, 2,000-mile journey from Missouri to San Francisco); 2.) a boat around Cape Horn at the southern tip of South America (a 6-month journey covering 18,000 nautical miles), or 3.) take a boat to Panama, cross overland and take another boat to California (a 3-month journey of 10,000 nautical miles).

1881: The French, who had completed the 120-mile Suez Canal in the Middle East in 1869, attempt to build a canal across what is now Panama. A combination of tough conditions (high humidity, flooding, dangerous snakes and other woes) and thousands of deaths from malaria and yellow fever derail the project.

1888-89: The French canal project is bankrupt. Assets are liquidated.

The Spanish-American War erupts. America needs to move its limited naval resources (including the USS Oregon, one of America's newest flagship battleships) from the West Coast to the Caribbean for battle. Newspapers across America trace the Oregon's long, difficult journey around the southern tip of South America. The public is captivated, wondering if the Oregon will arrive in time. The battleship arrives 66 days after departing the West Coast. This convinces many Americans that it's prudent to build the Panama Canal for national security.

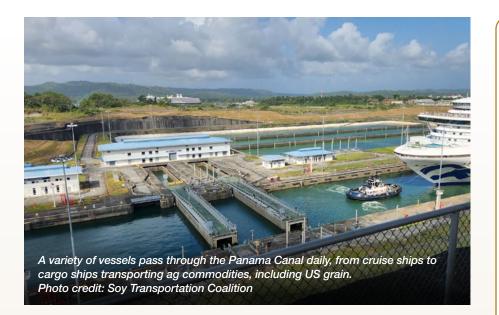
1903: Panama declares its independence from Columbia. U.S. President Theodore Roosevelt dispatches U.S. warships to Panama City in support of Panamanian independence. In November 1903, the United States signs the Hay Bunau-Varilla Treaty. This establishes the Panama Canal Zone, a long, 10-mile-wide strip of land that's sovereign U.S. territory. America makes a one-time, \$10 million payment to Panama and an annual annuity of \$250,000. America also agrees to guarantee the independence of Panama.

America begins constructing the Panama Canal, which utilizes a series of locks operated by the gravity flow of water. The project requires tens of thousands of laborers working in Panama's mountainous terrain. With a price tag of \$375 million (roughly \$11.8 billion in today's dollars), this is the most expensive infrastructure project in history up to this point.

1914: Construction of the Panama Canal is complete, symbolizing America's technological prowess and economic power. The project comes in \$23 million under budget, compared to a 1907 estimate. The inaugural transit through the new Panama Canal occurs August 15, 1914.

1960s & 1970s: Significant tension grows between the U.S. and Latin America, due to the expansion of Communism into Cuba and the rise of socialist fervor in other parts of the region.

1977: U.S. President Jimmy Carter and Panamanian leader Omar Torrijos negotiate the Torrijos-Carter Treaties, which the U.S. Senate ratifies in 1978. These treaties give Panama eventual control of the Panama Canal. The treaties allow the U.S. military to intervene and defend the Panama Canal against any threat to the canal's neutrality. The agreements also initiated a 20-year transition period from the U.S. to Panama.



Full transfer of the control of the Panama Canal occurs on December ■ 31. The Panama Canal Authority is the Panamanian government agency that manages the Panama Canal and is responsible for the canal's operation and maintenance.

Panamanian voters approve plans to expand the Panama Canal by 2006: Panamaman voters approve plane to the chipping installing additional sets of locks to allow a new generation of larger ocean vessels to transit the canal. The expansion also calls for deepening the shipping channel and increasing the volume capacity of Gatun Lake, the source of fresh water that allows the canal to operate. "It takes 50 million gallons of water for every transit through the locks of the Panama Canal," Steenhoek said.

The \$5.2 billion expansion project initiated in 2006 is completed in June. The Panama Canal Authority provided more than half of the funds, while international banks financed \$2.3 billion of the project.

2023: U.S. soybeans remain a leading agricultural customer of the Panama Canal. The U.S. exports 16 million long tons (600 million bushels) of soybeans via the Panama Canal in 2023.

There are 36 to 40 transits per day between the original locks and the expanded locks of the Panama Canal. About half (20 to 22) of those vessels transport grain. Annual revenue from the Panama Canal for fiscal year 2024 (October 2023-September 2024) totals nearly \$5 billion, according to the Panama Canal Authority. In late 2024, President-Elect Donald Trump announces a desire to have America retake the Panama Canal.

Panama is among the linst stops for her costs.

Rubio, America's top diplomat. He informed Panama's president and foreign minister that President Trump has made a preliminary determination that the Chinese Communist Party's influence violates the Treaty Concerning the Permanent Neutrality and Operation of the Panama Canal. Absent immediate changes, it will require the United States to take measures necessary to protect its rights under the Treaty, Rubio stresses.

Does China Control the Panama Canal?

So who's in charge of the Panama Canal? What about China?

The Panama Canal is owned and controlled by the Republic of Panama and operated by the Panama Canal Authority (ACP). The 1970s treaty that transferred ownership of the canal from the U.S. to Panama stipulates that the canal remain neutral and available for all countries.

Two of the main ports along the Panama Canal are at Balboa (Pacific side) and Cristobal (Atlantic side). They're operated by Hutchison Port Holdings, based in Hong Kong. Hutchison Port Holdings is one of the largest port operators in the world, operating 53 ports in 24 countries.

The typical arrangement for ports around the world is that a particular country, state, county or municipality owns the port, Steenhoek told us. The port authority—elected by the voters or appointed by a governing authority-provides long-term concessions to a company to manage the port operations.

"Concessions are usually longer in duration, since the port operator will often make significant investments like cranes, shipping berths, warehousing, container yards, etc. in the facility," Steenhoek said. "This requires a lengthy period of time to recover those investments."

In 1997, Hutchison Port Holdings received an original concession to operate the two ports at the Panama Canal. This was around the same time as the official transfer of Hong Kong from Great Britain to China on July 1, 1997. "As of late, Hong Kong has been increasingly under the influence of Beijing," Steenhoek said.

In 2022, Panama renewed another 25-year concession for Hutchison to operate both ports along the Panama Canal. Also, under a previous presidential administration, Panama was the first Latin American country to sign onto China's Belt and Road Initiative, a massive infrastructure project that aims to expand China's influence around the globe. "Panama certainly is a country (among many others) that have received actual or planned investment by Chinese interests," Steenhoek said.

While Steenhoek can't speculate on China's intentions, he's positive about his many interactions with Panama Canal Authority officials. "I've always found them to be extremely professional, collaborative and hospitable to U.S. agriculture."

GET TO KNOW BRIAN BOHANNON

Brian Bohannon, one of our certified general real estate appraisers, grew up in Hinckley, a small Illinois town west of the Chicago area, where his FFA experiences guided his career path.

"A lot of kids at my high school were in FFA, so I got involved, too," said Bohannon, who enjoyed participating in soil judging competitions and serving as the chapter's treasurer. "That's when I knew I wanted to work in agriculture."

He gained valuable experience working for grain and livestock farmers in the area, as well as various agricultural cooperatives. He also enrolled

in Western Illinois University, which is known for its excellent agribusiness program. As he earned his degree in agribusiness with a minor in agronomy, Bohannon landed a summer internship in 2022 with MGW.

The job went so well that he continued working part-time with MGW until he finished college. He joined the MGW Appraisal



Services team full-time in January 2023. He has appreciated the opportunity to grow his career in the Midwest and stay close to his small-town roots. He recently received his Certified General Appraiser license and focuses on appraising farmland, commercial and industrial property, grain elevators, and livestock confinement barns. He is also looking forward to expanding his knowledge in other areas that the firm specializes in, such as conservation easements, 2032-A special use, and partial interests.

"I like the people here in the Midwest," Bohannon said. "They're down-to-earth and easy to get along with."

That includes the MGW team, added Bohannon, who enjoys trapshooting and hunting in his free time. "MGW is an established, dynamic, family-owned business. It's like working with your friends and family."

GRANT KUPPLER'S FARM ROOTS RUN DEEP

When you've grown up in farming, there's just something about agriculture that gets in your blood.

"I enjoy the business aspect of agriculture and running the numbers," said Grant Kuppler, a farm manager with MGW. "Working with MGW allows me to do all this and stay close to my family's farm."

Kuppler was raised on a row-crop farm near Hinckley, Illinois. He participated in 4-H and FFA and exhibited cattle and hogs at various shows. Some of his favorite memories include showing cattle at local fairs, the Illinois State Fair, and nationally at the American Royal and the National Western Stock Show.

"Those experiences taught me that success doesn't come overnight," said Kuppler, who earned his degree in agribusiness from Western Illinois University. "You've got to work hard. Consistency is the key."

He continued to build more skills when he interned at MGW during college. "I learned the importance of good communication



with farm tenants and landowners," Kuppler said. He joined MGW full-time in May 2022. He's nearly done with the years of coursework and exams required to earn the Accredited Farm Manager designation through the American

Society of Farm Managers and Rural Appraisers.

This big milestone builds on the knowledge Kuppler has gained from the ground up—literally. "It has been incredible to see advances in ag, like modern seed genetics that have helped yields jump dramatically, and how those advancements relate to various soil types across the Midwest."

Growing things is second nature to a farmer like Kuppler, who helps his dad and uncle plant in the spring. Don't be surprised if you see him running a combine at harvest, too. "Something I really enjoy are the relationships in our farming communities," said Kuppler, who enjoys golfing when he's got a little free time. "I like growing these relationships through MGW."





Think of the ways technology has revolutionized daily life, from smartphones to smart thermostats. Incredible innovations are also driving what's been dubbed the fourth agricultural revolution (Agriculture 4.0).

This is a bold new world where high-tech innovations from artificial intelligence (AI) to automation are impacting farmland profitability, thanks to better management of resources and higher yield potential.

We're keeping a close eye on the latest technology that will impact agriculture. We reached out to Bruce West, founder of West Enterprises in Geneseo, Illinois, to get his perspective on the latest ag tech that's gaining traction. Bruce has been on the leading edge of this revolution since 2003, when he started his business to help Midwestern producers maximize precision farming. He's also a member of the Independent Precision Ag Alliance, a peer group of precision ag dealers across America who keep tabs on this fast-paced industry.

Bruce, **labor is a big challenge in agriculture**. How can technology help? Labor is the low-hanging fruit when it comes to the adoption of autonomous equipment. I think autonomy might create a niche for smaller equipment. Instead of a large autonomous tractor pulling a large planter, a "swarming" concept might be more feasible, where a dozen 2-row planters are running simultaneously. This would have a lighter footprint, which reduces compaction, plus you might be able to get into the field a little earlier, depending on soil conditions. The capital investment for autonomous equipment like this might be lower, as well. The downside is that you'll still need someone to tender the seed to all the units. Also, the smaller equipment means you can't carry as much seed.

What interests you about AI in agriculture? AI is already being used with autonomous sprayers in vineyards and orchards in the western United States. Cameras on the booms can be "trained" to determine what's a good plant and what's a weed, and what to spray. I think this technology will become much more common in all types of agriculture.

I'm especially intrigued by what AI can do for agronomy. With a lot of current programs, you need to define the answer. The challenge is that we don't always know the answer. I would like to be able to take layers of data and have AI distill all this down. Then it could tell you what specific corn hybrids or soybean varieties to plant in specific parts of the field for maximum yield potential.

Who's buying the latest ag technology? We see customers of all ages adopting new ag technology. When we started offering yield monitors 20 years ago, we sold one to a 75-year-old gentleman. It's all about having the right mindset, a goal to work more efficiently, and a desire to keep learning. All this makes life—and farming—more fun.

Anything else to add about ag technology trends? Return on investment is key when you're investing in ag technology.

Precision Weed Control Pays

Blink your eyes—you're too slow. You can't keep up with See & Spray[™] from John Deere. It makes decisions in 200 milliseconds or less about when and where to apply herbicide.

We've been hearing a lot about this precision weed-control technology, where computer vision and machine learning work at lighting speed in corn and soybean fields. See & Spray scans 2,500 square feet per second, thanks to 36 on-board cameras. See & Spray is available as a factory install or an upgrade kit for some existing sprayers.

"This past year, we covered over a million acres," says Josh Ladd, go-to-market manager/application for John Deere. "On average, we saw a 59% savings in non-residual herbicide products."

Beck's Hybrids put See & Spray technology to the test. Their 2024 Practical Farm Research report documents a 3.3 to 4.2 bushels per acre soybean yield advantage where See & Spray was used. We're taking note, since effective weed control can boost farmers' profit potential and impact farmland value.

SIX THINGS TO KNOW ABOUT BROOKE ROLLINS

Now that Brooke Rollins has been sworn in as the 33rd U.S. Secretary of Agriculture, you may be wondering—who is she?

Secretary Rollins leads a huge agency that impacts every farm and ranch in the country.

If you're like us, you probably thought Rollins was a surprising choice for this crucial role. Not long before she was nominated, farm media outlets were speculating that House Ag Chairman Glenn "GT" Thompson of Pennsylvania or American Farm Bureau President Zippy Duvall might be the next ag secretary. No one had Rollins on their radar.

She's now managing the massive U.S. Department of Agriculture (USDA), which employs nearly 100,000 people through 29 agencies across America and abroad. Rollins is undertaking this key role at a critical time for American agriculture. In an era of high input prices, lower ag commodity prices, tariffs and more, the "demands of American agriculture and the



Farm Machinery Show in Louisville, Kentucky. Photo credit: USDA

stakes our farmers take have never been higher," Rollins stressed during her Senate confirmation hearing in January 2025.

The Secretary of Agriculture role has massive implications for the countryimpacting things like crop insurance, food/ nutrition programs, rural development, ag research and more. Let's dig into Rollins' background more to see what the future might hold.

She grew up in rural America. Rollins is from Glen Rose, Texas. She grew up working summers on her family's farm in Minnesota, helping with corn, potato, and soybean crops. During the school year in Texas, she barrel raced, raised livestock for 4-H and FFA, rising to leadership positions in both organizations. Today, Rollins is married to her husband, Mark, and their four children participate in 4-H and FFA. Fort Worth, Texas, is home to the Rollins family.

Ag and law prepared Rollins for her career. Rollins graduated with honors from Texas A&M University with a bachelor of science degree in agricultural development. While at A&M, she was elected student body president. After earning her Juris Doctor with honors at the University of Texas School of Law, she led the Texas Public Policy Foundation, a small think-tank based in San Antonio, for 15 years.

She's known as a free-market advocate. Before accepting the nomination for USDA Secretary, Rollins served as president and chief executive officer of the America First Policy Institute (AFPI). This non-profit, non-partisan research institute encourages free enterprise and promotes policies that put the American people first.

She's worked for President Donald Trump before. Rollins, who's now 52, has a long history of earning Trump's trust. She served as Director of the Domestic Policy Council and Assistant to the President for Strategic Initiatives in the White House during Trump's first administration.

She could play a pivotal role in the next Farm Bill. While the Farm Bill is supposed to be updated every five years, the current one (approved in 2018) is more than a year overdue. It's living on life support, thanks to an extension. Rollins could play a significant role in helping to guide whatever measures might be drafted in 2025 to update the Farm Bill. With so many current conversations focused on agriculture, food and health, especially with the "make America healthy again" mantra, there's a lot at play in the next version of the Farm Bill.

She welcomes DOGE. Rollins says USDA will work with the Department of Government Efficiency (DOGE) to help make the agency better, faster and more efficient. Rollins told USDA employees that she expects full access and transparency to DOGE in weeks to come. We like her focus on serving the public, which she emphasized in her opening remarks in mid-February at USDA headquarters. "We are not administrators; we are stewards."

Unique Factors That Make Farmland EVEN MORE VALUABLE

How do you value farmland? It all depends on whose eyes you're looking through.

Analysts use financial measures, like the land's ability to generate income, appreciate in value, provide a hedge against inflation and offer short-term and long-term opportunities for creating wealth. If you're looking to add a stable asset class to your portfolio, farmland can be a wise choice.

If you're like a lot of our clients, you view farmland as a way to diversify your portfolio and provide a source of passive income. Its low-risk nature can help create stable growth that protects your portfolio from wild swings in the economy.

Many of our clients and the tenants we work with also value their farmland just as much for the non-financial returns that

enrich their life. They find satisfaction and enjoyment in the unique factors that make farmland essential to their quality of life:

Farmland lets you live the country lifestyle. When people who live amid the constant roar of a metro area visit the country, they'll typically say, "I can't believe how quiet it is out here." They appreciate a slower pace of life. Peace and quiet. A sense of safety and security inherent in an uncrowded country. All are comforting in a fast-paced, turbulent world.

Farmland ownership reflects freedom. There's nothing like the feeling of being your own boss. Success on the land depends more on your performance and less on someone else's. (You can't say that about stock investments.) Even when commodity prices dip, a well-capitalized farm offers exceptional security and freedom.

Farmland keeps you grounded. Today's high-tech world wears many people down to a low point spiritually. Farmland teaches us that "our" land ultimately belongs to our Creator. Our job is to be good stewards of this incredible gift while we're here.



Depending on the choices made over a lifetime, you as a landowner can breathe deeply with an inner satisfaction of leaving the land "better than I found it."

Farmland strengthens family ties. While many families are going a million different directions each day, a farm can integrate work life and family life, with everyone working towards a common goal. Children learn by example. Life on the land provides countless opportunities to see Mom and Dad's work habits, financial stewardship and love of the land.

5 Farmland allows roots to grow deep. There's a reason why people

identify with a home place or a hometown. In a mobile society like ours, people move every eight to 12 years during their lifetime, on average. It's much different for farm families, who typically live on their homeplace for multiple generations. A farm's permanence can inspire a deeper sense of connection, heritage and legacy, for both the tenant and the landowner.

Farmland offers a lifetime of advantages. Owning a farm gives you room to roam, a sense of continuity, strong connections to the other people connected with your land, a refuge you can come back to in good times and tough times, a stable income, precious memories and so much more.

As you can see, the true value of a farm can take many forms. Whether you view the land through the eyes of an analyst, an investor, or a farm family, farmland can be a win-win-win, especially when you consider the priceless, non-monetary returns that only farmland provides. It's not only a rewarding investment, but a rich legacy indeed.

