

Weekly NEWS

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Services
Association of
Alberta

An Information Service for Alberta's Environment Industry

The Week Ending August 7th, 2020



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NEW PROVINCIAL FRAMEWORK ADDRESSING OIL/GAS SITE CLEANUP

(Source: Vauxhall Advance) Last week the provincial government finally made an announcement to address some concerns around the cleanup of oil and gas sites in Alberta.

“Alberta’s government is taking long-overdue action to accelerate the responsible reclamation of oil and gas sites, ensuring a cleaner environment for current and future generations. A new framework to manage oil and gas liabilities – which includes a series of mechanisms and requirements to improve and expedite reclamation efforts – will enable the industry to better manage the clean up of oil and gas wells, pipelines and facilities at every step of the process, from exploration and licensing, through operations, reclamation and post-closure,” reads a press release from July 30 announcing the new Energy Liability Management Framework.

The Municipal District of Taber has continuously brought forward this issue over the past several years and at their last council meeting on July 14, they once again talked about the challenges associated with oil and gas site cleanups. According to administration’s report, there are approximately 20 oil and gas companies and around 1,300 oil and gas sites in the municipality where lease maintenance is not occurring.

“These include insolvent companies, companies in receivership, companies going through bankruptcy, or companies opting not to undertake maintenance due to challenging economic conditions. The impact on agricultural producers from weeds from these lease sites is significant,” reads administration’s report.

Through the past several years, letters have been sent back and forth between the municipality and Alberta Energy, Agriculture and Forestry, and Environment and Parks as the M.D. inquired about their support in addressing the weed issues landowners are facing as the oil and gas industry continues to struggle.

“I think there is a lot more information with Bill 12 (Liabilities Management Statutes Amendment Act) just coming out but I would suggest we carry on with this resolution. If at the time we choose to pull it because some of the concerns are addressed through Bill 12, but I think we will get more information on (July 30). We have had some preliminary discussions with them,” said Coun. Brian Brewin at the July 14 meeting.

Letters from the M.D. were sent to MLA Grant Hunter, Energy Minister Sonya Savage, and Agriculture and Forestry Minister Devin Dreeshen in late 2019 and early 2020.

“I understand how uncontrolled weeds on oil and gas sites cause problems for local landowners, farmers and the M.D. of Taber. I consulted with my department and the Alberta Energy Regulator (AER) and hope you find the following information helpful in addressing the issue,” reads Savage’s response in June 2020.

The letter also talked about the \$1 billion energy stimulus package addressing inactive wells in Alberta and a \$100 million loan to the Orphan Well Association as ways the province was looking to address the issue. The new framework presented by the UCP government which includes ‘a series of mechanisms and requirements to improve and

expedite reclamation efforts' is hoping to give the oil/gas industry better management of the cleanup of wells, pipelines and facilities through every step of the life-cycle.

"Alberta has a world-class oil and gas sector that takes responsible resource development seriously. This new approach will further ensure everyone who benefits from development also addresses their ongoing reclamation responsibility in a way that is fair and achievable. By clarifying the rules and improving the process, industry can confidently make long-term investment decisions, which will help the province's recovery efforts and create jobs, putting thousands of Albertans and Canadians back to work," said Savage in the press release.

While announced in July, the government stated the framework will be implemented in the next several months. The new framework states it:

- Will uphold the polluter-pay principle, ensuring that industry is responsible for cleanup costs in a way that is fair and manageable.
- Put an improved system in place to assess the capabilities of oil and gas operators to meet their regulatory liabilities and obligations, prior to receiving regulatory approvals.
- Provide practical guidance and proactive support for struggling operators, helping them to manage and maximize their assets, and maintain their operations. Doing so will protect Albertans from the financial and environmental burden of more inactive or orphaned sites – while ensuring operators meet their environmental responsibilities.
- Establish five-year rolling spending targets for reclamation that every active site operator must meet. This initiative includes the AER's area-based closure program, through which companies work together to share the cost of cleaning up multiple sites in an area.
- Establish a formal opt-in mechanism for landowners to nominate sites for cleanup. These sites must then be reviewed by the regulator, with operators responsible for justifying why a site should not be immediately brought through closure stages, and
- Implement a process to address legacy and post-closure sites – or sites that were abandoned, remediated or reclaimed before current standards were put in place, and sites that have received reclamation certificates and the operator's liability period has lapsed. A panel will be established to consider how to address this gap, bringing these sites up-to-date with the current environmental requirements.

"From drilling through reclamation, it's important that industry meets its obligations. Alberta's Liability Management Framework will ensure oil and gas sites are cleaned up faster, reinforcing Alberta's reputation as a leader in responsible energy development. The new framework provides clarity and certainty, which will help spur activity in the energy sector and put Albertans back to work when and where jobs are needed the most," said Jason Nixon, Minister of Environment.

Under the Liability Management Framework, the provincial government will set the policy direction and provide some oversight, while the AER is responsible for administration which includes monitoring progress, working with industry, and enforcement.

"The new Alberta Liability Management Framework provides strong protections for Alberta to enhance the responsible reclamation of oil and gas sites, while ensuring responsible energy development can continue to produce high-paying jobs for Alberta workers and their families. This is an innovative and modern approach to ensure continued focus by companies on their responsibilities to local communities," said Tristan Goodman, president of the Explorers and Producers Association of Canada.

As of July 2020, 456,729 licences have been issued to drill oil and gas wells in Alberta since the early 1900s. Currently, 96,969 wells are inactive, 70,785 are abandoned, 88,851 are reclamation certified, and 36,773 are reclamation exempt. Of the remaining wells, 162,530 are active and 821 have been drilled but are not producing. Other groups also touched on their reaction to the new framework.

"The Metis Settlements have long been advocates for responsible resource development. That means ensuring the work of 'cleaning up' is central to those operations. I am pleased to hear that Alberta will be taking the necessary steps to ensure that we not only practise responsible resource development but responsible reclamation. This work is critical to ensure our beautiful lands remain for future generations," said Roehelle Gaudet, vice-president of the Metis Settlements General Council.

“PSAC (Petroleum Services Association of Canada) welcomes the introduction of Alberta’s new Liability Management Framework that will provide certainty to industry and investors while easing landowner and public concerns of a growing inventory,” added Elizabeth Aquin, president and CEO of PSAC. “The new framework will also provide the oilfield services sector that PSAC represents with a predictable and regular stream of closure activity, sustaining jobs and retaining k

UPDATE ON SITE REHABILITATION PROGRAMS IN ALBERTA, BRITISH COLUMBIA AND SASKATCHEWAN
(Source HazMat Magazine) Written by Anna Fitz and JoAnn Jamieson, [McLennan Ross LLP](#)

On April 17, 2020, the federal government announced \$1.7 billion in funding to clean up oil and gas sites in Alberta, British Columbia, and Saskatchewan. The goal of the federal funding was to create immediate jobs in the three provinces while helping companies avoid bankruptcy during the COVID-19 pandemic.

All three provinces were quick to announce programs in the hopes of creating jobs and getting people back to work. This article provides an update on the programs in each province.

Alberta

Alberta received \$1.2 billion, the bulk of the federal funding. On April 24, 2020, the Government of Alberta announced its “Site Rehabilitation Program,” which provides up to \$1 billion in grants to oil field service contractors to perform well, pipeline, and oil and gas site closure and reclamation work.

The goals of the program are to:

- immediately get Alberta’s specialized oil field workforce back to work,
- accelerate site abandonment and closure efforts, and
- quickly complete a high volume of environmentally-significant work.

Inactive oil and gas sites may be nominated by landowners and Indigenous communities. Landowners can nominate inactive sites by emailing the required information (including the legal description of the land, landowners on the land title, and contact information) to the government. Indigenous communities can also nominate inactive sites by email; required information includes the name of the First Nation or Métis settlement, the legal description of the site, and the licensee information sign at the site. A detailed overview of the nomination process can be found [here](#).

In order to be eligible for funding to do the work, service contractors must be located in Alberta and must offer jobs to Albertans. Eligible work includes closure on inactive wells and pipelines, Phases 1 and 2 environmental Site Assessments, remediation, and reclamation. Interested parties can apply on the [Site Rehabilitation Program website](#).

The Alberta government will provide funding for the Site Rehabilitation Program in multiple increments. The first increment, which has now ended, reportedly received significant interest. The second increment is currently on-going, and will close for applications on June 18, 2020. Third and later increments will also become available.

In addition to the Site Rehabilitation Program, the government of Canada has extended a \$200 million repayable loan to the existing Orphan Well Association (“**OWA**”). Under the OWA, an orphan site is “a well, pipeline, facility or associated site that does not have a legally responsible and/or financially viable party to deal with its decommissioning and reclamation responsibilities.”

The OWA has a procurement process through which it selects from a list of prime contractors, who are then normally responsible for choosing their own subcontractors. However, with the new federal funding, the OWA is planning to collaborate with its prime contractors to select subcontractors (interested parties will be able to apply) for the additional work. The OWA anticipates allocating the new funding through a “staged process.” After further planning, OWA will be providing information about the process on its website.

British Columbia

On May 13, 2020, the Government of British Columbia (“BC”) announced its “Dormant Sites Reclamation Program” with which it is channeling its \$100 million in federal funding toward cleaning up dormant sites. In BC, well sites are deemed

“dormant” if they do not reach a threshold of activity for five years consecutively, or if they have failed to produce for at least 720 hours yearly.

The program is specifically for B.C. companies and contractors with experience in environmental contracting and/or oil and gas infrastructure abandonment. Applicants must have a valid contract with a BC-based oil and gas activity permit holder for a dormant site.

Eligible applicants can [apply online](#), where the information they will need to provide includes the company details, permit holder name, well authorization number, and estimated cost of each work component.

The B.C. government will provide its funding in two increments, the first from May 25, 2020 to October 31, 2020. Funding for this first increment is up to \$50 million. The second increment will commence on November 1, 2020 and run to May 31, 2021.

In both funding increments, the B.C. government will provide financial contribution up to 50% of the total estimated or actual costs (whichever is less), up to a total of \$100,000 per application and per closure activity. The program has already received significant interest; in a [news release](#), the province noted it received over 1,100 applications on the first day, which means the program was nearly fully subscribed.

B.C. landowners, local governments, and Indigenous communities can nominate dormant oil or gas sites on their land through an online process beginning June 15, 2020. The BC government noted that such nominations will be a priority in the second increment of funding.

Saskatchewan

On May 22, 2020, the Government of Saskatchewan initiated the “Accelerated Site Closure Program” (“**ASCP**”). Through this program, the Ministry of Energy and Resources will manage \$400 million from the federal government for the abandonment and reclamation of inactive oil and gas wells and facilities.

The ASCP involves multiple phases, the first for up to \$100 million (the future funding and applicable phases have not yet been announced). In order to be eligible, licensees must be in good standing regarding debts owed to the Crown as of March 1, 2020 (e.g. the Oil and Gas Administrative Levy, the Orphan Well Levy, etc.). Eligible licensees will receive a minimum of \$50,000 toward their abandonment and reclamation projects.

The program provides that licensees nominate their wells and facilities through the IRIS system (Integrated Resource Information System). Service companies, interested in performing the work, must apply through SaskTenders beginning in the first week of June 2020. Further details on the application process, and who to contact with questions, can be found in the [following bulletin](#).

The Saskatchewan government anticipates that up to 8,000 wells and facilities will be abandoned and reclaimed through the ASCP, which in turn will support approximately 2,100 full-time jobs. Saskatchewan plans to develop an Indigenous procurement strategy further into the program.

The first phase of the ASCP is now complete, and eligible licensees have received notice of their allocation.

Moving Forward

The federal funding is a welcome boost to cleaning up inactive oil and gas sites in Western Canada. This is a significant step to subsidize old, inactive sites and lower the associated environmental risks. As the three programs also create jobs and contracting opportunities for local parties, the federal funding appears to be a big win for both the energy industry and the environment in all three provinces during these difficult times.

The content of this article is intended to provide a general guide to the subject matter. Specialist advice should be sought about your specific circumstances.

ABOUT THE AUTHORS

[JoAnn P. Jamieson](#)'s practice is dedicated to environmental, regulatory and Aboriginal law matters. With over 20 years of experience, she has worked on major resource development throughout western and northern Canada including oil sands, oil and gas, coalbed methane, pipelines, co-generation, hydro, petrochemical, diamond and uranium mining, in situ coal gasification, power, renewables and clean energy technology. JoAnn has extensive experience in environmental impact assessment, land and water regulation, municipal planning, climate change, species at risk, corporate social responsibility and regulatory compliance issues.

[Anna Fitz](#) is a student-at-law in the Edmonton office of McLennan Ross LLP. Anna completed her Juris Doctor at the University of Ottawa, where she graduated cum laude. She also received her Bachelor of Arts in English Literature at McGill University and graduated with distinction.

ALBERTA EXPLORING SAFE, SMALL-SCALE NUCLEAR TECHNOLOGY

Alberta will enter into an agreement with three other provinces to explore emerging, small-scale nuclear technology that could lower emissions and help diversify the energy sector.

Premier Jason Kenney has signalled the intent for Alberta to enter into a memorandum of understanding with Ontario, Saskatchewan and New Brunswick to support the development of versatile and scalable small modular reactors (SMRs).

SMRs are smaller than traditional nuclear reactors and scalable to suit local needs, with lower upfront capital costs and enhanced safety features. This new and versatile technology could supply non-emitting, low-cost energy for on-grid and off-grid communities in Alberta, including remote and rural areas of the province, as well as industries with a significant need for steam, such as Alberta's oil sands.

"Our government is exploring all opportunities that could help diversify our economy and create jobs for Albertans. We are building on our track record of responsible and innovative energy production by exploring the potential for small modular reactors, which have the potential to generate reliable and affordable energy, while also strengthening our traditional resource sectors and reducing emissions. We are excited to collaborate with our provincial partners to stay ahead of the game in the development of this promising technology." - *Jason Kenney, Premier*

"Alberta's rich uranium deposits, respected innovation and research sector, and technically skilled and educated workforce could make us an attractive destination to develop and deploy SMRs. By signing on to this agreement, our government is taking another step to attract investment and job creators to our province by ensuring we have the appropriate regulatory framework in place should private industry decide to pursue this emerging technology." - *Sonya Savage, Minister of Energy*

Alberta's Recovery Plan is a bold, ambitious long-term strategy to build, diversify, and create tens of thousands of jobs now. By building schools, roads and other core infrastructure we are benefiting our communities. By diversifying our economy and attracting investment with Canada's most competitive tax environment, we are putting Alberta on a path for a generation of growth. Alberta came together to save lives by flattening the curve and now we must do the same to save livelihoods, grow and thrive.

Quick facts

- SMRs are nuclear reactors that are smaller and more flexible than conventional nuclear reactors. SMRs would be small enough to be built in a factory and shipped by truck, rail or ship.
- A typical SMR would generate between two and 300 megawatts of electricity, which could provide power for a village or small city. In comparison, a conventional nuclear reactor can generate 600 to 1,000 megawatts, which can provide power for a large city.
- SMRs could operate independently or be linked to multiple units, depending on the required amount of power.
- In November 2018, the federal government released the Canadian Small Modular Reactor Roadmap that outlines recommendations for collaboration among federal, provincial and territorial governments, Indigenous communities and other stakeholders to support SMR development in Canada.
 - In February 2020, the federal government announced plans for a fall 2020 launch of Canada's SMR Action Plan, which will outline progress and ongoing efforts across Canada.

- In December 2019, New Brunswick, Ontario and Saskatchewan signed a memorandum of understanding to work together to support the development and deployment of SMRs.
- Canada is the second largest uranium producer in the world, with about 15 per cent of total world production.
- The Athabasca Basin, which straddles the northern Alberta-Saskatchewan border, contains some of the greatest uranium resources in the world.

CANADIAN GOVERNMENT AWARDS CONTRACT FOR CLEAN-UP OF KELSET CREEK POND, BRITISH COLUMBIA

(Source: HazMat Magazine) The Canadian government recently announced that it had awarded a contract to complete the second phase of the KÉL,SET (formerly Reay Creek) Remediation Project that will remove sediments with elevated levels of metals from this 200 metre long pond. Last summer, the first phase of creek sediment remediation was completed within the Victoria Airport boundary.

The pond clean-up work will begin this summer and is expected to be complete by fall 2020. The remediation work will be restricted to a short window of time between the cutthroat trout and coho salmon's critical spawning timeframe in the KÉL,SET (Reay) Creek.

The clean-up work involves diverting the creek around the pond area, excavating contaminated sediment in the pond, transporting the sediment to an approved facility for treatment/disposal, and backfilling the pond. It is estimated that approximately 3,900 cubic meters of sediment will be removed from the pond, which is about seven times more than the volume excavated during last year's work.

The contract awarded to QM Environmental for \$1,144,350 will be closely monitored by Transport Canada to ensure the safety of workers and the community. The work will be conducted in accordance with all federal and provincial guidelines, including those addressing COVID-19. Construction and environmental monitoring will be conducted throughout the project to ensure that clean-up activities comply with Town of Sidney bylaws and do not adversely impact the surrounding environment.

Reay Creek is also known by the Sencoten name 'Kelset,' (pronounced "KWAL-sit"). It is a relatively small creek originating both on the east side of the Victoria International Airport and the northeast slope of Mount Newton. It drains into Bazan Bay near Sidney.

A healthy waterway is essential for the well-being of fish who live there. Fish health is threatened when high concentrations of metals that don't break down remain in the environment, threatening the marine food web.

The KÉL,SET (Reay) Creek Remediation Project is funded through Canada's Federal Contaminated Sites Action Plan (FCSAP). FCSAP provides funding to assess and remediate federal contaminated sites and is coordinated by Environment and Climate Change Canada and the Treasury Board of Canada Secretariat.

Marc Garneau, the federal Minister of Transport stated, "Completing this phase of the KÉL,SET (Reay) Creek remediation project demonstrates our government's commitment to remediating contaminated sites and protecting the environment. Cleaning-up the pond will reduce threats to the pond ecosystem and the food web, in addition to providing a healthier home for cutthroat trout and coho salmon."

The initial phase of the remediation project, conducted in 2019, removed and treated 923 tonnes of contaminated sediment from portions of the creek bed located on the Victoria Airport.

GOVERNMENT OF CANADA PROTECTING SPECIES-AT-RISK HABITAT IN BRITISH COLUMBIA

Protecting nature is an essential part of addressing biodiversity loss and fighting climate change. Here in Canada and around the world, we need transformative action to protect natural ecosystems now and into the future.

Today, the Minister of Environment and Climate Change, the Honourable Jonathan Wilkinson, announced that the Government of Canada has invested \$2 million over four years in Kootenay Connect—a program that aims to help protect and restore species-at-risk habitat and ecological connectivity in four biodiversity hotspots in the Kootenay region of southeastern British Columbia.

This funding, provided through the Nature Legacy's Canada Nature Fund, enables partners to advance the protection of habitat vital to the survival of iconic Canadian species.

Kootenay Connect focuses on the Bonanza Biodiversity Corridor, Creston Valley, Wycliffe Wildlife Corridor, and the Columbia Valley Wetlands and will help to conserve important habitat for 28 species at risk including grizzly bears, northern leopard frogs, western screech-owls, American badgers, Lewis's woodpeckers, little brown myotis (bats), and many other important species.

"Conserving habitat for 28 species at risk—including grizzly bears and American badgers—is a necessary step to support the survival of these iconic animals while protecting nature and fighting climate change. This on-the-ground work led by the Kootenay Conservation Program showcases what can be achieved for Canada's biodiversity through collaboration. By working together with local communities, we are working toward Canada's goal of protecting a quarter of our lands and a quarter of our oceans by 2025." – The Honourable Jonathan Wilkinson, Minister of Environment and Climate Change

"We appreciate the 'community-nominated' aspect of the Canada Nature Fund, which relied upon our local scientific assessments of what is important for landscape-level conservation in our region to improve the conservation status of suites of federally listed species at risk and their habitats.

"This multi-year funding for Kootenay Connect has enabled the Kootenay Conservation Program to build a regional team of 25 partners such as conservation land trusts, stewardship groups, independent biologists, and First Nations, who have collaboratively developed a package of over 50 interrelated subprojects that target real-world conservation issues with on-the-ground restoration and enhancement actions." – Marcy Mahr, Kootenay Connect Project Manager, Kootenay Conservation Program

Quick facts

- The project focuses on four areas in the Kootenay region of British Columbia, which contain important wetland and riparian habitat and are hotspots for biodiversity, totalling approximately one million hectares.
- Based on leading-edge science, Kootenay Connect will identify, restore, improve, and steward a variety of habitats at key locations to support numerous species at risk and improve ecological connectivity across the landscape to allow species to respond to climate change and other large disturbances by migrating to new suitable habitat and shifting their range.
- Because habitat connectivity is so important to the survival of species at risk, Kootenay Connect works across multiple jurisdictions to encompass an entire landscape.
- Wetland habitat restored in the Creston Valley in the first year of the project is already being used by breeding northern leopard frogs, an endangered species.
- Through Budget 2018, the Government announced \$1.35 billion for the Nature Legacy initiative. This amount represents the largest investment in nature conservation in Canadian history.
- The Canada Nature Fund's Community-Nominated Priority Places for Species at Risk is a \$15.6 million, four-year funding initiative administered by Environment and Climate Change Canada to support community-led projects that protect and conserve species at risk.

Associated links

- [Kootenay Connect project](#)
- [Video on habitat restoration work for the northern leopard frog](#)
- [Pan-Canadian Approach to Transforming Species at Risk Conservation in Canada](#)

GOVERNMENT OF CANADA PROTECTING THE LAKE WINNIPEG BASIN

The Lake Winnipeg basin is the second-largest watershed in Canada, covering close to one million square kilometres, which span over four provinces and four states. Home to seven million people, the basin is an important freshwater resource. Over the past several decades, Lake Winnipeg has faced significant challenges to its water quality.

Today, Parliamentary Secretary to the Minister of Environment and Climate Change, Terry Duguid, on behalf of the Minister of Environment and Climate Change, the Honourable Jonathan Wilkinson, announced \$1.18 million to support 15 new projects under the Lake Winnipeg Basin Program.

These projects will address key water-quality issues in the Lake Winnipeg basin, including addressing algae growth, enhancing collaboration throughout the basin, and engaging Indigenous Peoples in freshwater management.

The Parliamentary Secretary was joined today by representatives from the University of Manitoba and the Manitoba Metis Federation. One of the projects, carried out by the University of Manitoba in collaboration with the Manitoba Metis Federation, received \$50,000 to expand community-based water-monitoring efforts and create a water-weather keeper program. The Manitoba Metis Federation will be receiving an additional \$130,000 to lead another project that aims to increase the number of Metis citizen scientists measuring phosphorus concentrations and gather traditional knowledge on the health of Lake Winnipeg. Through investments like these, the Government of Canada is protecting fresh water across the country.

“Projects like these will have a positive impact on our community, economy, and natural environment. Lake Winnipeg is a significant resource to numerous communities and Indigenous Peoples across the basin, generating millions of dollars each year. It is so encouraging to see Canadians stepping up with innovative and practical ways to address some of our most pressing freshwater challenges.” – Terry Duguid, Parliamentary Secretary to the Minister of Environment and Climate Change

“These innovative local projects will help address freshwater issues across the Lake Winnipeg basin through action and collaborative efforts. By working together, we have made important strides in understanding ongoing and emerging threats to Lake Winnipeg’s water quality and ecosystem health to preserve this vital resource for future generations.” – The Honourable Jonathan Wilkinson, Minister of Environment and Climate Change

Quick facts

- Lake Winnipeg is Canada’s sixth-largest lake and the eleventh-largest freshwater lake in the world. Its watershed is the second-largest in Canada and includes parts of four provinces and four US states.
- The Lake Winnipeg drainage basin is nearly one million square kilometres in size and is home to nearly seven million people.
- In 2020–21, \$1.18 million will support 15 projects in protecting water quality throughout the Lake Winnipeg basin through the Lake Winnipeg Basin Program. A total of \$25.7 million over five years was allocated to the Lake Winnipeg Basin Program, in Budget 2017.
- Excessive nutrients, like phosphorus, contributed to algae growth and deteriorated water quality in Lake Winnipeg. The recent release of the State of Lake Winnipeg (second edition) was a collaborative effort between Manitoba and Environment and Climate Change Canada, and findings indicate that nutrient loading to the lake still remains a challenge.

ALBERTA OHS ACT REVIEW – PUBLIC REVIEW – DEADLINE AUGUST 12TH

We are inviting stakeholders to provide online written submissions to inform potential change to the *Occupational Health and Safety Act* at the following web address: <https://extranet.gov.ab.ca/opinio6//s?s=OHS>

The intent of the OHS Act review is to improve health and safety outcomes, while enabling innovation and competitiveness. Your input is essential to this review, and as such, we are writing to remind you that **we are accepting written online submissions until August 12, 2020.**

If you have made a submission, thank you for your participation and please disregard this email.

Should you require additional information or have questions regarding the information shared, please contact us via email at lbr.ohsreview@gov.ab.ca.

REMEDATION TECHNOLOGY NEWS AND RESOURCES

(The following are selected items from the US EPA's Tech Direct - <http://clu-in.org/techdirect/>)

Upcoming Live Internet Seminars

Revegetation of Mine Wastes in Arid Environments: Linking Above- and Below-Ground Performance - August 12, 2020, 1:00PM-2:30PM EDT (17:00-18:30 GMT). Hard rock mining results in extensive land disturbance due to economic mineral extraction and residual mine waste deposition. Revegetation accelerates reclamation of land disturbed by mining; however, the revegetation of mine waste sites in arid regions of the world

has unique environmental challenges due to low water availability and sensitive ecologies. Further complicating the issue is the myriad of wastes that exist. Here we focus on mine tailings, which exhibit a wide range of pH and metal content, as well as waste rock. In this presentation, we will discuss what we have learned over the last decade about how below-ground metrics are related to and can predict revegetation success under a variety of conditions and revegetation approaches. We will present data from legacy and modern waste sites examining both direct planting into mine waste and cap and plant scenarios. We are using these data to identify below-ground metrics that correlate with vegetation establishment patterns and are easy to measure; and then using the identified metrics to develop guidance for prediction of tipping points for vegetation success or failure. An additional outcome of this work is creation of the University of Arizona Center for Environmentally Sustainable Mining which has facilitated a partnership with Arizona copper companies called the Collaborative Industry-University Research Initiative on Revegetation of Mine Wastes. This partnership has enabled both a comprehensive assessment of multiple revegetation strategies under diverse conditions and an open atmosphere wherein results are shared among all partners through annual reports and meetings. For more information and to register, see <https://clu-in.org/live>.

ITRC Integrated DNAPL Site Characterization - August 20, 2020, 1:00PM-3:15PM EDT (17:00-19:15 GMT).

The Integrated DNAPL Site Characterization Team has synthesized the knowledge about dense non-aqueous phase liquid (DNAPL) site characterization and remediation acquired over the past several decades, and has integrated that information into a new document, Integrated DNAPL Site Characterization and Tools Selection (ISC-1, 2015). This guidance is a resource to inform regulators, responsible parties, other problem holders, consultants, community stakeholders, and other interested parties of the critical concepts related to characterization approaches and tools for collecting subsurface data at DNAPL sites. After this associated training, participants will be able to use the guidance to develop and support an integrated approach to DNAPL site characterization, including: identify what site conditions must be considered when developing an informative DNAPL conceptual site model (CSM); define an objectives-based DNAPL characterization strategy; understand what tools and resources are available to improve the identification, collection, and evaluation of appropriate site characterization data; and navigate the DNAPL characterization tools table and select appropriate technologies to fill site-specific data gaps. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

ITRC Characterization and Remediation of Fractured Rock - August 25, 2020, 1:00PM-3:15PM EDT (17:00-19:15 GMT).

The basis for this training course is the ITRC guidance: Characterization and Remediation of Fractured Rock. The purpose of this guidance is to dispel the belief that fractured rock sites are too complex to characterize and remediate. The physical, chemical and contaminant transport concepts in fractured rock have similarities to unconsolidated porous media, yet there are important differences. By participating in this training class, you should learn to use ITRC's Fractured Rock Document to guide your decision making so you can: develop quality Conceptual Site Models (CSMs) for fractured rock sites, set realistic remedial objectives, select the best remedial options, monitor remedial progress and assess results, and value an interdisciplinary site team approach to bring collective expertise to improve decision making and to have confidence when going beyond containment and monitoring -- to actually remediating fractured rock sites. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

ITRC Optimizing Injection Strategies and In situ Remediation Performance - August 27, 2020, 1:00PM-3:15PM EDT (17:00-19:15 GMT).

ITRC developed the guidance: Optimizing Injection Strategies and In Situ Remediation Performance (OIS-ISRP-1) and this associated training course to identify challenges that may impede or limit remedy effectiveness and discuss the potential optimization strategies, and specific actions that can be pursued, to improve the performance of in situ remediation by: refining and evaluating remedial design site characterization data; selecting the correct amendment; choosing delivery methods for site-specific conditions; creating design specifications; conducting performance evaluations, and optimizing underperforming in situ remedies. The target audience for this guidance and training course is: environmental consultants, responsible parties, federal and state regulators, as well as community and tribal stakeholders. This training will support users in efficiently and confidently applying the guidance at their remediation sites. An optimization case study is shared to illustrate the use of the associated guidance document. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

ITRC Long-term Contaminant Management Using Institutional Controls - September 3, 2020, 1:00PM-3:15PM EDT (17:00-19:15 GMT).

Institutional controls (ICs) are administrative or legal restrictions that provide protection from exposure to contaminants on a site. When ICs are jeopardized or fail, direct exposure to human health and the environment can occur. While a variety of guidance and research to date has focused on the implementation of ICs, ITRC's Long-term Contaminant Management Using Institutional Controls (IC-1, 2016) guidance and this associated training class focuses on post-implementation IC management, including monitoring, evaluation, stakeholder communications, enforcement, and termination. The ITRC guidance and training will assist

those who are responsible for the management and stewardship of ICs. After attending the training, participants will be able to: describe best practices and evolving trends for IC management at individual sites and across state agency programs; use this guidance to improve IC reliability and prevent IC failures, improve existing, or develop new, IC Management programs, identify the pros and cons about differing IC management approaches; use the tools to establish an LTS plan for specific sites; and use the elements in the tools to understand the information that should populate an IC registry or data management system. For more information and to register, see <http://www.itrcweb.org> or <http://clu-in.org/live..>

New Documents and Web Resources

ITRC Risk Communication Toolkit. This resource was developed by three current ITRC teams: Per- and Polyfluoroalkyl Substances (PFAS), 1,4-Dioxane, and Harmful Cyanobacterial Blooms (HCBs). The purpose of the Toolkit is to recognize that risk communication is broader than any specific environmental issue and highlight the value of this science-based communication approach. The Risk Communication Toolkit is a resource for aiding state personnel, other lead organizations, and stakeholders in understanding and communicating risk associated with emerging environmental issues and concerns. This Toolkit contains: an overview of risk communication concepts; steps to develop a risk communication plan and stakeholder outreach activities; guidance for drafting press releases and analytical result summary letters, case studies, and a risk communication plan template; and additional tools and case studies added and updated by ITRC teams as they are developed. View and use at <https://rct-1.itrcweb.org>.

Technology Innovation News Survey Corner. The Technology Innovation News Survey contains market/commercialization information; reports on demonstrations, feasibility studies and research; and other news relevant to the hazardous waste community interested in technology development. Recent issues, complete archives, and subscription information is available at <https://clu-in.org/products/tins/>. The following resources were included in recent issues:

- First Monitored Natural Recover Report, Data Collections 2013-2016 Palos Verdes Shelf, Operable Unit 5 of the Montrose Chemical Corporation Superfund Site, Los Angeles County, California
- Pilot Scale Assessment of a Deployable Photocatalytic Treatment System Modified with BiPO₄ Catalyst Particles for PFAS Destruction in Investigation-Derived Wastewaters
- A Combined Photo/Electrochemical Reductive Pathway Towards Enhanced PFAS Degradation
- A Framework for Assessing Bioaccumulation and Exposure Risks of Per- and Polyfluoroalkyl Substances in Threatened and Endangered Species on Aqueous Film Forming Foam (AFFF)-Impacted Sites
- Modeling Pilot-Scale GAC PFAS Adsorption for the Simulation of Full-Scale Performance and Costs
- Engineering Issue: Soil Vapor Extraction (SVE) Technology
- Record of Decision for the Ballard Mine
- Discharge System 2019 Annual Operations and Maintenance Report Berkeley Pit and Discharge Pilot Project
- Bonita Peak Mining District BioCement-A Pilot Study
- In-Pit Batch Treatment of Arsenic: Laboratory Studies and Field Trial

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 5 resources, events, projects and news items were added to EUGRIS in July 2020. These can be viewed at <http://www.eugris.info/whatsnew.asp> . Then select the appropriate month and year for the updates in which you are interested. The following resources were posted on EUGRIS:

Supplementary Report 1 of the SuRF-UK Framework: A General Approach to Sustainability Assessment for Use in Achieving Sustainable Remediation (2020). **This collection of documents describe a general approach to sustainability assessment that consolidates a range of guidance issued by SuRF-UK. Part 1 also provides guidance on how to carry out sustainability assessments for remediation design and strategy setting and remediation technology selection. View or download at <https://www.clare.co.uk/projects-and-initiatives/surf-uk> .**

Supplementary Report 2 of the SuRF-UK Framework: Selection of Indicators/Criteria for Use in Sustainability Assessment for Achieving Sustainable Remediation (2020). **Part 2 describes in detail the nature and rationale for 15 SuRF-UK headline indicator categories and an approach to indicator selection and use. The report also includes a checklist of possible individual indicators/criteria provided as an appendix. View or download at <https://www.clare.co.uk/projects-and-initiatives/surf-uk> .**

UPCOMING EVENTS

ESAA Virtual Regulatory Forum

**9:00 am - 4:00 pm
September 16th, 2020**



ESAA is pleased to announce that the draft agenda for the upcoming ESAA Regulatory Forum is now available. Full details can be found at:

<https://www.esaa.org/events/#id=209&wid=401&cid=153>.

ESAA has intentionally kept the registration fees low and are asking everyone to register, spread the word about the event and presentation. Approximately 90% of ESAA's revenues come from events, and now more than ever your Association needs your support!

- 6 hours of potential professional development
- Can't make all of the presentations. Don't worry - you can come and go out of the presentations as needed.
- Missed a presentation. All of the presentations will be recorded and available to registered participants only.

Registration rates:

- **Member: \$49**
- **Non-Member: \$79**
- **Registration Link: [Click Here](#)**

This full day workshop features the following presentations:

Orphan Well Association (OWA) Update

Lars DePauw, Executive Director, OWA

Indian Resource Council (IRC) Introduction

Steve Saddleback, Director, National Energy Business Centre of Excellence, IRC

Contamination Management and Administration of the Remediation Regulation

Adrian Kerry, Senior Remediation & Contamination Specialist, Alberta Energy Regulator (AER)

Canadian Federal Contaminated Site Clean-up

Martine Lalonde, Environmental Specialist, Public Services and Procurement Canada

Incorporation of Atlantic RBCA in Nova Scotia's Contaminated Sites Regulations

Brent Cox, Contaminated Sites Specialist, Nova Scotia Environment

Impact Assessment Agency of Canada (Tentative)

Environmental Prosecutions – How Bad Can It Get? Is there a Defence?

John Georgakopoulos and Anand Srivastava, Willms & Shier Environmental Lawyers LLP

Clarifying or Muddying Environmental Insolvency? Post-Redwater Review and Implications

Jacquelyn Stevens, Willms & Shier Environmental Lawyers LLP

REMTECH 2020 IS GOING VIRTUAL!

Due to the on-going COVID situation, ESAA has decided to take *RemTech 2020* online. The virtual version of *RemTech* will take place on October 14th and 15th and will feature a couple of keynotes, group sessions and breakouts, and a few other surprises. Check out the [draft agenda](#).

ESAA has intentionally kept the registration fees low and are asking everyone to register, and to spread the word about the event and presentations. Approximately 90% of ESAA's revenues come from events, and now more than ever your Association needs your support!



Important Information for Sponsors and Exhibitors

- Sponsors: If you are a current sponsor of *RemTech*, watch your email for additional information and next steps.
- Exhibitors: If you are a current exhibitor of *RemTech*, watch your email for additional information and next steps.

Did You Previously Register for RemTech?

If you are already registered for *RemTech 2020*, you will need to register to attend the virtual version using the link below. ESAA will transfer your existing registration and payment to *RemTech 2021*. If you require a refund, please contact Joe Chowaniec at the ESAA Office.

Virtual RemTech Registration Fees

	Early Bird Rate (until August 28th)	Regular Rate (after August 28th)	
Member	\$69 + GST	\$99 + GST	Register Now
Non-Member	\$89 + GST	\$119 + GST	Register Now
Presenter	n/a	\$39 + GST	

Industry Positions Openings



As a benefit of ESAA Membership, ESAA Members can now post position openings on our website at no charge. Position opening ads also will appear in the newsletter at no charge. For full details visit: <https://www.esaa.org/news/job-board/>

Note: You must still complete the advertising form. After completing the order form, you will receive an email with a link to post your position.

Non-Members are welcome to advertise as well for a nominal charge. Visit [advertising form](#) to place your order.

Job Title	Organization	Application Deadline	Term	Details
Intermediate Environmental Consultant	Ridgeline Canada Inc.	2020-08-31	Full-Time	more