



ENVIRONMENT AND NATURAL RESOURCES WEBINAR SERIES

ARCGIS FOR WATER QUALITY INSPECTION

CHRIS NICKOLA

NIKKI GOLDING

ENVIRONMENT AND NATURAL RESOURCES

Webinar Series

GIS Trends in Environment and Natural Resources

May

Improving Environmental Permit compliance and Inspection through GIS

June

Improving Civic Engagement with GIS

August

Understanding Environmental Impacts through GIS

September

Water Quality Inspections

November 30

<https://geonet.esri.com/groups/env>

MISSION

To help environment and natural resource agencies leverage location-based information to:

1. Deliver improved service,
2. Make better decisions, and
3. Effectively engage citizens.

DEFINITION

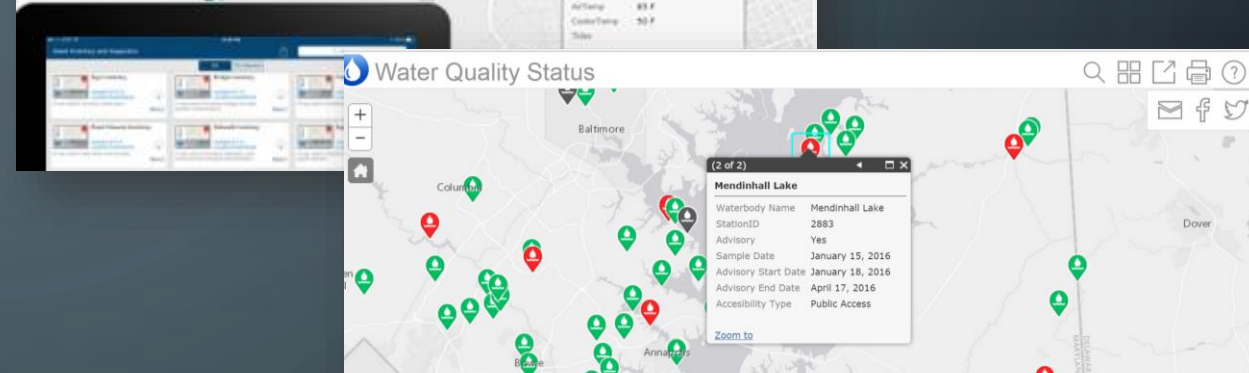
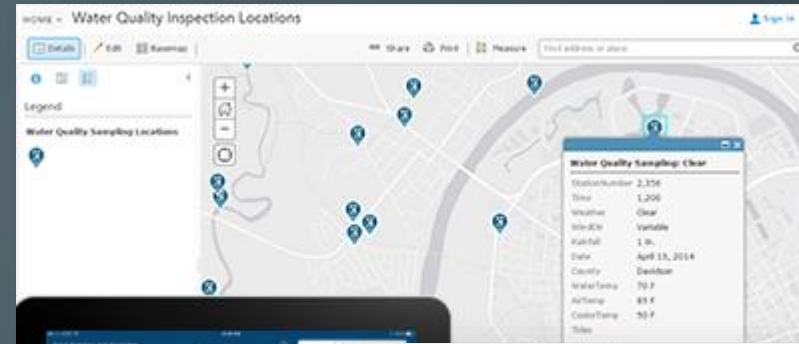
WikipediA

Water quality refers to the chemical, physical, biological, and radiological characteristics of [water](#).^[1] It is a measure of the condition of water relative to the requirements of one or more biotic species and or to any human need or purpose.^[2] It is most frequently used by reference to a set of standards against which compliance can be assessed. The most common standards used to assess water quality relate to health of [ecosystems](#), safety of human contact, and [drinking water](#).

WATER QUALITY ASSESSMENT


Timely access to more accurate information

- Expedite access to information
- Increase data accuracy
- Monitor and evaluate the health of water bodies
- Deliver information to the public
- Facilitate communication with stakeholders




Welcome to My Water Quality

Is Our Water Safe to Drink?




Safe drinking water depends on a variety of chemical and biological factors regulated by a number of local, state, and federal agencies. [\[Future Portal\]](#)

Is it Safe to Swim in Our Waters?




Swimming safety of our waters is linked to the levels of pathogens that have the potential to cause disease. [Learn more >>](#)

Is it Safe to Eat Fish and Shellfish From our Waters?




Aquatic organisms are able to accumulate certain pollutants from the water in which they live, sometimes reaching levels that could harm consumers. [Learn more >>](#)

Are Our Aquatic Ecosystems Healthy?




The health of fish and other aquatic organisms and communities depends on the chemical, physical, and biological quality of the waters in which they live. [Learn more >>](#)

Are Harmful Algal Blooms Affecting Our Waters?



Harmful algal blooms can make water unsafe for swimming and other recreational activities. The toxins they produce can harm pets, livestock, and people. [Learn more >>](#)

About Us



The Monitoring Council seeks to provide multiple perspectives on water quality information and to highlight existing data gaps and inconsistencies in data collection and interpretation. [Learn more >>](#)

INSPECTING AND ASSESSING

Provide insight and clarity through analysis

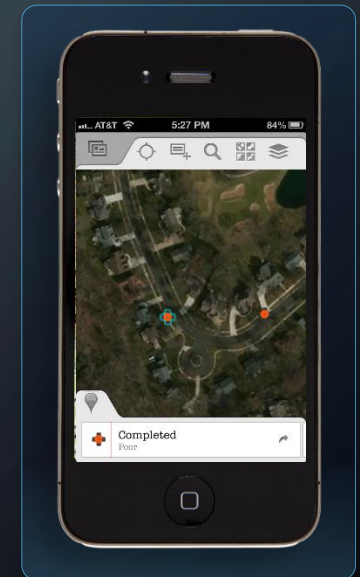
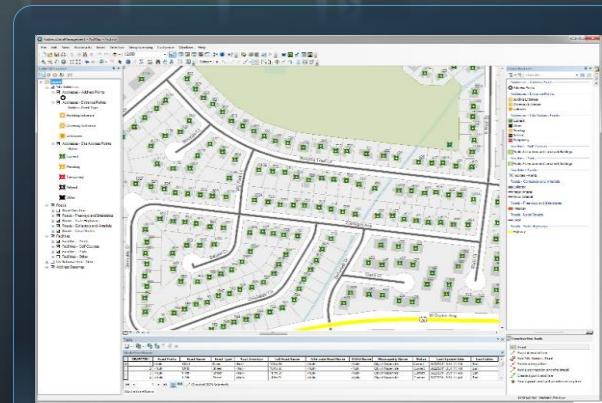
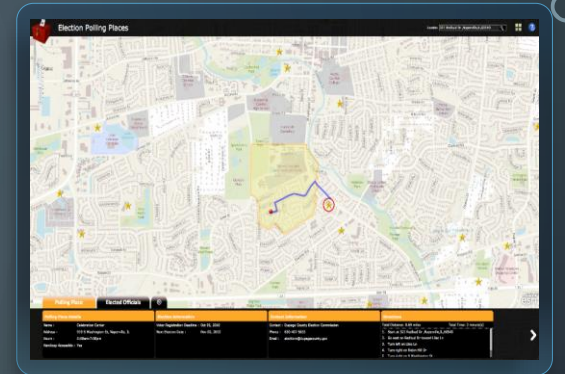
- Prioritize
- Evaluate
- Analyze
- Engage
- Communicate



LOCATION FOR THE ORGANIZATION

Business Value

- Improved decision making
- Improve timeliness and accuracy of data
- Streamline field operations
- Increase operational awareness
- Improve service to business community
- Increase community engagement and feedback

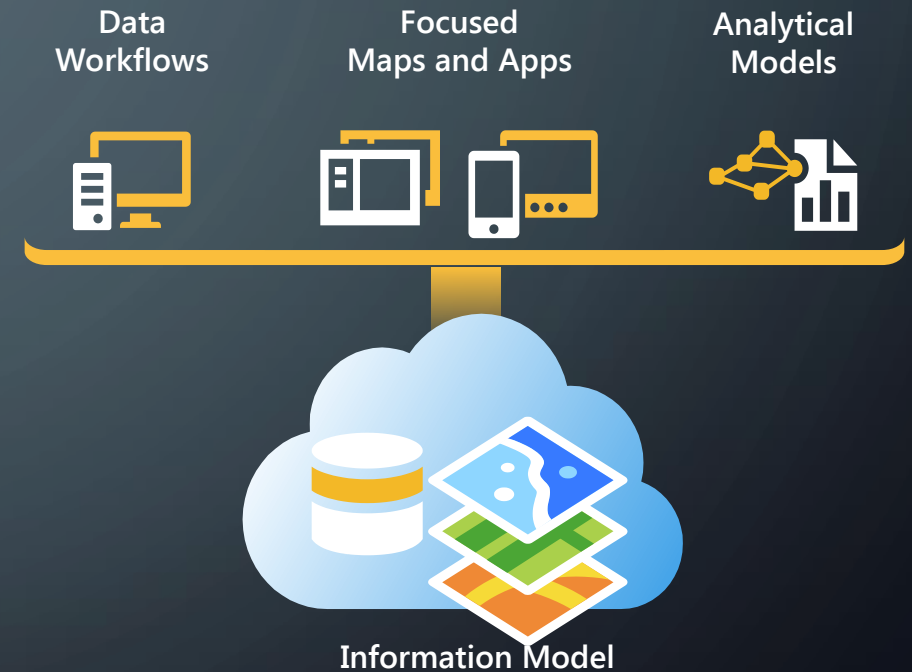


APPLYING WEBGIS TO WATER QUALITY ASSESSMENT

ARCGIS FOR STATE GOVERNMENT

Esri solutions for government customers

- Series of useful maps and apps focused on government work
 - Configurable and extensible
 - Freely available and fully supported
- Community of users
 - Best Practices / Implementation Support
- Network of Esri Services and Partner offerings
 - Help users implement, sustain and enhance



.....Available on-premise or in the cloud

ARCGIS FOR STATE GOVERNMENT

Our mission is to help you.....

- Deliver maps and applications quickly throughout your organization
- Stay current with future releases / avoid legacy technology
- Deploy a geospatial platform that can be leveraged by many
- Leverage the collective knowledge of the entire community
- And do this with....less staff, budget, and technical expertise



Transportation



- Railroad Crossing Inspection
- Road Closures
- Bridge Inventory
- Environmental Screening
- Crash Analysis
- Guardrail Inventory
- Pavement Marking Inventory
- Sign Inventory
- Signal Inventory
- Transportation 511

Public Health

- Beach Monitoring
- Water Quality Monitoring
- Restaurant Inspection
- Restaurant Inspection Results
- My Health Services
- Birth Outcomes
- Birth Outcomes Briefing
- Model Organization



Secretary of State

- Early Voting
- Polling Place Locator
- Election Results
- My Elected Representative



Emergency Management

- Situational Awareness
- Flood Planning
- Special Event Planning
- Emergency Assistance
- Evacuation Zones
- Road Closures
- Damage Assessment
- My Hazard Information
- EM Maps
- Model Organization
- Briefing Book
- Citizen Reports
- Common Operational Picture
- Incident Analysis Viewer
- Operations Response
- Photo Survey
- Shelter Locator



- Public Information Map
- Local Impact Map
- Road Closures
- CAMEO Tools
- Incident Briefing
- Health and Safety Reports
- Debris Reporting
- Floodplain Inquiry
- Emergency Assistance
- Evacuation Zone
- Incident Status Dashboard
- Logistics Planning

Environment and Fish and Wildlife



- Permit Status
- Permit Inspection
- Hunting License Locator
- Water Access Locator
- Wildlife Management Area Locator
- Environmental Screening
- Environmental Impact Polling
- Trail Locator
- Citizen Science Reporter
- Citizen Science Manager
- Model Organization
- Impact Briefing
- Water Quality Inspections
- Water Quality Results
- Park and Recreation Locator

Economic Development

- Live, Work, and Locate
- Incentive Zones
- Site Selector
- Event Locator



GIS/IT

- Executive Dashboard
- Briefing Book
- Community Parcels
- Community Addresses
- Maps and Apps Gallery
- Crowdsourcing Manager
- Crowdsourcing Reporter
- Service Catalog/Hosted Services
- Model Organization
- PLSS



ARCGIS FOR STATE GOVERNMENT

The background is a dark blue gradient. In the corners, there are white, stylized circuit board traces with circular nodes. These traces form a network-like pattern, with some lines extending from the edges towards the center.

DEMO



GETTING STARTED. NEXT STEPS.

Environment and Natural Resources

Help scientists and interested parties understand potential impacts of development and other projects on the natural environment. Brief executives and decision-makers on potential impacts, and elicit feedback from stakeholders and constituents on projects happening in the region.



Conduct Analyses

Environmental Analysis is a configuration of ArcGIS that helps scientists, planners, and other analysts to understand the potential impact of development and other projects on the natural environment.

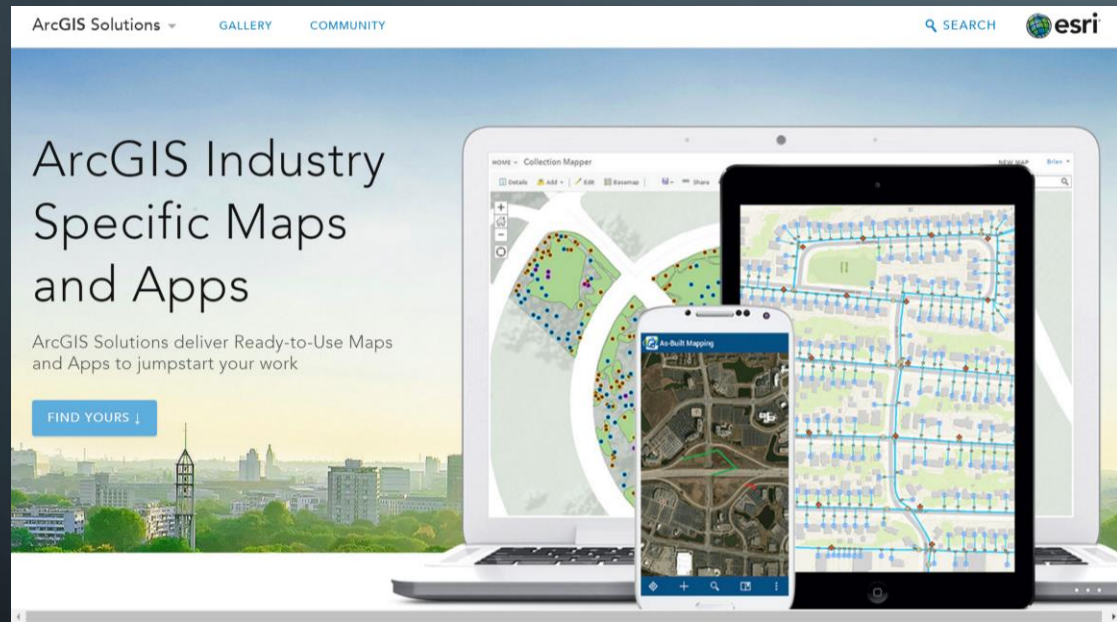


Understand Impact

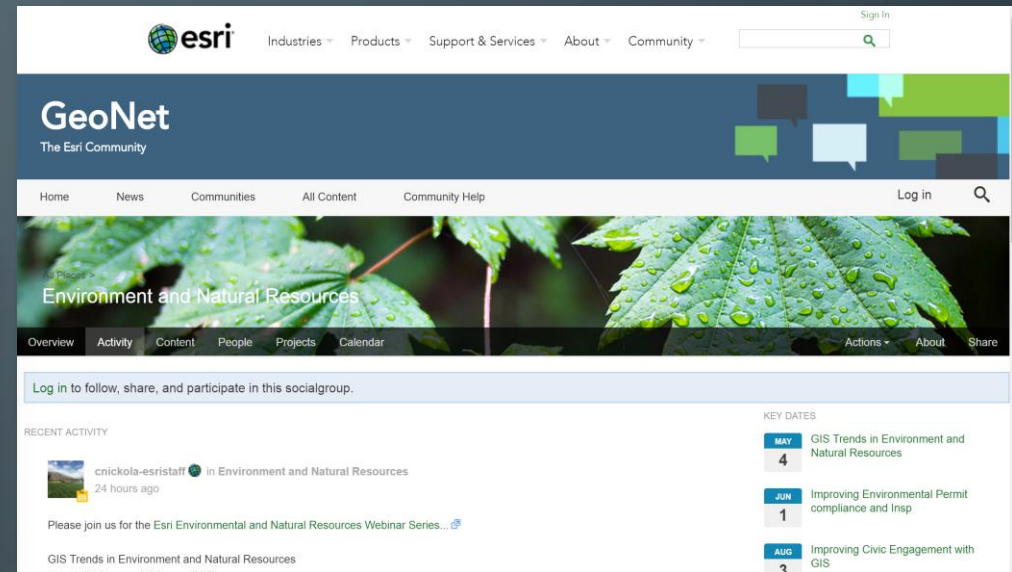
An application configuration that enables interested parties to discover potential impacts to the natural landscape, species, and species habitat due to development and mitigation activities.

THE COMMUNITY

It's not just about the technology



Destination where organizations can collaborate



Have ongoing dialog, share success stories and learn from others

The background is a dark blue gradient. In the corners, there are decorative white line-art elements resembling circuit traces or a network diagram, with small circles at the end of the lines.

Questions

Please enter in Question form

ENVIRONMENT AND NATURAL RESOURCES

Webinar Series

GIS Trends in Environment and Natural Resources

May

Improving Environmental Permit compliance and Inspection through GIS

June

Improving Civic Engagement with GIS

August

Understanding Environmental Impacts through GIS

September

Water Quality Inspections

Today

<https://geonet.esri.com/groups/env>

Thank You



<http://solutions.arcgis.com>



<https://geonet.esri.com/groups/env>



@ArcGISStateGov



<http://esri.github.com>



Chris Nickola – cnickola@esri.com

Nikki Golding – ngolding@esri.com