

PARSONS

Knowledge. Expertise. Resources.

Environmental Services



Parsons PLUS envision more



Onondaga Lake Environmental Remediation
Syracuse, New York

Parsons Who We Are

Parsons is a technology-driven engineering and environmental services firm with nearly 75 years of experience across many regions. We are a leader in many diversified markets with a focus on environmental, infrastructure, security, and construction. Parsons has the resources and expertise to execute projects of nearly any size and complexity, from early feasibility studies through remedial design and site closure.

As regulatory frameworks and technologies have evolved, we have stayed at the forefront. Our team of industry experts works closely with customers and stakeholders to address environmental concerns, and develop sustainable and cost-effective solutions to protect our natural environment while achieving compliance, reducing risk, and maintaining safety. Our ability to serve in various capacities, coupled with our depth of expertise and flexible contracting methods, provides a framework for successful project execution.



74
Years



14,000+
Employees



25
Countries




85
Languages



\$3B+
Annual Revenue

Exceptional Reputation Worldwide

				
TOP 10	9 YEARS	ISO 9001 ISO 14001	TOP INNOVATOR	23 SITES
Environmental, Chemical, and Soil Remediation (2017)	Impeccable reputation for integrity	Continuous improvement of work processes	Inventive processes and unique solutions	World-class safety performance

Parsons' Core Values

 **Safety**

 **Quality**

 **Integrity**

 **Diversity**

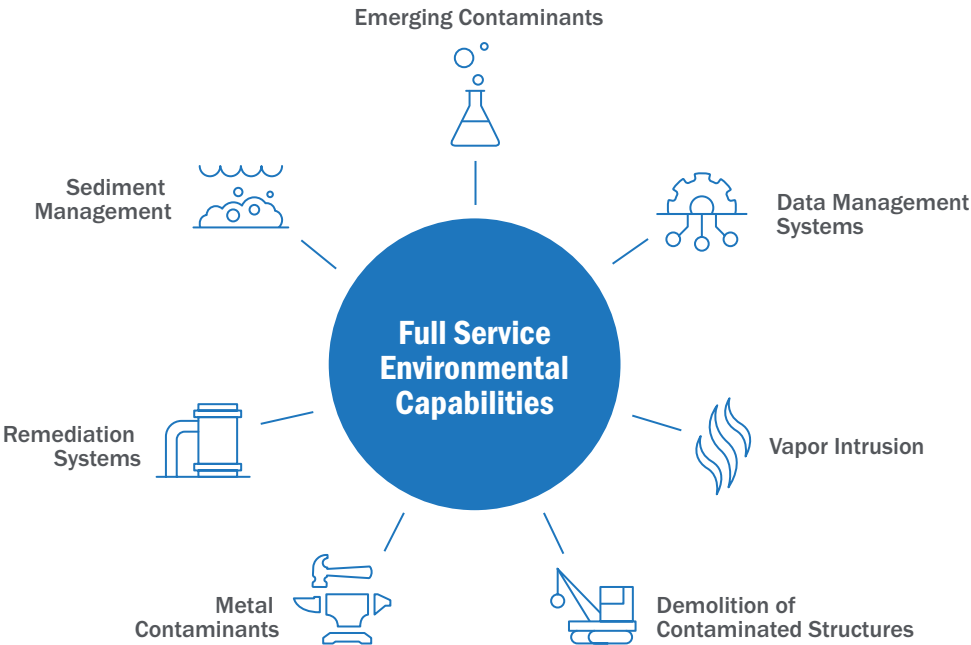
 **Innovation**

 **Sustainability**

"World's Most Ethical Companies" and "Ethisphere" names and marks are registered trademarks of Ethisphere LLC.

Environmental Services

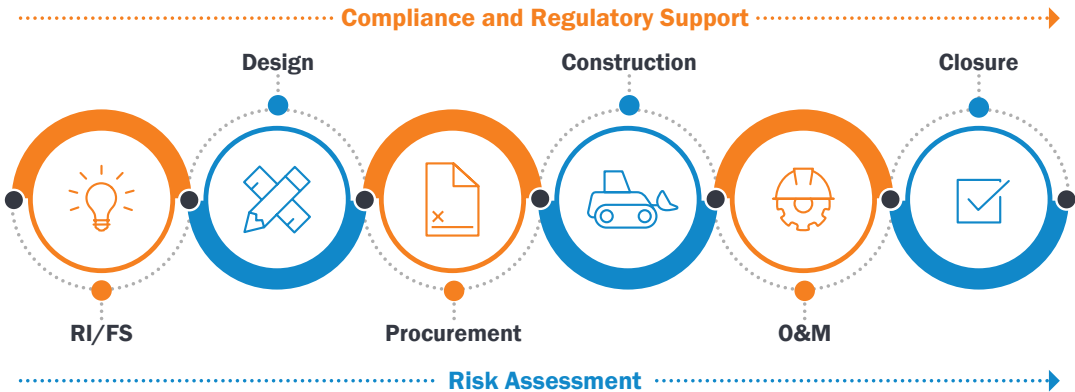
Industry leaders providing turnkey environmental services



Delivering End-to-End Remediation Safely

Today's remediation programs and projects are often best served by one total solutions provider that can deliver everything from inception to delivery. As a one-stop shop, Parsons can take a site from initial assessment to design, construction, and eventually closure, with deliberate emphasis on reducing overall footprint and lifecycle costs. We support our customers as they strive to comply with regulatory requirements including:

- Resource Conservation and Recovery Act (RCRA)
- Comprehensive Environmental Response, Compensation, and Liability Act/Superfund (CERCLA)
- Clean Water Act (CWA)
- Clean Air Act (CAA)



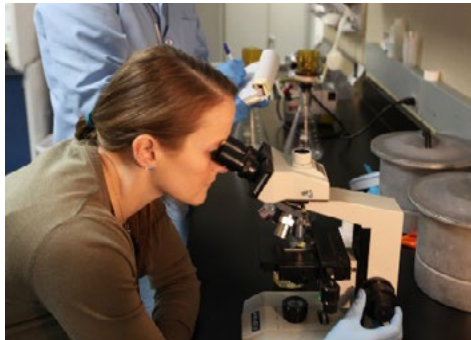
Remediation Systems



Parsons designed a unique two-stage biological treatment process for carbon disulfide/hydrogen sulfide destruction at a former fiber manufacturing plant.



We are providing operations, maintenance, and monitoring services to FMC at 24 environmental remediation sites in 14 states, and have a zero incident safety record.



Parsons' Syracuse office has a full-service treatability laboratory where we perform bench- and pilot-scale evaluations using physical, chemical, and biological treatment methods.

NAPL-Away®: Parsons has developed and acquired a patent* for the bioremediation of light nonaqueous-phase liquid (LNAPL) using enhanced natural anaerobic biodegradation. This treatment method is less costly to implement than other forms of remediation and reduces the time required for monitored natural attenuation.

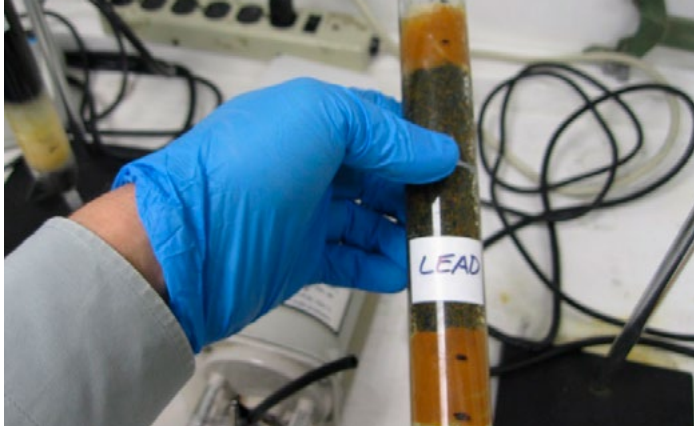
* U.S. Patent No. 8,679,340 and 9,333,542 | Canada Patent No. CA 2898434

Emerging Contaminants

We have taken a leading role in understanding emerging contaminants—chemicals detected in soil, groundwater, and surface water. These chemicals pose a threat to human health and the environment, and the regulated community is taking steps to understand and address their impact.

Per- and polyfluoroalkyl substances (PFASs): Parsons is leading the way with PFAS investigations at government and commercial sites in the United States. We are contributing members of the Interstate Technology and Regulatory Council's PFAS Team that is working to develop fact sheets and technical regulation documents that will lead the industry in managing PFASs. Our technical experts have implemented remedial alternatives consisting of pump and treat for plume management at industrial sites in the U.S.

1,4-Dioxane, a Class B carcinogen: Parsons is treating this compound at a variety of sites, including using phytoremediation to treat 1,4-Dioxane in shallow groundwater at a former industrial facility in South Carolina.



We've worked at many sites to study, sample, and remediate PFASs, including 1,800 inactive landfills in New York.



We designed, constructed, and are operating an aerobic biological treatment system for the biodegradation of 1,4-dioxane at the Lowry Landfill Superfund Site in Aurora, Colorado.

Sediment Management

We are known for our ability to cost-effectively move contaminated sediment sites from investigation through final remediation and closure stages. Our teams have extensive experience developing, negotiating, and implementing complex closure strategies; conducting human health and toxicology studies; and assessing risks, while upholding the highest levels of safety. Our extensive sediment capabilities include:

- Selecting, evaluating, and engineering cost-effective solutions (monitored natural recovery, thin layer capping, in situ treatment, reactive caps, flow diversion, and dredging)
- Characterizing and sampling sediment using boats and barge-mounted drill rigs
- Implementing sediment remediation, including self-perform or construction management (dredging, capping and dredge material management)

Parsons led the feasibility study, design, construction, and O&M for the Onondaga Lake Superfund Project in New York, which is one of the largest and most complex sediment sites ever remediated. Sediment dredging was completed in 3 years—1 full year ahead of schedule. Honeywell's historic restoration, which involved removal and capping of contaminated sediments, returned Onondaga Lake as an enjoyable resource to the community. ►



Demolition of Contaminated Structures

We have successfully completed hundreds of decommissioning, decontamination, and demolition projects, providing everything from pre-demolition surveys and regulatory negotiations to redevelopment planning and design.



Our market experience includes:

- Abandoned mines
- Chemical production units
- Commercial/industrial buildings
- Oil and gas production facilities
- Petrochemical plants
- Refineries
- Weapons systems

Metal Contaminants

Our industry-leading teams have employed innovative strategies to remediate sites impacted by arsenic, mercury, chromium, lead, and other metals at 250 active and former electric utility, oil and gas, manufacturing, landfill, and mine sites. We seek the most effective, low-cost alternative for each site's unique circumstances, and implement sensible solutions for recalcitrant metal-impacted sites.



Parsons holds patents on advanced arsenic removal technologies, including:

- In situ chemical fixation (ISCF)
(U.S. Patent No.: 8,157,476 B2; April 17, 2012)
- In situ soil flushing and removing
(U.S. Patent No.: 6,210,078 B1; April 3, 2001)



Giant Mine Roaster Complex Deconstruction
Yellowknife, Northwest Territories, Canada

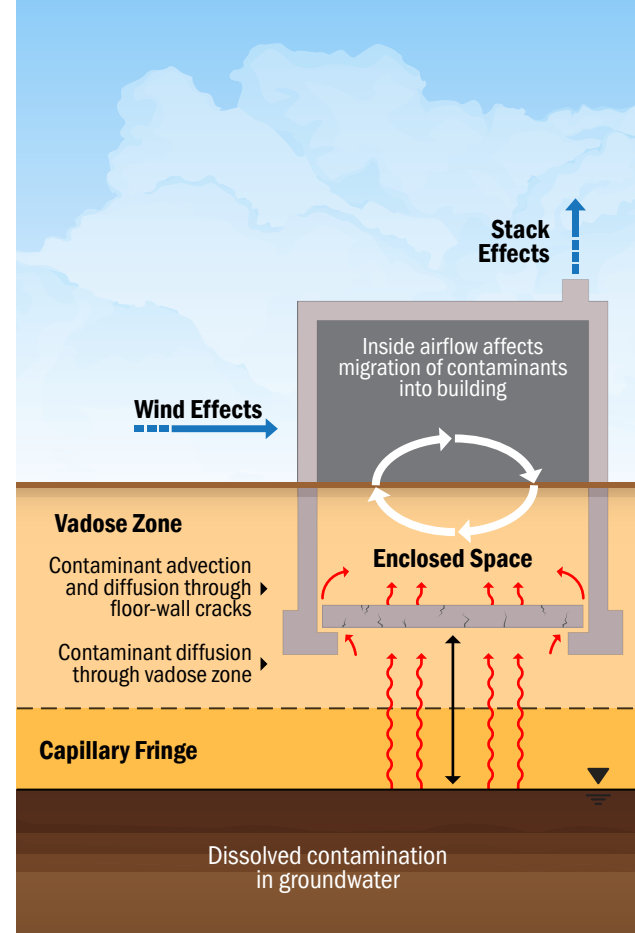
Parsons is leading the largest environmental remediation project in Canada, serving as the general contractor of the Giant Mine Roaster Complex Deconstruction project for the Public Works and Government Services Canada (PWGSC). We successfully removed more than 10,000 tons of highly toxic arsenic trioxide from the Roaster complex by providing comprehensive construction

management services to decontaminate and deconstruct 10 above-ground structures to slab-on-grade standard, while safely protecting workers and the public. Parsons currently provides on-going site management and support, including site care and maintenance and addressing emerging risks as they arise.

Vapor Intrusion

Parsons has performed vapor intrusion studies and mitigation response at a variety of industrial petroleum-impacted sites throughout North America. We provide value to our customers by:

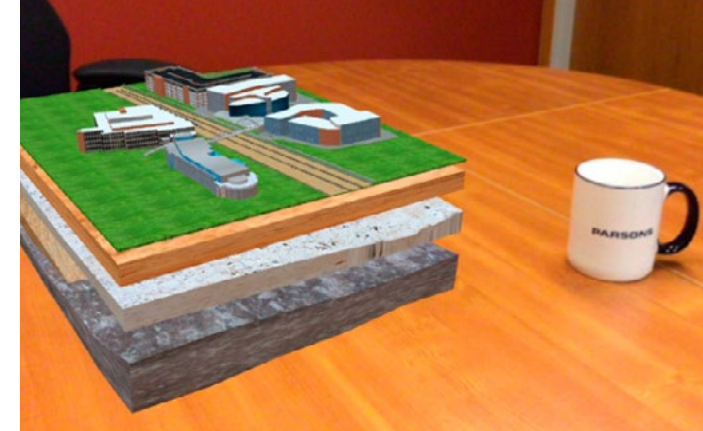
- Developing the appropriate sampling and analytical plans to determine whether vapor intrusion pathways are complete
- Conducting sampling/monitoring to evaluate chemicals of concern
- Developing site conceptual models
- Performing shallow soil gas surveys and indoor air surveys
- Mitigating vapors via soil vapor extraction
- Performing long-term vapor monitoring
- Developing and negotiating reasonable and effective remedial solutions for our commercial and industrial clients



Interactive Design

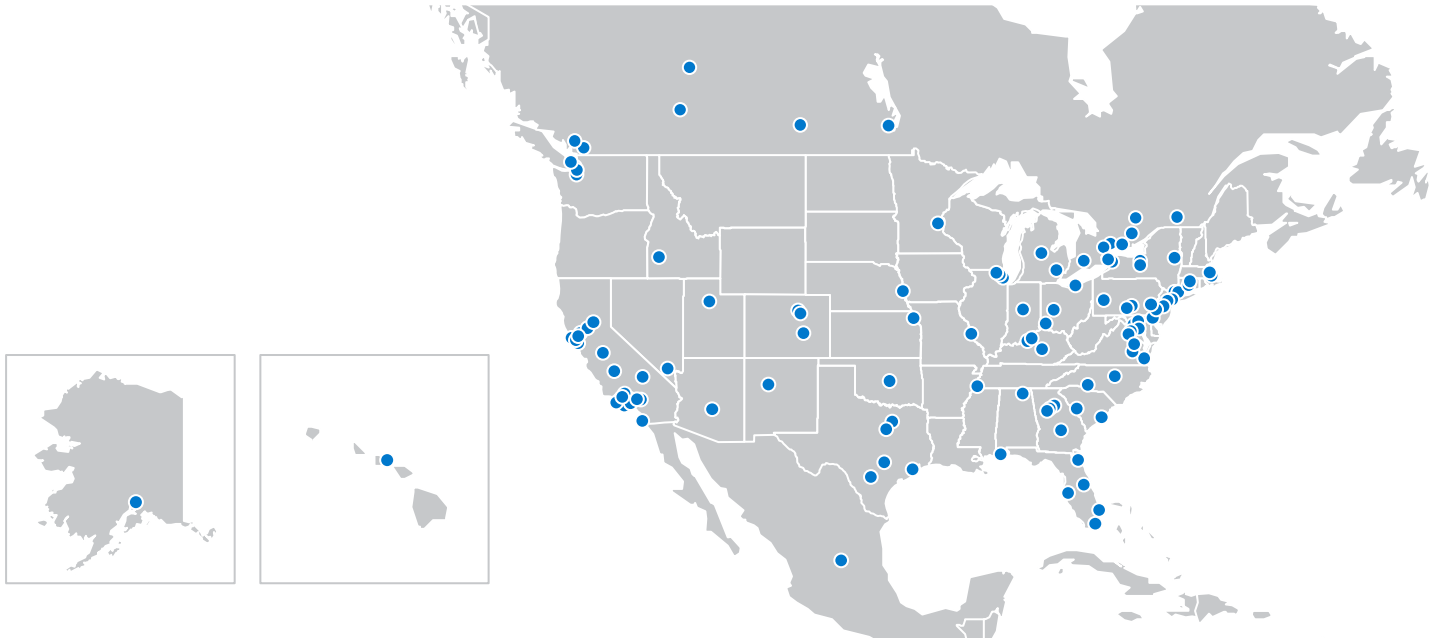
As a technology-driven company, Parsons has invested in developing augmented reality (AR), virtual reality (VR), and drone technology for science, engineering, construction, and architectural applications that include improvements to environmental remediation, chemical processes, engineering, and construction.

- Demonstration projects are being built to deploy to multiple AR/VR hardware and end-use applications.
- 4D models including time sequencing, ideal for design and construction work, are under development for the AR/VR space.
- Sharable models enable users to interact with the virtual model space, change parameters, view building information modeling (BIM) content, make measurements, create cross-sections, and evaluate future states of design development—in real time.



Parsons' North American Locations

We are locally focused with a global footprint in North America and beyond. Our work reflects the unique blend of our multidisciplinary expertise and the specific needs of geographies to deliver cost-effective solutions for our customers.



Delivering a better world.

PARSONS

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