

June 2023

The Community Connector

BIANNUAL NEWSLETTER - ISSUE 7

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Territorial Acknowledgement

We acknowledge and respect the many Indigenous Territories and Treaty areas, each with unique cultures, languages, legal traditions and relationships to the land and water, which the BC Energy Regulator’s work spans. We also respectfully acknowledge the Métis and Inuit people living across B.C.

Message from the CEO



I'm pleased to introduce the latest edition of the Community Connector, showcasing some of the diverse people and projects that make up the British Columbia Energy Regulator (BCER). Our expanded mandate and new name is one of the biggest changes in our organization's 25 year history and is reflected in the articles you'll find in this month's newsletter.

We look at environmental topics such as new 2D seismic line restoration planning; the new mandate and carbon capture and sequestration; community wellbeing and our attendance at tradeshow, an orphan site information session and involvement in a provincial/federal disaster planning exercise. In addition, we profile our Stewardship group and one of the many experts working with us.

Given the BC Energy Regulator's commitment to meaningful recognition and partnerships with Indigenous Peoples, I'd also like to acknowledge June is National Indigenous History Month.

Wherever this finds you in this wonderful province we all share, I'm hoping everyone enjoys this edition; but also the summer and everything that season offers – considering we're almost halfway through the year already!



Orphan Program Update

It's been a busy and exciting year for the organization, and it's been no different for the Orphan Restoration team. We were able to deliver a \$50 million work plan, funded by levies on industry and funds transferred from the Dormant Site Reclamation Program. That translated to more than 700 decommissioning, assessment, and restoration projects on approximately 450 orphan sites... a lot of moving parts and a lot of people working hard on the ground.

In March 2023, the BCER Orphan Restoration team held a land owner information session at the Pomeroy Hotel and Conference Centre in Fort St. John. This was an excellent opportunity to update land owners about the work being completed by the team and allow land owners to ask questions.

About 30 land owners attended the session. There was great conversation following the update about our process and how to create an excellent reclamation product as the land is returned to its former state.

All of these efforts have allowed us to hit a huge milestone – 70 per cent of orphan sites are decommissioned and 25 per cent are reclaimed. Many thanks for all of the help from communities across the northeast, the amazing service sector, and our community and land owner partners who make these programs a success.

For more information, please visit: <https://www.bc-er.ca/what-we-regulate/oil-gas/orphan-sites/>



Land owner information session in Fort St. John.

Ecologically Suitable Species Guidance

[The Ecologically Suitable Species Guideline \(ESSG\)](#) is a guidance document to support industry in meeting the intent of Section 19 of the Environmental Protection Management Regulation for specific oil and gas activities on forested Crown lands. These activities include wellsites, decking sites, access roads, remote sumps, and more.

The development of the ESSG has been collaborative, through feedback from BCER subject matter experts, industry, reclamation professionals and the Treaty 8 Restoration Advisory Committee. The guidance clarifies minimum expectations around achieving soil and vegetative-specific objectives which

directly influence longer term restoration outcomes. Implementation of the ESSG will also help the BCER keep track of areas being restored on an annual basis, a measurement that is currently unavailable.

Supporting and measuring ecological restoration is an area of ongoing research, and learnings, collected through Certificate of Restoration Part 2 applications, which will support future updates to the ESSG.

The first publicly available version of the ESSG was released May 2023.

Any questions related to the ESSG can be emailed to webadmin@bc-er.ca.



Ecologically suitable species – vegetation species which are ecologically relevant to the surrounding conditions and do not hinder the benefits of natural revegetation processes.

See our article in the [November 2022 issue](#) (page 7) for more information about the Treaty 8 Collaborative Oil and Gas Restoration Advisory Committee.



Common name: wild rose
Scientific name: *Rosa acicularis*



Common name: yarrow
Scientific name: *Achillea millefolium*



Common name: tamarack
Scientific name: *Larix laricina*

Carbon Capture and Storage



Weather events linked to global climate change are regularly featured in the news. The Earth has been through many significant climate pattern changes throughout geologic history, as evidenced within the many geologic formations we drill through to access oil and gas resources, and more recent data within sediment and ice core studies. However, the rate of change since human industrialization and related carbon dioxide (CO₂) emissions to the atmosphere, points to a cause and future that may be unsustainable with current activities. Though CO₂ average atmospheric concentration is currently only ~420 parts per million, this is a 50 per cent increase from pre-industrial time, and is rising.

Carbon capture and storage (CCS), also referred to as sequestration, describes methods to both prevent additional CO₂ emissions and potentially reduce CO₂ already in the atmosphere. The prominent technology, already in use at several sites around the world, is the capture of CO₂ from industrial site flue stacks (chimneys), compression of the CO₂ gas into a liquid state, and injection into the deep subsurface for permanent storage. The geologic conditions of pressure and temperature at depths greater than ~800 meters below the surface keep the CO₂ in a dense state, occupying only about 1/300th of the volume that the same mass would in the atmosphere. CCS projects are described as storing megatonnes (millions of tonnes) of CO₂.

The BCER is responsible, under the Oil and Gas Activities Act and the Energy Resource Activities Act, for the regulation of CCS activity; the facilities compressing the CO₂, pipelines transporting this CO₂ and the wells and reservoirs of a CCS project.

An applicant is required to own the subsurface rights for the formation in which the CO₂ will be stored, administered by the Ministry of Energy, Mines and Low Carbon Innovation. The BCER publishes a CCS application guide, outlining the detailed knowledge required to include in the written application submission. A BCER multi-disciplinary team of professionals considers the suitability of the reservoir and the wells for the purpose of CCS; protection of the environment, including aquifers containing useable water, and safety are top of mind. One of many considerations is the avoidance of injection that may result in induced seismicity. In northeast B.C., injection would result in CO₂ being locked in formations that have contained fluids for millions of years.

A CCS approval from the BCER would contain numerous enforceable conditions regarding operations, monitoring, measurement, testing and reporting. A CCS project is subject to a Standard published by the Canadian Standards Association. The consultation process with land owners, communities, and First Nations is key to any CCS project.

To date, there are no dedicated CCS projects approved in British Columbia, however the BCER and industry have decades of experience in northeast B.C. with safe deep injection and storage of produced water and acid gas, a combination of carbon dioxide and hydrogen sulfide removed from produced natural gas.

Though northeast B.C. is a primary area of interest for CCS, other areas of the province have geology, which may be suitable for CCS projects utilizing slightly different technology. The BCER is engaged with industry researchers and academics who continue to study CCS.

CSA Standards - Now Free for Download!

All Canadians now have free, online access to important CSA technical standards, including CSA Z662, which is the main safety standard for designing, building and operating pipelines in Canada. Previously, these standards were only available by paid subscription.

The BCER is part of the Western Regulators Forum, a group of energy regulators in western Canada making an annual investment to cover the cost of the standards for public access. This ensures everyone can see the high standards we, and other regulators, hold energy companies to when operating pipelines.

Visit the CSA Group website to find the list of standards now available to download at no fee: <https://www.csagroup.org/store/petroleum-and-natural-gas/>. Follow these [instructions](#) to get started.



Fort St. John Office Open to the Public

Finally! At last! We are open! Access to our office building was restricted due to COVID. We are now happy to say our Fort St. John office is pleased to invite you to come visit us in person.

Hours of operation are Monday to Friday, 8:30 a.m. - 4:30 p.m.



Environmental Stewardship

The Environmental Stewardship Team (team) supports the BCER in fulfilling its goal of environmental protection. The team, working from our offices in Fort St. John, Kelowna and Victoria, is comprised of people from a variety of backgrounds and expertise, providing support for the BCER's environmental needs.

Some of their professional designations and examples of typical responsibilities are:

- Professional Engineers
 - Review of air and water quality data
 - Review and preparation of waste discharge permitting
- Professional Biologists
 - Review of impacts and mitigations to habitat / vegetation
 - Develop new biology-based standards and guidelines
- Professional Foresters
 - Review of forest health and restoration
 - Vegetation assessments
- Professional Agrologists
 - Review of soil quality, reclamation and agricultural impacts
 - Support permitting of works on Agricultural Land Reserve lands
- Professional Geoscientists
 - Review of surface and groundwater quality and quantity
 - Support water related permitting
- Technologists and Specialists
 - Data analysis, regulatory reviews & research
 - Oversight of environmental processes

Some interesting projects the team has recently completed include:

- Review of ecological conditions for over 200,000 km of historic 2D seismic lines using satellite imagery.
- Development of guidelines for selecting suitable ecological species for restoration works on oil and gas sites.
- Update of regulations to improve tracking and reporting of methane emissions to enable reporting relative to federal targets.



Environmental Stewardship team members measuring flow of Aitken Creek with a member of Blueberry River First Nations.



Spruce sapling on a restored wellsite.

Staff Profile: Supervisor, Reservoir Engineering



I began public service employment in 1989 with the then named provincial Ministry of Energy, in the role of Reservoir Engineering Technician, as part of a very small group regulating the oil and gas industry at the time. About 300 vertical wells per year were being drilled in northeast B.C., with frequent discoveries of new oil and gas pools. Industry submitted information as bundles of pages through the mail and we tracked data on file cards and in binders. Mainframe computers with user terminals on desks appeared a few years later, followed by personal computers. Fax machine transmission was a major advance!

As I gradually advanced in position within the department, there were continuous improvements in geoscience and engineering knowledge, oilfield technology and computerization. Reservoir engineering is the understanding and management of oil and gas deposits and deep aquifers, for the placement and completion of wells and controlling rates of production and injection to optimize recovery or storage. One pillar of the field is the calculation of subsurface reserves. A specialist in reservoir engineering must think in four dimensions; the three dimensions of subsurface geometry as well as the element of time, in both millions of years that formed the sedimentary formations and structure, and in the dynamics of fluid rates and changing pressure during the production life of an oil or gas pool. In my case, previous education and work in mining geology afforded understanding,



sometimes firsthand, of the deep subsurface. After returning to school in oil and gas technology, I worked for a time in the oilfield equipment industry, gaining experience that included turning a wrench! I was fortunate to find a position in the field of reservoir engineering, my strongest interest.

From vertical wells, now almost all new wells in northeast B.C. are drilled horizontally within the objective formation and receive large hydraulic fracture stimulation to achieve economic production rates. The past risk of drilling a “dry hole” is virtually nonexistent as “resource plays” are developed over vast areas, such as the Horn River and Montney formations, as companies pursue the source of the oil and gas formerly searched for in conventional pool accumulations.

Now the supervisor of the Reservoir Engineering branch of the BCER, I have the privilege to lead a team of dedicated staff who continue to pursue improvements in how we regulate for the benefit of British Columbians. Strong teamwork and sharing of knowledge enable the successful tackling of tough questions, using regulation and guidance for making industry responsible for making the best decisions.

The oil and gas sector will continue to remain a place of tremendous opportunity and challenges, as the BCER broadens its scope into hydrogen, geothermal and more. For those with a lifelong curiosity, who seek to make a difference to improve our world, our sector provides opportunities for continuous education and improvement. What a great place to be!

New Public Toll-free Number Available!

One of the BC Energy Regulator’s (BCER) key priorities is safety and transparency with the public. As a result, the BCER has launched a new province-wide toll-free number for the public to use when calling to report concerns or emergencies. The new number will be staffed 24-hours a day and is for public use only.

This number is in addition to a local number for callers from Fort St. John and surrounding areas to reach the BCER.

**New Public Toll-free number:
1-877-500-2237 or 1-877-500-BCER**

**Public Fort St. John number:
250-794-5200**

Protecting Public Safety

At the BCER, safety is the highest priority, and this extends to our efforts during natural disasters like flooding and wildfires. May 7 to 13 was Emergency Preparedness Week, and a great reminder to consider what each of us can do to be ready. Industry is required to create, maintain and test emergency management plans and the current flooding and wildfires remind us of the value of having a personal plan.

Throughout the year, we evaluate permit holders to ensure they have the training, competencies and capacity to manage a wide range of incidents. During major incidents like the current wildfires, we work closely with companies and other emergency management agencies to ensure the safety of company staff, firefighters and the public. With many incidents in the news, the recent evacuations and evacuation alerts, this is a good time to review your own family plans, or if you don't have one, a chance to create one using some of the online tools and resources available from the Ministry of Emergency Management and Climate Readiness ([Public emergency preparation and recovery - Province of British Columbia \(gov.bc.ca\)](https://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-recovery)) or Public Safety Canada (About Emergency Preparedness Week (getprepared.gc.ca)).

For the BCER, safety is a full-time commitment, not just providing critical support during incidents. When these challenges arise, we step in and work with emergency responders and permit holders, ensuring heavy equipment working on fires can cross pipelines safely, using wildfire mapping data to identify companies with assets near a fire and bring them into coordination calls, and making the locations of industry fresh water storage sites and water lines available to fire crews.

For close to 10 years, we've provided trained staff to regional emergency operations centres, directly supporting impacted communities and helping our neighbours during challenging times.

New Data Narratives Feature to Increase Transparency



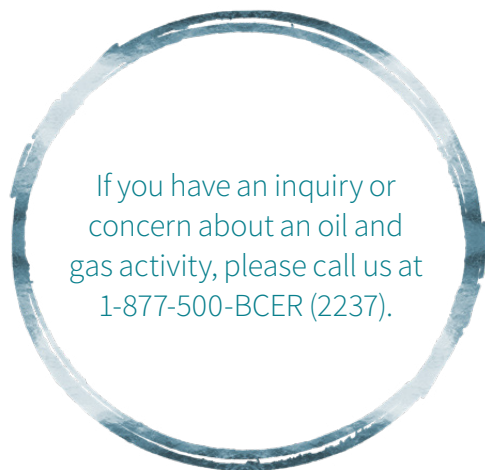
If you've ever wondered what energy companies use water for or how technology has affected drilling production, you should check out the new "Data Narratives" feature on the BCER website. This feature combines data and information to help tell the stories and increase people's understanding of what we do on a variety of topics. This data narratives webpage also includes two new interactive web maps—a [dormant sites web map](#) and a new [seismicity map](#), which displays recent and past seismic events of greater than local magnitude 1.5 recorded in northeast B.C.

Trade Show Season



After a three-year hiatus, it's great to get out and engage with local communities again. Our Public Trust team, along with other subject matter experts within the organization have been busy over the last few months attending various tradeshow within the communities where we work and live. We were happy to sport our new brand and talk with people on matters of energy resource regulation and our expanding mandate. We attended six tradeshow in northern B.C., along with the North Central Local Government Association's convention in Dawson Creek.

Thanks to everyone who stopped by to speak with us about energy resource regulation. If we missed seeing you at any of the events and you have any questions, please contact us.



BCER staff at the Chetwynd Chamber of Commerce trade show.



BCER staff at the Fort Nelson & District Chamber of Commerce trade show.



BCER staff at the Fort St. John trade show.

2D Seismic Line Ecological Recovery Analysis

The BCER recently completed a large project studying the progress of ecological recovery along historic 2D seismic lines in northeast B.C. The project evaluated the current condition of over 200,000 km of historic seismic lines using high quality colour and infrared satellite imagery. Seismic lines were evaluated for:

- Line width in meters
- Alternative uses
 - Pipeline
 - Road
 - Hydro line
 - Etc.
- Current tree canopy coverage
- Current shrub coverage

This information will help to understand the location and characteristics of seismic cutlines and support restoration planning initiatives in northeast B.C.

This dataset was developed in coordination with the Treaty 8 Restoration Advisory Committee, and spatial data derived from the project will be shared with Treaty 8 Nations. The dataset can also be found online on the BCER's [open data portal](#). Check out our [Information update 2023-04](#) posted to our website.



Connecting with Land Owners

The BCER Regional Networking Group (RNG) connects land owners with the BCER. Group members receive land owner focused news, announcements and invitations to participate in BCER events. We also welcome input on new guidelines, fact sheets and other information useful for land owners.

In an effort to expand our membership, we mailed an invitation to connect postcards to

rural land owners across the province. The new membership grew by over 30 members and this is great, as the more members across our province, the better informed we are of what people want us to know.

New members welcome! Join the RNG by contacting our community engagement team at communityengagement@bc-er.ca.

2023 Stakeholder Survey Key Findings

The BC Energy Regulator (BCER) conducts an annual survey with stakeholders across British Columbia. For the past five years, the focus has been on land owners and local government who live directly in, or adjacent to, areas where oil and gas activity is taking place or is planned to take place. The BCER sent 6,808 survey invitations to land owners and local government and received 524 responses.

The survey measures and tracks the following:



Awareness and familiarity with major oil & gas projects



Awareness and familiarity with the BCER's functions and roles



Perceptions of the BCER's effectiveness at meeting its mission's goals



Past year usage and performance of various tools for interacting with the BCER

AWARENESS OF THE BCER'S RESPONSIBILITIES, INITIATIVES, ACTIVITIES AND PERCEPTIONS OF ITS EFFECTIVENESS

Recognition remains consistent with the last two years and stakeholders continue to have a high awareness of the BCER's responsibilities to consult with First Nations (84 per cent of respondents), enforce compliance with regulations (80 per cent), review applications for oil, gas and geothermal development activities in B.C. (80 per cent) and ensure companies consider the concerns of land owners in their applications (76 per cent). Awareness of the BCER's responsibility to provide the public 24/7 access to report safety concerns or complaints has recovered to 2021 levels, with 64 per cent awareness compared to 57 per cent in 2022 and 63 per cent in 2021.

Knowledge of the BCER's initiatives and activities are consistent with last year's findings. Stakeholders are aware of initiatives around reclamation of orphan and dormant wells (39 per cent), work with scientists and researchers to reduce and prevent impacts of hydraulic fracturing (35 per cent) and regulation to reduce methane emissions (34 per cent).

Perceptions of the BCER's effectiveness remain the same as 2022. The BCER received excellent or good ratings from six in 10 stakeholders for protecting public safety (61 per cent), ensuring that industry complies with regulations governing the oil and gas activity in B.C. (58 per cent), consulting with First Nations (58 per cent) and safeguarding the environment (56 per cent). About half of stakeholders gave the BCER high marks for demonstrating respect for land owners affected by oil and gas activity (49 per cent).

CONFIDENCE IN THE BCER'S PROJECT DECISION-MAKING

64 per cent of stakeholders are very or somewhat confident the BCER makes fair and balanced decisions for oil, gas and geothermal projects in B.C., similar to 2022 (62 per cent).



CONTACT WITH THE BCER AND ENGAGEMENT SATISFACTION

Understanding of the BCER’s engagement tools (website, email, Land Owner Liaisons, Emergency Officers, Compliance and Enforcement Inspectors, webinars, ability to call in a complaint, written submissions) remains high with eight in 10 stakeholders aware of these tools.

The BCER’s Service Plan includes a performance measure for satisfaction level on how well we are engaging stakeholder groups. The performance measure reflects the effectiveness of the BCER’s engagement efforts with land owners and local government. Engaging with stakeholders, particularly those directly affected by regulated activities, is a key aspect of our work. The BCER strives for a high-level of stakeholder satisfaction and will continue to work with local government officials, land owners and affected stakeholders to take meaningful actions that mitigate negative impacts on their quality of life.

STAKEHOLDER SUGGESTIONS

The survey respondents provided several comments for the BCER including:



Increase visibility of the BCER and what the organization does



Ensure stakeholders are kept up-to-date on the progress of oil and gas projects and their potential impacts



Ensure companies are held accountable for their actions with increased monitoring and compliance enforcement



Continue to consult with stakeholders and acknowledge their concerns



Transition to cleaner energy sources to reduce concerns about environmental impacts from oil and gas activity

The BCER thanks all who took the time to participate in this survey. This information is very useful in helping us know where we are doing well and where there are opportunities to improve. We will be analyzing the data and using it to inform initiatives throughout the BCER to ensure our continuous commitment to being a responsible, respectful and effective regulator.

The Community Connector

BCER

BRITISH COLUMBIA ENERGY REGULATOR



Discover how we regulate energy in B.C.