



# Careers in Environmental Consulting

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Presented by the Licensed Site Remediation  
Professional Association (LSRPA)

April 25, 2017



# A Little About Me

- Erin Palko, P.G., LSRP
- Senior Consultant/Regional Director – Integral Consulting
- BS, University of Pittsburgh (Natural Science)
- MS, East Carolina University (Geology)
- 2 years – mining industry (stream restoration/remediation)
- 19 years – environmental consulting
- LSRP since May 2014
- LSRPA member since May 2014 (Steering, Communications, and College Outreach Committees)



# A Little About Me

- Malena Gordon-Ramos, LSRP
- Project Manager at BEM Systems, Inc.
- BA, UNC, Environmental Studies
- 10 years – environmental consulting
- 2 Summers– Soil Conservation Intern for USDA-Natural Resources Conservation Service
- LSRP Since 2015
- LSRPA member since 2015



# What We'll Cover

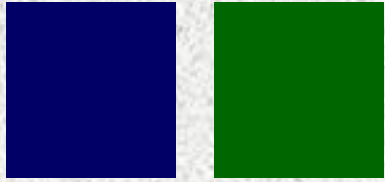
- What is Environmental Consulting?
- What is a Licensed Site Remediation Professional?
- How do you become an Environmental Consultant?
- What is the LSRPA, and what does it offer to students?





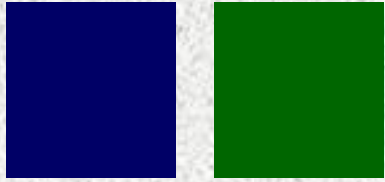
# What Is Environmental Consulting?

- “Providing professional or expert advice regarding the environment”
  - Scientific (environment, geology, chemistry, biology)
  - Engineering (environmental, civil, geological, chemical, biological)
  - Regulatory
  - Advice provided to “clients”
    - Private sector (e.g., manufacturing, real estate, attorneys, public utilities, financial institutions)
    - Public sector (federal, state, local)



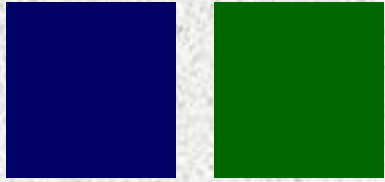
# Type of Work Performed

- **Environmental Compliance – assistance in complying with regulations**
  - Chemical storage and handling
  - Waste disposal
  - Health and safety
  - Planning (demolition and construction)
  - Ecological management (wetlands, endangered and threatened species, etc.)
  
- **Proactive initiatives**
  - Responsible care
  - ISO 14000



# Type of Work Performed

- Investigation and Remediation
  - Identify evidence of contamination
  - Verify existence of contamination
  - Establish extent and severity of contamination
  - Design remedy for the contamination
  - Implement remedy
  - Monitor effectiveness of remedy



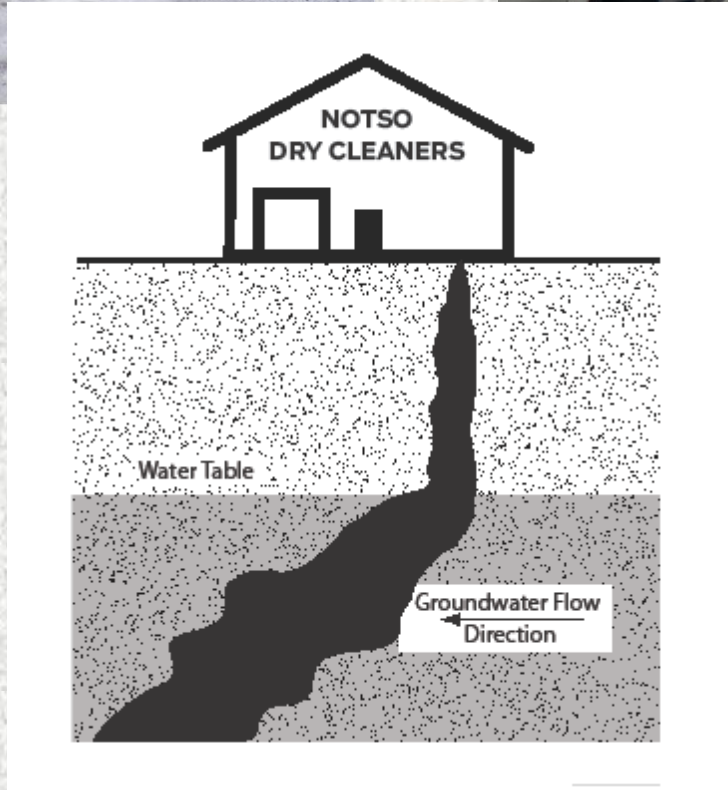
# Phase I of a Site Cleanup

- Phase I Environmental Site Assessment
  - Known as a Preliminary Assessment in New Jersey
  - Performed for various reasons (regulatory and non-regulatory)
  - Non-intrusive reconnaissance
  - Historical research
  - Document research
  - Interviews
  - No samples collected













Imagine  
that this



Used to  
look like  
this





# Phase II Environmental Site Assessment

- Called a “Site Investigation” in New Jersey
- Evaluate Areas of Concern
- Collect media samples (soil, groundwater, surface water, air)
- Analyze samples for constituents of concern
- Compare results to regulatory standards



# Remedial Investigation

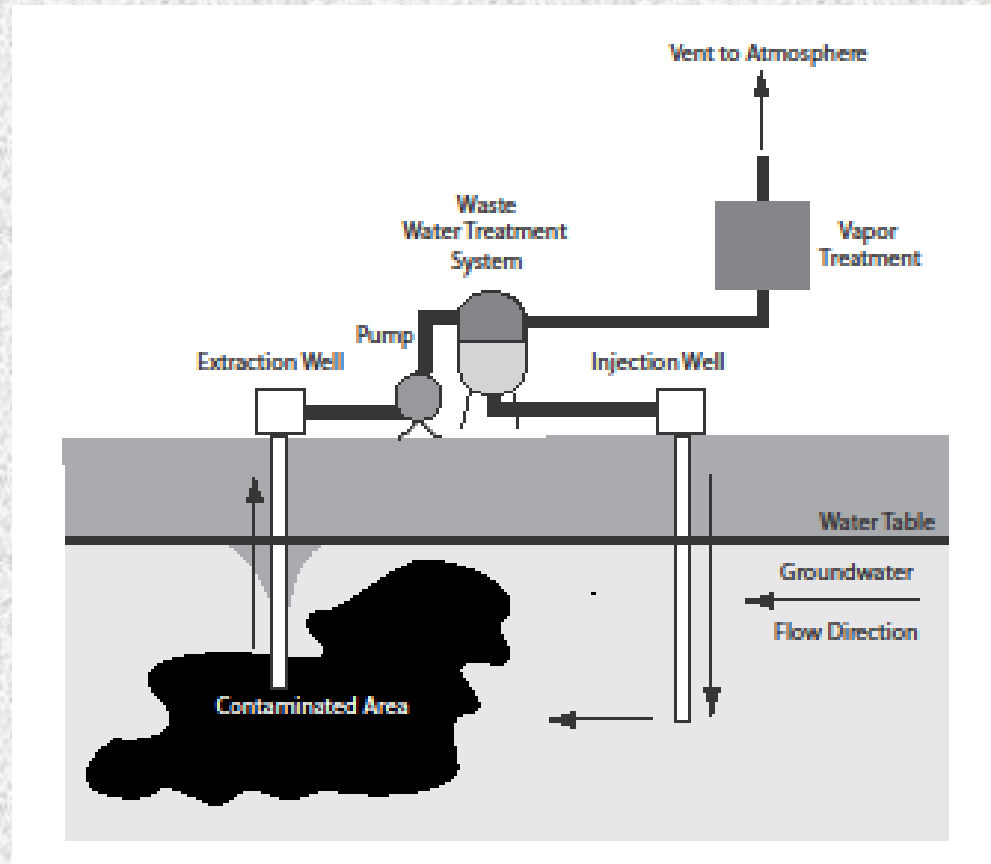
- Assess extent and severity of contamination, once identified
  - Vertical and horizontal extent
  - Chemicals of concern
  - Media affected



# Remedial Design

- Performed after completion of the Remedial Investigation
- Choose the method for remediating the contamination at the Site
  - Consider practicality, effectiveness, and cost of remedy
- Usually requires expertise in various sciences (environment, geology, ecology, chemistry, etc.) and engineering (env., civil, chemical, biological)
- Develop a Remedial Action Work Plan

# Remediation By Source Removal





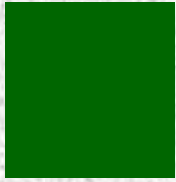
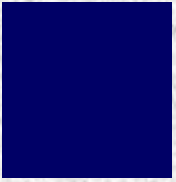




# Consultant's Role in Investigation & Remediation

- **Scientist/Engineer**
  - Responsible for data analysis, engineering design, etc.
  - Reports to a project team
- **General Contractor**
  - Responsible for all aspects of the project
  - Leads the project team – subcontractors report to the consultant





# What Will You Do?

- Entry level (0 – 5 years)
  - Field sampling
  - Field oversight
  - Data mgmt. and analysis
  - “Eyes and Ears” of the project team





# What Will You Do?

- **Mid-Level (5 – 15 years)**

- Manage projects
- Design remedial actions
- Write reports
- Meet with clients
- Manage project budgets

- **Senior Level (>15 years)**

- Manage the project team
- Obtain clients and manage client relationships
- Responsible for fiscal matters, employee performance
- Participate in division or company management





# What is an LSRP?

- “Licensed Site Remediation Professional”
- A senior-level environmental consultant
- LSRP is a professional license equivalent to a P.E. or Architect’s license
- The LSRP program started in 2009
- 642 LSRPs as of November 2016
- LSRPA is a professional organization that represents the interest of LSRPs



# LSRP's Responsibility

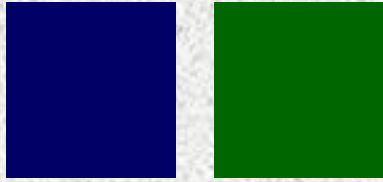
- Remediate hazardous waste sites in NJ
- Over 9,000 active contamination cases currently managed by LSRPs
- Self-certifies completed remediations
- Paramount responsibility: “Protection of Human Health and the Environment”
- LSRPs also certify uncontaminated conditions at pre-K day care centers



# Who Retains LSRPs?

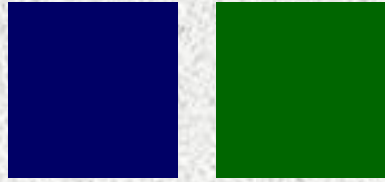
- Anybody who is cleaning up a contaminated property, wants to buy a contaminated property, or is lending money to a purchaser
  - Industrial companies
  - Real estate developers
  - Banks and other financial institutions
  - Owners of commercial properties
  - Governmental entities that own contaminated property
    - State
    - Counties
    - Municipalities





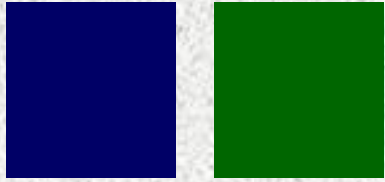
# LSRPs Work With People

- Clients
- Co-workers
- Outside professionals
  - Engineers, scientists, architects, attorneys, etc.
- Contractors
  - Construction contractors
  - Technical contractors (e.g., scientists, engineers)
  - Contract laboratories
- Vendors
  - Equipment providers
  - Information providers
  - Service providers (IT, etc.)
- Regulatory authorities
- Residents or workers on the subject property
- Other “stakeholders”
  - Communities
  - Money interests



# LSRPs Manage Projects

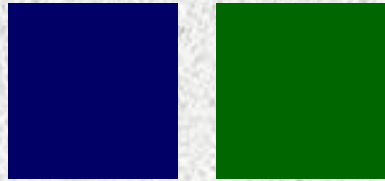
- Prepare and manage budget
- Prepares and sends proposals and change orders to client
- Prepares and manages project schedule
- Interacts with various “stakeholders”
- Prepares and oversees written and verbal correspondence
- Ensures that project activities and reports comply with all applicable rules and regulations



# LSRPs Communicate in Writing

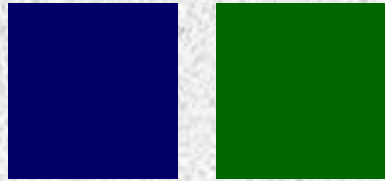
- Develops and approves work plans
- Effects contracts with contractors and vendors
- Coordinates with project team members
- Prepares and reviews reports, letters, memos, etc.





# Becoming an Environmental Consultant

- B.S. or B. Eng. degree typically required
  - In natural science or related field
  - Environmental or chemical engineering
- Masters degree will help your career
- Ph.D. useful mainly for technical specialists



# Becoming an Environmental Consultant

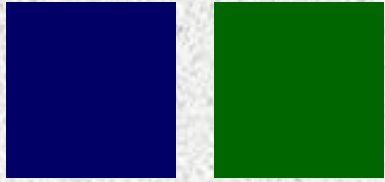
- Effective communication skills (oral and written) essential
- Basic computer skills essential
  - Knowledge of GIS a plus
- Experience a plus but not required
  - Summer internships
  - 40-hour HAZWOPR course



# About the LSRP Association

- Over 600 professionals who practice in New Jersey
- Mostly LSRPs, but many associate members
  - Contract laboratories
  - Attorneys
  - Construction contractors
  - Scientific and engineering professional support
- Student level associate membership





# What the LSRPA Offers You

- Learn about the business of environmental consulting
- Make business contacts
- Scholarships
- Resume portal