



ENVIRONMENT AND NATURAL RESOURCES WEBINAR SERIES

# **UNDERSTANDING ENVIRONMENTAL IMPACTS WITH GIS**

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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 14th

**Water Quality Inspections**

October TBD

<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

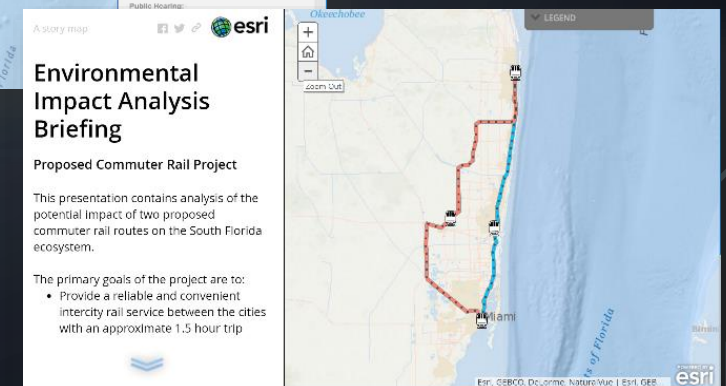
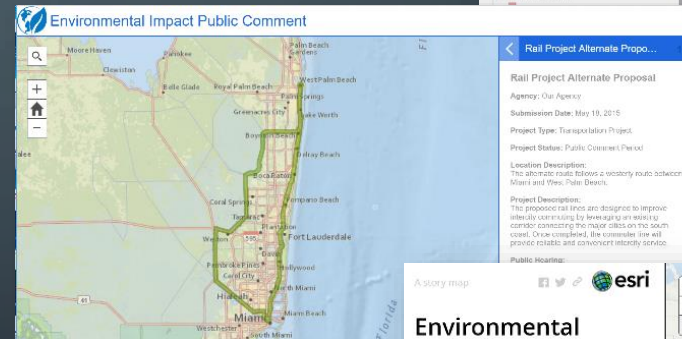
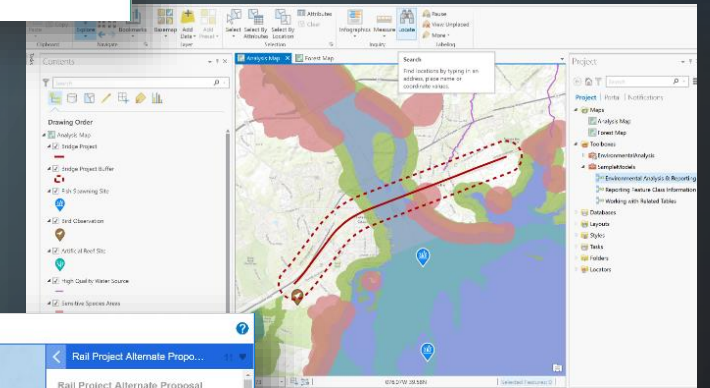
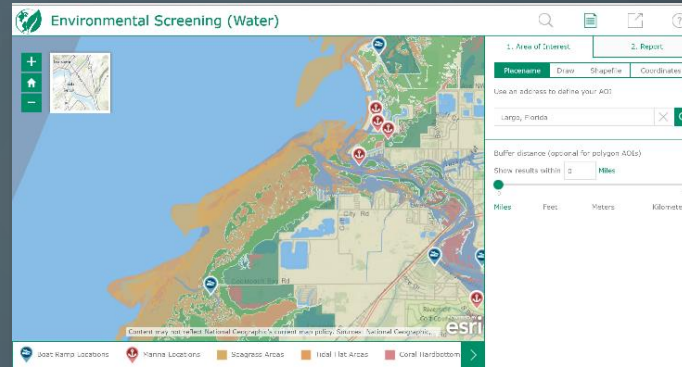
WikipediA

***Environmental assessment*** (EA) is the term used for the assessment of the environmental consequences (positive and negative) of a plan, policy, program, or concrete projects prior to the decision to move forward with the proposed action.

# ENVIRONMENTAL IMPACT

## Gain Understanding Through Analysis

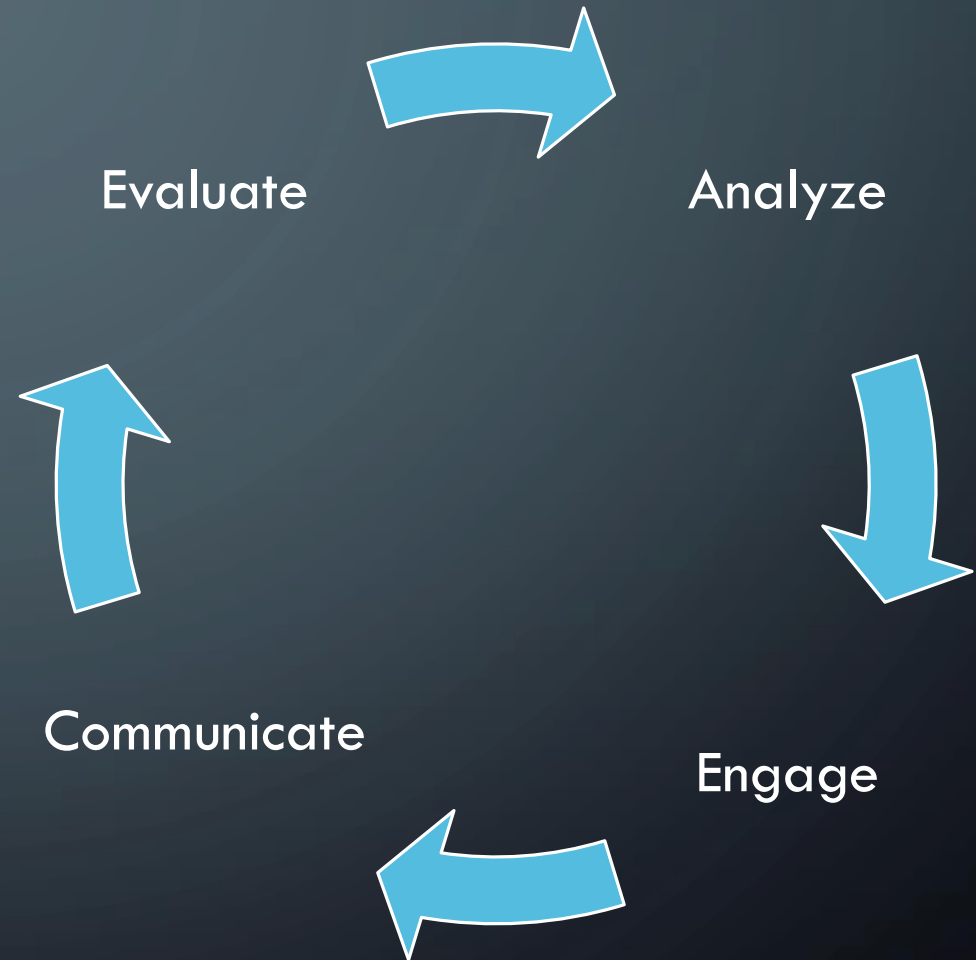
- Evaluate potential implications
  - Endangered species, protected lands, water resources, extent of impact
- Iterative evaluation of projects and boundaries
- Generate summary information for project
- Engage the community for feedback
- Utilize authoritative sources across organizations
- Facilitate communication with stakeholders



# DRIVING DECISIONS

Provide insight and clarity through analysis

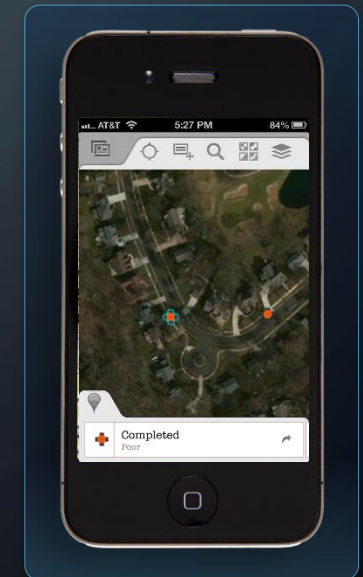
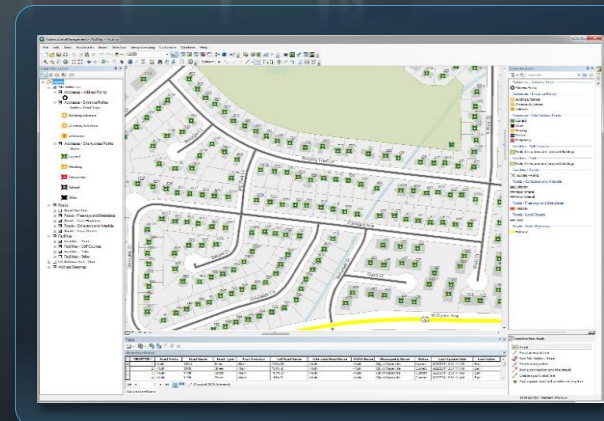
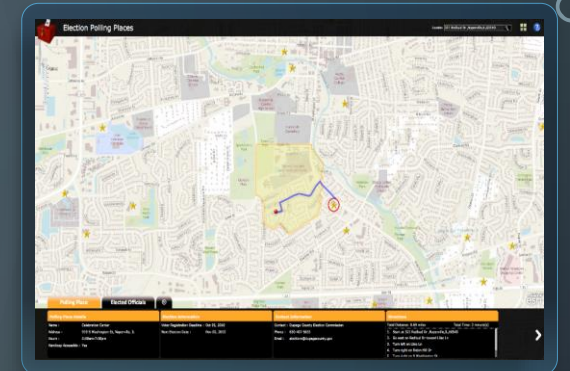
- Evaluate
  - Environmental Screening
- Analyze
  - Environmental Analysis
- Engage
  - Environmental Impact Polling
- Communicate
  - Environmental Impact Briefing



# 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



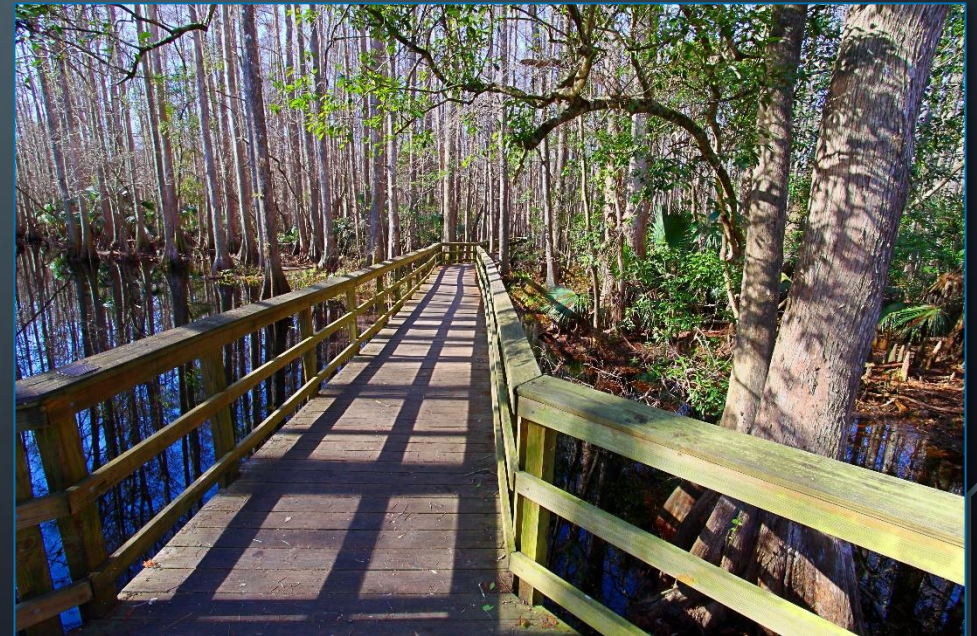
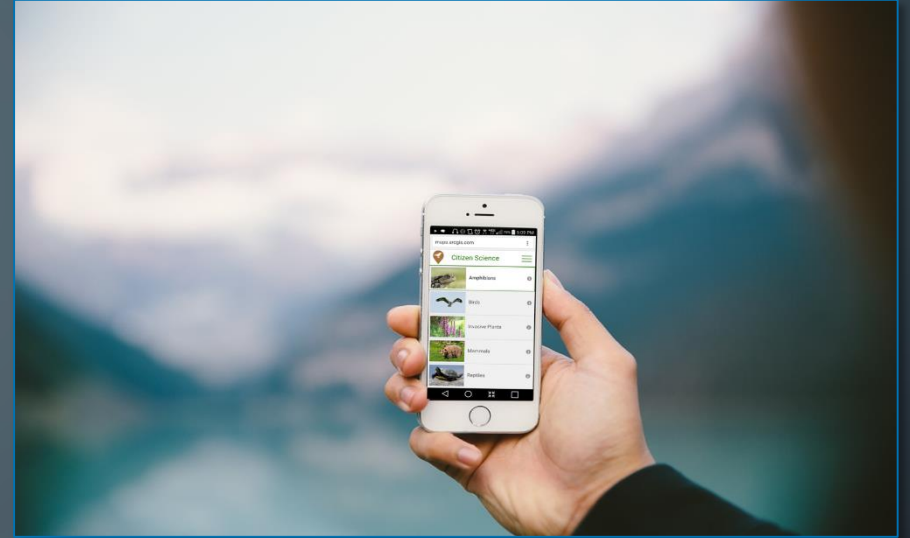
The background is a dark blue gradient. In the corners, there are decorative white lines that resemble circuit traces or a network diagram, with small circles at the end of the lines.

# APPLYING WEBGIS TO UNDERSTAND ENVIRONMENTAL IMPACTS WITH GIS



# A COMMON EXPERIENCE....

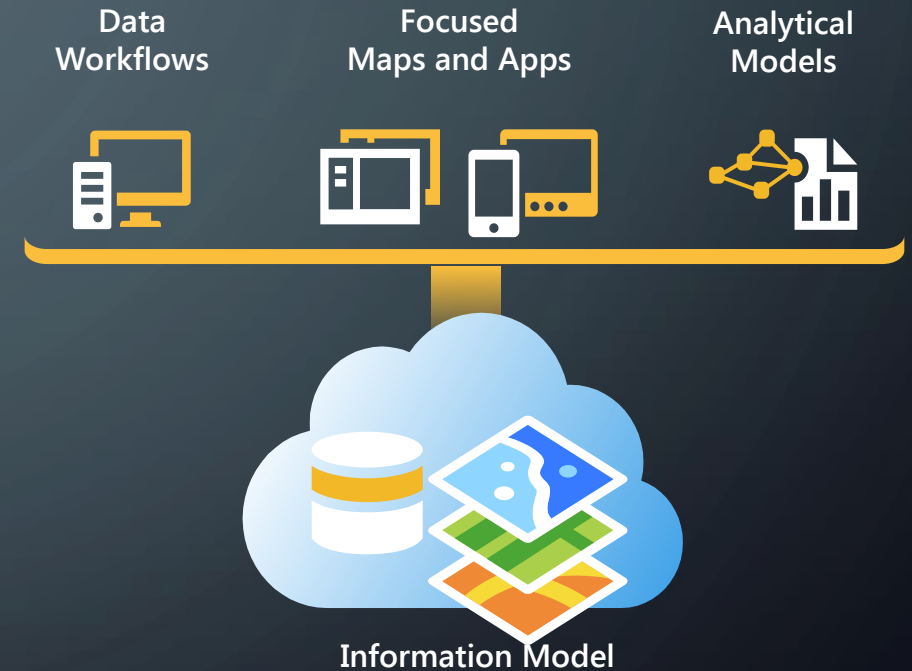
- Management and protection of natural resources
- Land management and recreation
- Ecosystem restoration
- Species and habitat mapping / conservation
- Public engagement



# 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

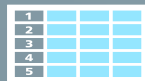
## Public Health

- 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

# IMPACT ASSESSMENT

A collection of applications to support impact analysis

The screenshot shows the 'Environmental Screening (Water)' application interface. It features a map of a coastal area with various colored overlays representing different environmental zones. On the right side, there are two main sections: '1. Area of Interest' and '2. Report'. Under '1. Area of Interest', there are buttons for 'Place name', 'Draw', 'Shapefile', and 'Coordinates'. Below these is a search bar with the text 'Use an address to define your AOI:' and 'Largo, Florida'. Under '2. Report', there is a section for 'Buffer distance (optional for polygon AOIs)' with a dropdown menu set to 'Miles' and a 'Show results within' field set to '300'. Below this is a table with columns for 'Miles', 'Feet', 'Meters', and 'Kilometers'. At the bottom, there is a legend with categories like 'Joat Ramo Locations', 'Manna Locations', 'Seagrass Areas', 'Habitat Areas', and 'Coral Hardbottom'.

The screenshot shows the 'Environmental Impact Public Comment' application interface. It displays a map with a red dashed line indicating a proposed route. A search bar at the top right contains the text 'Find locations by typing in an address, place name or coded route names'. Below the map, there is a 'Project' section with a search bar and a list of project items including 'Maps', 'Analysis Map', 'Formal Map', and 'Tool Boxes'. The map shows various colored overlays and a legend on the left side.

The screenshot shows the 'Environmental Impact Analysis Briefing' application interface. It features a map of South Florida with a green line indicating a proposed rail route. On the right side, there is a 'Rail Project Alternate Proposal' section with the following details: 'Agency: Our Agency', 'Submission Date: May 19, 2015', 'Project Type: Transportation Project', and 'Project Status: Public Comment Period'. Below this is a 'Location Description' and a 'Project Description'. The map shows various colored overlays and a legend on the left side.

The screenshot shows the 'Environmental Impact Analysis Briefing' application interface. It features a map of South Florida with a red line indicating a proposed rail route. On the right side, there is a 'Rail Project Alternate Proposal' section with the following details: 'Agency: Our Agency', 'Submission Date: May 19, 2015', 'Project Type: Transportation Project', and 'Project Status: Public Comment Period'. Below this is a 'Location Description' and a 'Project Description'. The map shows various colored overlays and a legend on the left side.



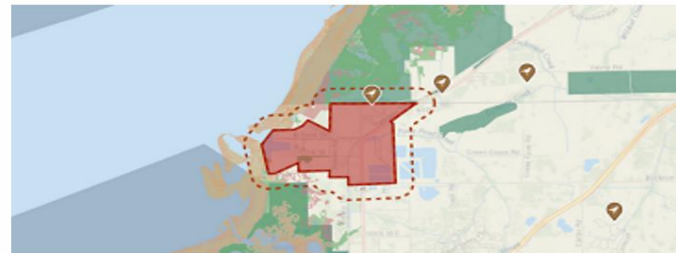
GETTING STARTED. NEXT STEPS.

# SOLUTION SITE:

<http://solutions.arcgis.com>

## 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.



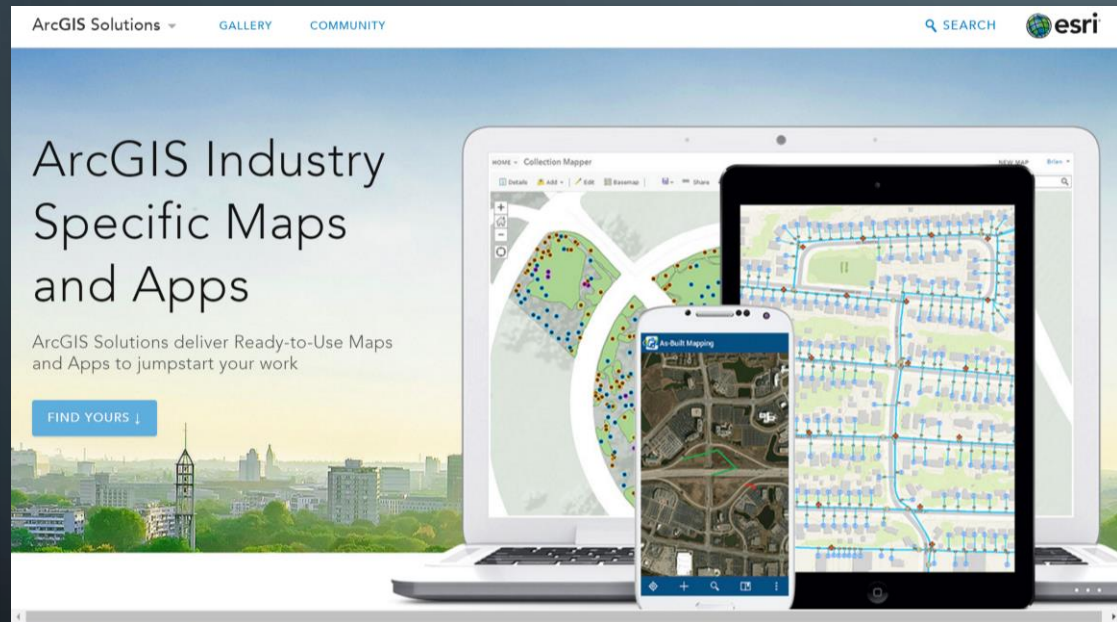
### Understand Impact

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.

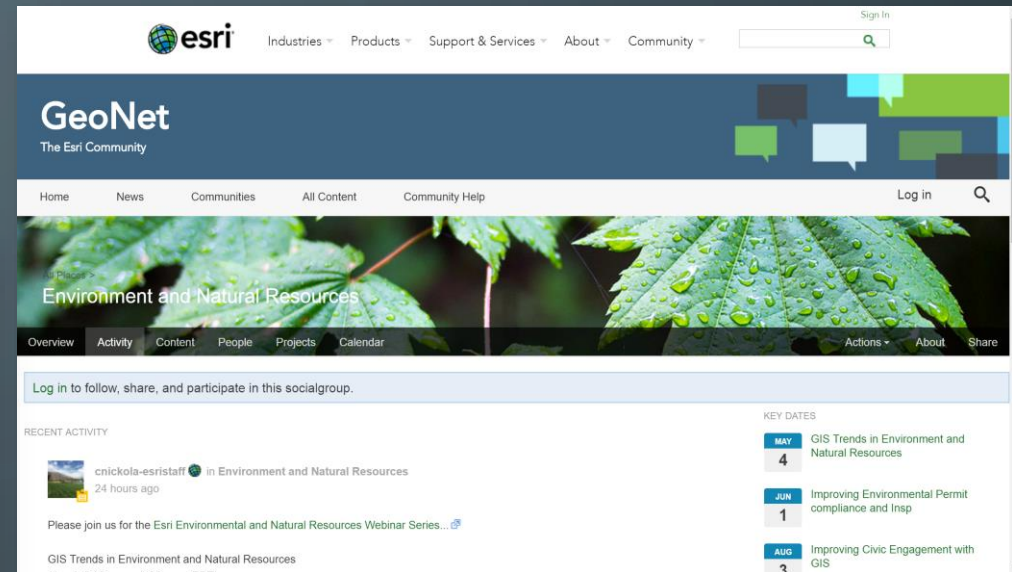
<http://esriurl.com/ArcGIS4StateGov>

# THE COMMUNITY

It's not just about the technology



Destination where organizations can collaborate



Have ongoing dialog, share success stories and learn from others



# Questions

Please enter in Question form

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**Understanding Environmental Impacts through GIS**

Today

**Water Quality Inspections**

October TBD

# Thank You



<http://solutions.arcgis.com>



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



@ArcGISStateGov



<http://esri.github.com>



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