

## Get to Know GIS at CHK

Central to many of Chesapeake's key initiatives is a small but mighty team of GIS professionals. Often known as the company's map makers, our GIS (an abbreviation for geographic information systems) employees use their expertise and education to gather, analyze and visualize geographic data to support other departments in making more informed and strategic decisions. Their advanced mapping and spatial analytics increase operational efficiency through rich location intelligence.

*As November 16 is designated GIS Day, we take time to honor the hard work, expertise, and ingenuity of our GIS colleagues.*

**"It's important to recognize how the GIS team helps us learn and be better prepared as a company. They influence so many areas of our E&P business, including our day-to-day operations, field development planning and ESG-related projects," said Josh Viets, EVP and COO. "I've been extremely impressed with the quality of work by our GIS team, and we couldn't function at the level we do without the work they do every day."**

### GIS Fast Facts

- ~150 data and mapping requests executed by the GIS team each month
- 7 employees make up the team
- ~100 collective years of experience among the GIS team
- ~15 software programs used by the GIS team on a daily basis
- 30 servers required recently to upgrade the GIS environment and database to protect against possible security compromise and to enhance software functionality

### The GIS Impact at CHK

**Supporting Smarter Pipeline Corrosion Monitoring:** The Asset Integrity team had been tracking corrosion coupons (used to monitor corrosivity in our pipelines) manually via Microsoft Excel. The GIS team was able to provide a spatial database to house our corporate corrosion coupon catalog and build a custom web map application that gives pipeline engineers a one stop shop for all things corrosion coupon. Having the ability to view coupons spatially and easily measure distances between coupons allows engineers to design better treatment plans and pigging runs.

**Making Methane Monitoring More Comprehensive:** The GIS team worked hand in hand with Scientific Aviation and its installation of SOOFIE methane monitoring sensors on our Marcellus and Haynesville pad sites. SOOFIE employs machine learning to accurately identify emission anomalies 24 hours a day, but before any machine learning can occur, good pad data is required. The GIS team worked alongside HSE engineers and field personnel to map and categorize any component on our pad sites that could produce emissions, providing this critical data to Scientific Aviation.

**Creating More Efficient Water Hauling:** GIS designed a custom web map application for Supply Chain and the Operations Support Center that ranks the haul distance from every Chesapeake-operated pad site to all approved saltwater disposal options in each business unit. The application encourages the most efficient wastewater trucking routes.

**Maintaining our Pipeline Compliance:** GIS is working with the Asset Integrity team to ensure all pipeline acquired in company acquisitions is mapped accurately and incorporated into CHK's pipeline database and our OneCall account. This is in addition to the team's annual work classifying pipelines for the PHMSA (Pipeline and Hazardous Materials Safety Administration), which involves running a comprehensive model that creates a buffer around our pipelines and identifies occupied structures (houses, schools, commercial buildings, etc.) that fall within that buffer.



*GIS Team: Jason Nichols, Erin Felts, Jane Lam, Micah Cox, Nichole Buersmeyer, Ryan Roark and Jennifer Hargis (not pictured)*