GIS BEST PRACTICES FOR ENVIRONMENTAL HEALTH

ENHANCING ENVIRONMENTAL HEALTH WORKFLOWS WITH GIS

Our world is an increasingly complex ecosystem of shared space between humans and their environments. Populations are at risk from deadly chemicals; contaminated air, water, and soil; and disease, requiring location-based solutions and data-driven interventions. Esri, the global market leader in geographic information system (GIS) technology, brings all levels of government and organizations optimized tools to mitigate environmental threats and address challenges immediately. A geographic approach enhances environmental health monitoring, improves operational efficiencies, ensures compliance with regulatory requirements, explores and forecasts potential hazards, and promotes environmental justice to keep all communities safe.

GIS technology enhances environmental health management to

- Automate monitoring for critical decision-making.
- Improve operational efficiency and streamline workflows.
- Comply with regulatory requirements.
- Promote environmental health justice by addressing at-risk areas to achieve health for all.

AUTOMATE MONITORING FOR CRITICAL DECISION-MAKING

GIS allows organizations to incorporate a real-time automated monitoring system in which you can manage and track data for timely data-driven interventions and critical decision-making.

GIS technology provides targeted and timely strategic information to keep communities safe and healthy by doing the following:

- Seamlessly integrating and automating data systems
- Providing mobile data collection tools
- Optimizing spatial analytics for real-time data-driven decisions

IMPROVE OPERATIONAL EFFICIENCY AND STREAMLINE WORKFLOWS

GIS serves as a communication hub for the modernization of investigations and inspections, community-informed environmental health information, and mobilizing a competent workforce to provide timely results. Through GIS, environmental health organizations can integrate data systems to prioritize workflows, leading to improved performance and transparency.

GIS improves operational efficiency by doing the following:

- Streamlining communication for timely results
- Prioritizing inspections by performing spatial analysis on integrated data systems
- Expediting inspection routes and data collection
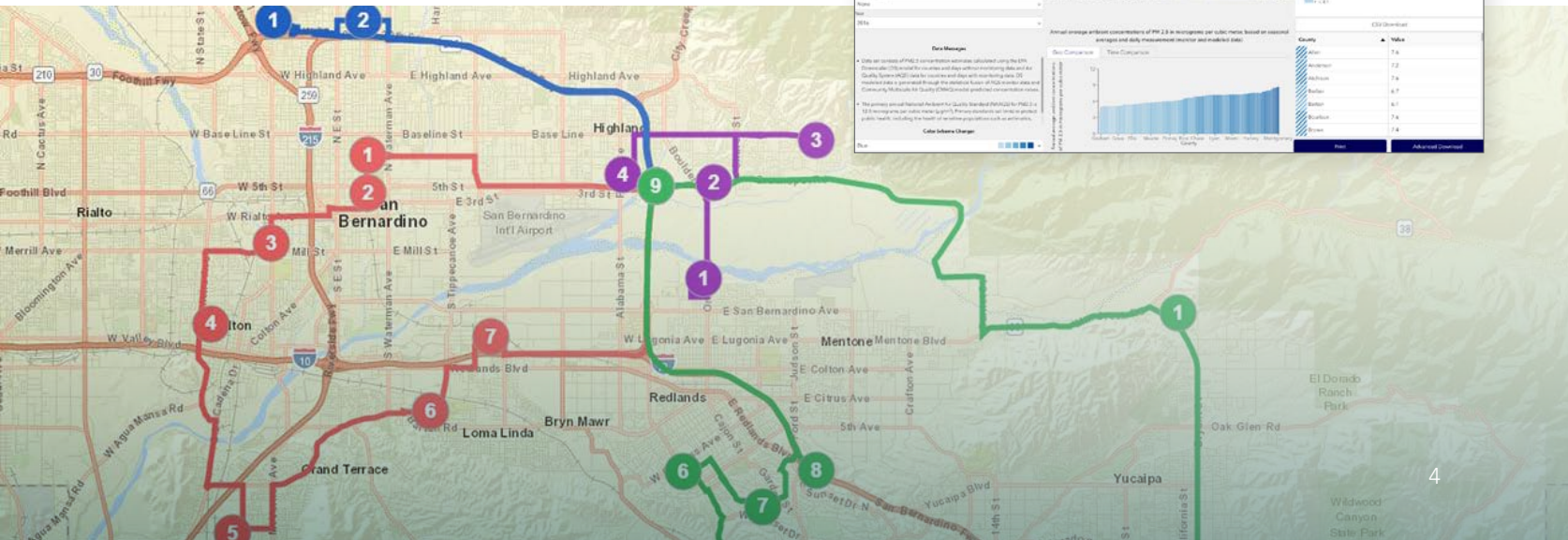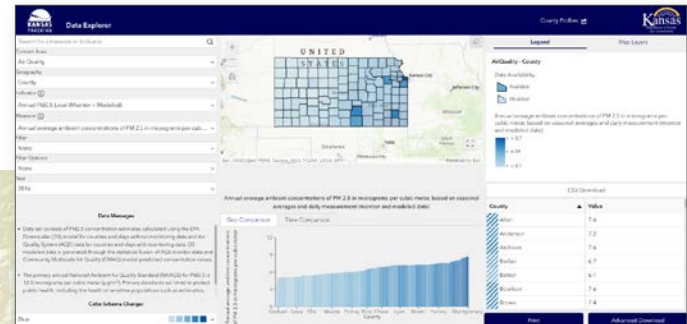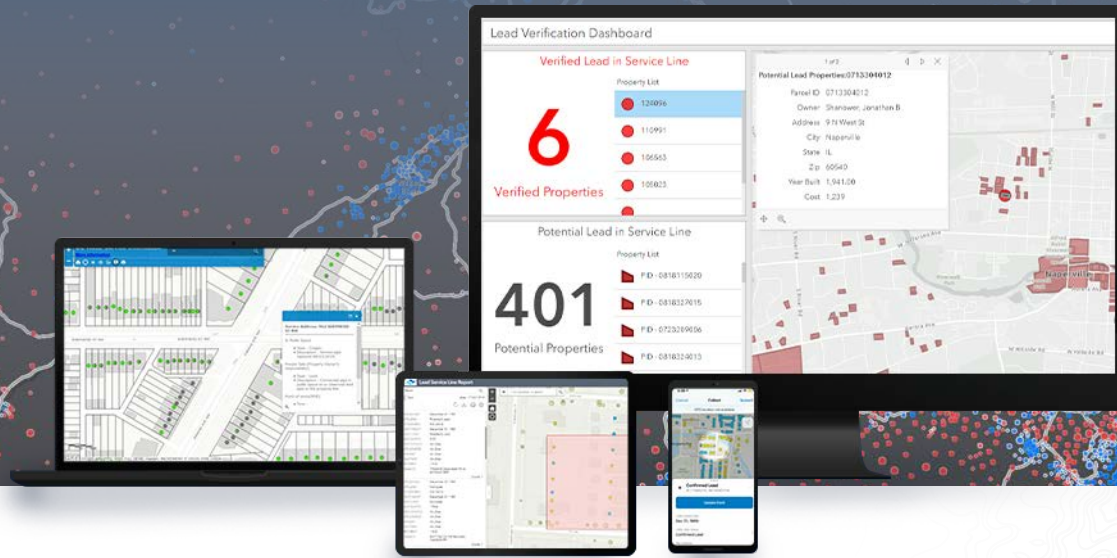
COMPLY WITH REGULATORY REQUIREMENTS

A geographic approach allows organizations to move beyond basic compliance with regulatory requirements. GIS provides the unique alignment between compliance and an agency's organizational strategies to swiftly respond and allocate resources where they are most needed. Customizable technology allows organizations to easily update and adapt to new regulations.

Incorporating GIS into organizational strategies can decrease disruption from changing regulations by doing the following:

- Supporting regulation changes at the federal, state, and local levels
- Monitoring the impact of environmental regulations on health outcomes

PROMOTE ENVIRONMENTAL HEALTH JUSTICE

GIS technology allows you to identify at-risk communities who are subject to greater health disparities. Applying a geographic approach gives you access to demographic data, tools that identify unequal resource allocation, and insight into communities who are exposed to greater environmental threats. Mapping and analysis can expose the disproportionate share of negative environmental impacts and aid in effectively meeting the populations with the most need.

Taking a geographic approach will advance environmental justice by doing the following:

- Identifying environmental health disparities through enhanced demographic information
- Strengthening communication across sectors by accurately capturing real-time data and applying place-based community resources

# CORE GIS TECHNOLOGY TO ENHANCE ENVIRONMENTAL HEALTH

ArcGIS® Field Maps

This all-in-one app uses data-driven maps to help mobile workers perform mobile data collection and editing, find assets and information, and streamline field workflows.
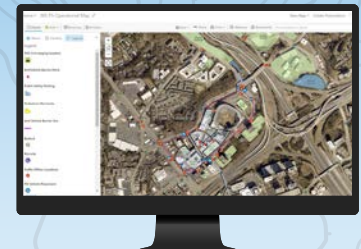
ArcGIS Velocity℠

Use this software as a service (SaaS) product to leverage your real-time spatial data for essential operational tasks such as remote monitoring of assets, predictive maintenance, and process optimization.
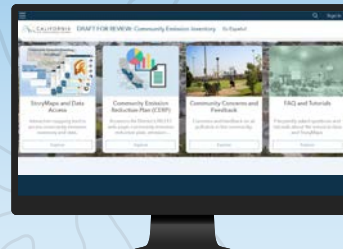
ArcGIS Hub℠

This community engagement platform fosters communication, collaboration, and data sharing.

ArcGIS Community Analyst℠

Prioritize community projects, allocate resources for greatest impact, and understand the types of people impacted by a policy decision with this cloud-based mapping solution.

Visit us at **esri.com/health**.

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