

Environmental Solutions

for Oil & Gas Operators



Practical, Local, Permitting-to-Reclamation Field Services, Monitoring and Reporting.

From leasing to reclamation, each phase of a shale project touches environmental compliance, risk management, and community stewardship. GES supports operators by integrating environmental protection into operational workflows, reducing delays, controlling costs, and ensuring regulatory confidence. Our team is experienced with state regulators, river basin commissions, watershed conservancy districts, and U.S. Army Corps of Engineers (USACE) processes.

1. Leasing, Planning and Permitting

Includes: environmental impact screening, identification of wetlands, streams, endangered species; air and water resource considerations; local and state permit strategy.

- Wetland and waterbody delineations
- Threatened and endangered species assessments
- Cultural and archaeological coordination
- Regulatory permitting support (Erosion and Sediment Control General Permits (ESCGPs), General Permit (GP)-5/5A)
- Geographic Information System (GIS) mapping and environmental constraint layers
- Desktop and field environmental due diligence (Phase I / II Environmental Site Assessments (ESAs))

2. Site Selection and Pad Development

Includes: stormwater controls (E&S), land disturbance and habitat impacts, spill prevention and materials management, and water sourcing and logistics.

- Erosion and sediment control planning
- Stormwater management design and inspections
- Spill Prevention, Control, and Countermeasure (SPCC) plans
- Water sourcing evaluation and permitting
- Pre-drill baseline groundwater and surface water sampling
- Drone surveys for topographic, vegetation, and environmental monitoring
- Threatened and endangered species surveys, monitoring and management

Service Capabilities

- Air permitting
- Carbon accountability
- Cultural resources screening
- Environmental monitoring and the over
- Facility siting and due diligence (including brownfields)
- Feasibility studies
- GHG emissions
- Local planning board support
- NEPA documentation
- Phase I/II ESAs
- Protected species evaluations
- Regulatory advocacy
- Site remediation/restoration
- Spill prevention, control and countermeasure (SPCC) plans
- Stormwater planning and permitting
- sUAS (drone) services
- Vapor intrusion assessment

3. Drilling Operations

Includes: waste handling (drilling muds, cuttings), air emissions from engines, compressors, generators, noise, dust, and light impacts, and groundwater protection and well integrity oversight.

- Waste characterization and disposal guidance
- On-site environmental monitoring and inspections
- Groundwater protection audits
- Well pad environmental compliance staffing
- Drone-based site progress documentation, asset inspection and methane screening
- HSSE training and inspections

4. Hydraulic Fracturing and Completion

Includes: water sourcing and withdrawal compliance, flowback and produced water management, air emissions from pumps and flowback operations, and chemical inventory and reporting (FracFocus, state and federal regulators).

- Water withdrawal permitting and compliance monitoring
- Flowback/produced water sampling and characterization
- Air monitoring (particulate, volatile organic compound (VOC), methane)
- Chemical inventory management and regulatory reporting
- Secondary containment assessments
- Spill response readiness planning
- Well pad inspections

5. Production, Ongoing Operations, Compliance and Monitoring

Includes: routine compliance monitoring and reporting, produced water management, stormwater and erosion control maintenance, spill management and reporting, and waste streams and residual waste compliance.

- Monthly/quarterly environmental compliance inspections
- Groundwater and surface water sampling
- Waste profiling and residual waste reporting
- Stormwater Best Management Practices (BMP) inspections
- Spill response and remediation
- Drone surveillance for environmental anomalies, erosion, vegetation, methane, Normalized Difference Vegetation Index (NDVI)
- Compliance audits

- Naturally Occurring Radioactive Material (NORM)/ Technologically Enhanced Naturally Occurring Radioactive (TENORM) Surveys
- Standard Operating Procedure (SOP) and GIS form development
- Complaint sampling/ investigations
- Data management
- Asset acquisition environmental due diligence (Phase I/ II ESAs)
- Stray gas migration/ vapor intrusion investigation and management
- Chemical inventory management and regulator reporting
- Preparedness, Prevention and Contingency Plans
- Above ground storage tank inspections
- Safety Data Sheet Management Inspections and Training

6. Midstream Tie-Ins

Includes: compressor station air emissions, methane leak detection, and right-of-way impacts.

- Leak Detection and Repair (LDAR) inspections using optical gas imaging (OGI) drones
- Emissions inventories, compliance testing and emissions reporting
- HDD inadvertent return monitoring
- Pipeline environmental compliance (Right of Way (ROW) surveys, restoration oversight, NDVI Surveys)
- Soil and groundwater monitoring at midstream assets
- EI/PG inspections
- Drilling fluid release and waste sampling
- Earth movement/ Slip/ slope stability analysis and prediction (thermal and OGI imaging)

7. Incident Response and Remediation

Includes: rapid spill evaluation, regulatory communication, soil and groundwater remediation, risk assessment to reduce cleanup footprint and cost.

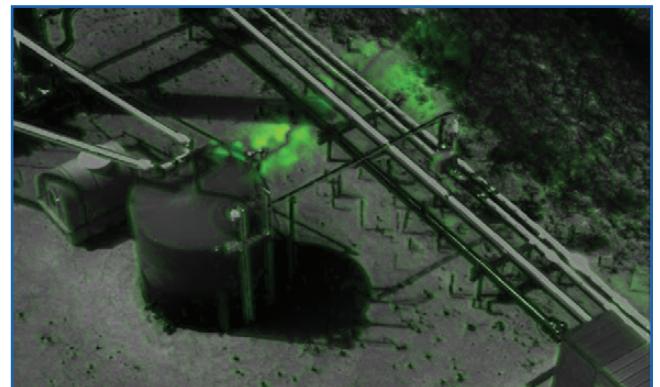
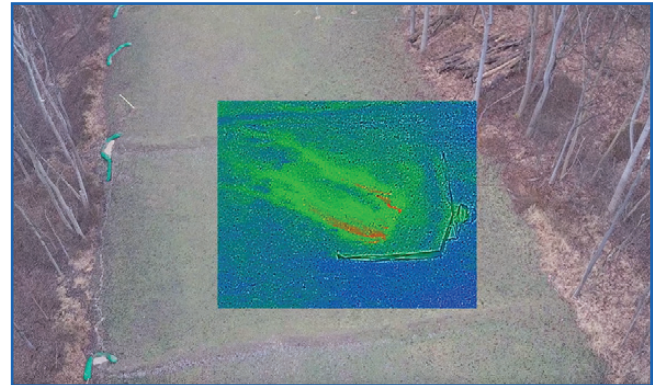
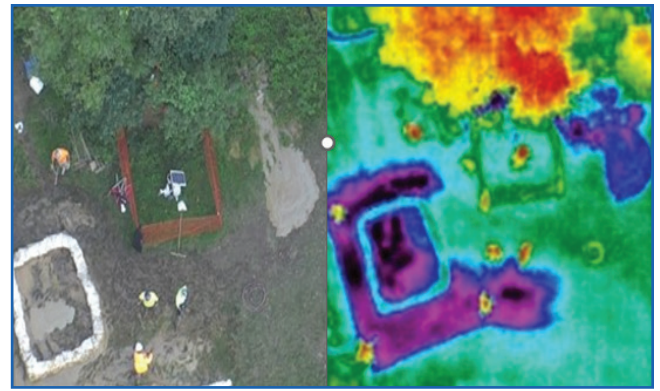
- 24/7 emergency spill response
- Groundwater remediation feasibility testing, system design and operation and maintenance (O&M)
- Contaminated soil excavation oversight

- Human health and ecological risk assessments
- Regulatory negotiation and closure documentation
- Drone imaging for plume and impact delineation
- Litigation and expert witness support
- Ecological restoration to pre-impact conditions or improved for compensatory uplift

8. Well Plugging, Site Restoration and Reclamation

Includes: land restoration and revegetation, long-term groundwater protection, pad decommissioning, and final regulatory closure.

- Plugging environmental oversight, methane calculations and documentation
- Trained and certified Qualified Measurement Specialist (QMS) for methane screening and quantification under the Infrastructure Investment and Jobs Act/ Methane Emissions Reduction Program (IIJA/MERP)
- Soil management and restoration planning
- Groundwater, soil, and air sampling and reporting
- Environmental monitoring and compliance
- Drone-based revegetation verification and progress monitoring
- Third party wildlife habitat certification for sustainability reporting
- Ability to locate difficult to find wells (drone or field magnetometer, historical archived files)



Why Shale Operators Choose GES

- More than 40 years of experience in the industry
- Faster approvals and reduced delays: Streamlined permitting and compliance support
- Cost efficiency: Early risk identification, proper planning and staffing
- Technology advantage: Industry-leading drone capabilities (methane, thermal, LiDAR, magnetometer, hyperspectral)
- End-to-end support: Leasing through reclamation—all handled by one coordinated local team

