

RELIABLE RESOURCES...[®]

from exploration to market



Civil & Environmental Consultants, Inc.

THE CEC ADVANTAGE

What sets CEC apart is that we put ourselves in our clients' shoes and make recommendations from their strategic vantage point. These are the real differentiators:

REGULATORY INSIGHT

CEC leverages its relationships with agency personnel to stay on top of and contribute to the development of evolving regulations and policies, taking an integral advocacy role on behalf of clients. CEC also offers specialized training to regulatory agency employees.

INDUSTRY KNOWLEDGE

Active involvement in major industry groups keeps CEC at the forefront of best management practices (BMPs), and CEC has developed several BMP guideline documents in use today. In-house professionals offer a tiered CPESC training program for clients.

DIVERSE EXPERTISE

Capabilities range from the ability to mobilize an army of trained professionals to accommodate tight schedules due to limited ecological survey windows, to critical gas migration expertise using compositional and isotopic analyses, to detailed water management plans that provided the basis for a portion of WVDEP's application forms for Horizontal Oil & Gas Well Permits.

CRITICAL RESPONSE

Greater flexibility to respond to immediate client needs means CEC can help implement a targeted solution faster. For spills and releases, CEC characterizes and assesses impacts and also develops and implements efficient and effective remediation plans and activities.



1: This large rail-loading facility fills 24 tanker cars at a time, moving purified products to market.



2: This constructed rock riffle structure within a stream channel is part of a natural gas pipeline exposure repair project in Kentucky.



3: State- and federally certified surveyors conduct habitat assessments and offer mitigation alternatives for threatened and endangered bat species.

EXPLORATION & PRODUCTION

Upstream companies face a complex interplay between schedule, cost, industry demands, and regulations. Balancing these elements requires resources, proven experience, and regional familiarity to tackle the regulatory and physical landscapes.

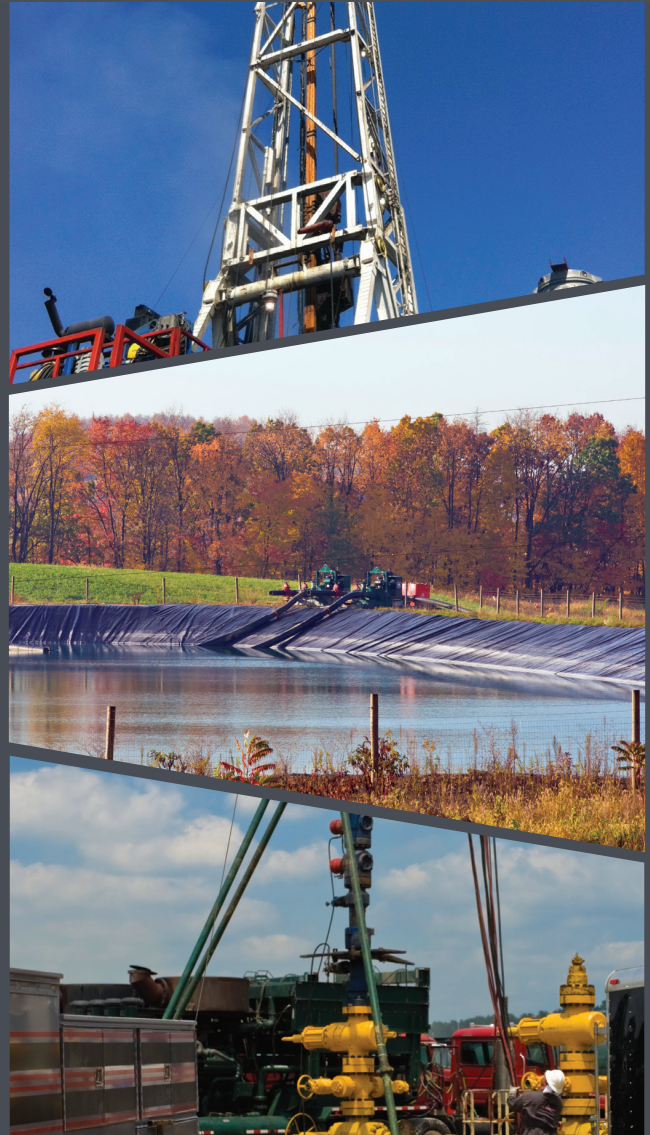
WELL PADS

Site conditions pose geotechnical challenges that often require slope stability evaluations. Earth-retaining structures or specialized stabilization practices may be required, while earthwork quantities are considered to help minimize construction costs and duration.

CEC evaluates potential water withdrawal locations using geological and geophysical interpretations to locate groundwater production wells and aquifer testing to determine a sustained well yield. CEC also develops greenhouse gas emissions testing and air monitoring programs, and a tailored set of operating procedures ensures maintenance of these programs. When drilling operations are temporarily or permanently complete, revegetation, closure, and reclamation services enable site restoration.

IMPOUNDMENTS AND DAMS

Our civil and geotechnical engineers and geologists assist with site selection, investigate subsurface conditions, evaluate slope stability, assess groundwater conditions, design liner and leak detection systems, and prepare construction plans for fluid containment, transfer, and storage facilities. Regulatory familiarity helps streamline the permitting process for dams, erosion and sedimentation controls, and sensitive resource impacts.



1: CEC manages the design, approval, and construction quality assurance of production well projects.

2: Impoundments often require the installation of groundwater protection and monitoring systems, including the installation of monitoring wells.

3: CEC provides options for the storage of hydraulic fracturing fluids, as well as flowback and produced water.

MIDSTREAM

Whether installing gathering and transmission pipeline systems or constructing processing, loading, or transfer facilities, midstream companies need to implement a strategic approach to stay on schedule and get their products to market.

PIPELINE SYSTEMS

CEC has extensive experience with gathering system components and large-diameter transmission pipelines, including those requiring FERC certification. Routing studies and surveying help identify the most efficient pipeline alignments. GIS analysts perform daily data analysis to track field team progress and evaluate potential re-routes, delivering real-time access.

To assist clients with permit-required sampling data and reporting, CEC prepares custom data management, illustration, and reporting programming. CEC conducts pipeline as-built surveying to document construction and for use during future maintenance and integrity analyses.

FACILITIES

CEC has consulted on natural gas liquids (NGL) compression, fractionation, and treatment facilities development, assisting midstream clients with the civil design, engineering, and construction of meter and compression stations, processing and fractionation plants, and rail transport and railroad transloading facilities. CEC's innovative plans optimize site layouts and allow for planned and scalable expansions.



1: CEC offers environmental design and permitting services for large-diameter pipelines.

2: Geotechnical engineers perform subsurface investigations to support Horizontal Directional Drilling (HDD) activities.

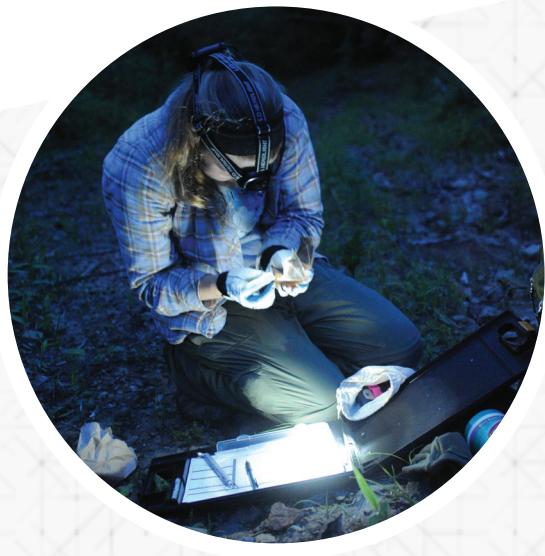
3: Environmental engineers prepare air emissions permit documents among the numerous services offered for compressor stations.

Energy companies, drillers, and operators seek a resource with the expertise to successfully navigate evolving federal, state, and local regulations.

Legislative and regulatory bodies race to keep pace with the fastest-growing segment of an expanding domestic energy industry. CEC helps clients obtain the necessary permits, clearances, and certificates for their upstream developments, midstream pipeline projects, and processing and infrastructure facilities—allowing clients to keep their primary focus on operations.

The experienced managers and principals at CEC are involved in the outreach and advocacy efforts of industry trade groups to stay in front of emerging issues, while maintaining long-standing relationships with the regulatory community.

CEC has continually expanded service offerings and opened regional offices with a focus on performance, delivery, and client satisfaction. A diverse scope of consulting services offered to the oil & gas industry has led to CEC's emergence as a proven, reliable resource.



CEC OVERVIEW

Civil & Environmental Consultants, Inc. (CEC) provides comprehensive market-oriented consulting services that advance the strategic business objectives of our clients. CEC is recognized for its innovative design solutions and integrated expertise in air quality, civil engineering, ecological sciences, environmental engineering and sciences, manufacturing infrastructure services, survey/geospatial, waste management, and water resources.

Our Oil & Gas Market Group is a diverse team of engineers, scientists, and professionals who serve as our conduit to the latest thinking and advancements in the oil and gas industry, providing clients with concise, timely information and regulatory updates to facilitate informed decision-making.

CIVIL ENGINEERING & SURVEYING

Surveying
GIS mapping and data management
Geotechnical engineering and subsurface investigations
Well site layout, grading, and earthwork
Water management planning
Pit, impoundment, and dam design and permitting
Erosion and Sedimentation (E&S) control design and permitting
Post-Construction Stormwater Management (PCSM) design and permitting

ECOLOGICAL

Stream identification and wetland delineation
Stream and wetland impacts permitting
Threatened and endangered species surveys
Cultural resources assessments and management

ENVIRONMENTAL

Environmental assessments
Federal Energy Regulatory Commission (FERC) environmental reporting and certification assistance
Air permitting and emissions testing
Stray gas migration studies
Gas storage field leakage assessments
Gas intrusion abatement services
Spill Prevention, Control, and Countermeasure (SPCC) plans
Spill response, cleanup, characterization, and remediation
Hydrogeologic studies and groundwater monitoring
Pre- and post-drill water sampling

CONSTRUCTION PHASE

Construction Quality Assurance (CQA) monitoring services
Construction management
Site infrastructure maintenance and rehabilitation services
E&S BMP inspections
PCSM BMP inspections
Stream and wetland post-construction monitoring

WASTE MANAGEMENT

Centralized above-ground storage tank permitting
Drill pad above-ground storage tank permitting
Drilling waste characterization studies
Above-ground storage tank liner installation CQA

800.365.2324 / www.cecinc.com

Manufacturing / Mining / Oil & Gas / Power / Public Sector / Real Estate / Solid Waste