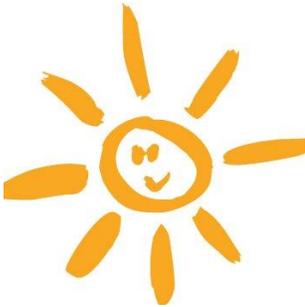


Weekly NEWS



An Information Service for Alberta's Environment Industry

The Week Ending February 7th, 2020



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**Comments & submissions
are welcome!**

Please submit your
announcement
via e-mail to:
weeklynews@esaa.org

EnviroTech 2020

April 27-29, 2020

Hyatt Regency Calgary

Announcing New Registration Options

ESAA is pleased to announce day passes are now available for each day of *EnviroTech*. The Tuesday and Wednesday passes include access to all of the technical sessions for the day chosen, breakfast, lunch and access to the Tuesday reception.

In addition, for the first time, ESAA is offering discounts when members purchase multiple passes.

- Option 1: Register two people and save 10% (*Members Only*)
- Option 2: Register three people and save 15% (*Members Only*)

Consider using the option to bring clients and non-members to *EnviroTech 2020*.

[Register Now](#)

Draft Program: ESAA expects to release the draft program on Monday, February 10th.

8 Exhibit Spaces Remaining

Eight (8) exhibit spaces are still available for *EnviroTech 2020*. *EnviroTech 2020* is expected to have 300+ delegates and 40 exhibitors and feature a program with 42 technical talks and 3 keynotes.

EnviroTech 2020 features an all new floor plan and additional exhibit space. For the new floor plan and a list of current exhibitors, visit:

<https://www.esaa.org/envirotech/exhibitors/>

Exhibit space includes:

- One or two booth worker passes (depending on booth package chosen) which provide access to the trade show, all meals, receptions, and coffee/networking breaks. Does not include access to the technical sessions.
- 10' wide x 8' deep booth space
- 3' high side wall and 8' high back wall drape
- 6' table
- 2 padded chairs
- One 110v power outlet

If you are interested in receiving the exhibitor brochure, please contact: lorraine@tl2.ca

In addition, a number of **sponsorship opportunities** remain, including:

- **Emerald**
- **Ruby**
- **Sapphire**

Check out the current list of sponsors at: <https://www.esaa.org/envirotech/sponsors/>

If you are interested in receiving the sponsor brochure, please contact: lorrine@tl2.ca

We look forward to your continued support of ESAA events and to welcoming you to [EnviroTech 2020](#).



Are you an employee of an ESAA full member? Are you interested in serving on the ESAA Board of Directors? The ESAA AGM and Board Election is happening on March 10th. Full details below.

ESAA Board of Directors - Call for Nominees

The ESAA Board of Directors is pleased to announce the initial slate of candidates for the upcoming Board of Directors election to be held at the ESAA AGM on **March 10th, 2020** in Edmonton, Alberta.

There will be three **(3)** positions open for the ESAA Board of Directors, each for a three **(3)** year term.

If you would like to be included on the list of candidates for the ESAA Board of Directors and are a **representative of a full ESAA Member**, please submit six (6)* letters of support by no later than **February 19th, 2020** to the ESAA Office via e-mail to: chowaniec@esaa.org.

Proposed List of Candidates

- **(I) Stacy Thygesen, JSK Consulting**
- **Sean Parker, McLennan Ross LLP**

(I) Incumbent

(*) Letters of Support must be from full ESAA Members and only one letter from a company



ESAA Annual General Meeting

2:30 pm – March 10th, 2020 (Doors open at 2:00 pm)

Town Square Brewing – 2919 Ellwood Dr SW, Edmonton

RSVP to attend by visiting: www.esaa.org/2020agm/

NOTICE IS HEREBY GIVEN that the Annual General Meeting of the Members of the Association will be held in Edmonton, Alberta, on March 10th, 2020, at the hour of 2:30 pm for the following purposes:

1. to approve the minutes of Members dated March 19th, 2019;
2. to receive the report of the President;
3. to receive the report of ESAA Management;
4. to receive the report of the Treasurer;
5. to appoint Auditors;
6. to appoint/elect Directors; and
7. the transaction of such further and other matters as may properly be brought before the meeting or any adjournment thereof.

All full members have the right to appoint a proxy, who needs not to be a member, to exercise the same voting rights that the member appointing such proxy would be entitled to exercise if present at the meeting.

Dated at the City of Edmonton, in the Province of Alberta, this 3rd day of February 2020.

BY ORDER OF THE BOARD

Per: ESAA President

** Attendees to the AGM are welcome to stay after the AGM for drinks and Hors d'oeuvre. Doors Open at 2:00 pm*

2020 AGM Documents including the **AGM Notice**, **AGM Agenda**, **2019 AGM Minutes**, and **AGM Proxy** information can be found online at: www.esaa.org/2020agm/

ABANDONED WELL RATIO NO LONGER PUBLISHED BY AER

(Source: Medicine Hat News) A rating used to determine an oil and gas company's ability to properly abandon its wells is no longer being published by Alberta regulators, who say a new calculation is being developed of wider changes due this winter.

The Alberta Energy Regulator says removing individual company's ratings from its public website has been done to provide a better picture of the industry's assets and liabilities, but critics say it's more likely to obscure it.

"Taken on its own, the LLR is not a good indicator of a company's financial health," reads a statement from AER officials in response to new inquiries.

"For this reason, we are no longer posting the reports for individual licensees ... The AER is working with the Government of Alberta on a more holistic assessment of a company's ability to address its end-of-life obligations."

In Alberta, well operators are assigned a Licensee Liability Rating that is a ratio of its assets – including expected revenue from operations and reserves – against the estimated liability to properly close wells and reclaim well sites.

They had been published each month on the AER website until December 2019, when only a grant total was provided.

The rating also determines contribution levels to the industry funded Orphan Well Association, to clean up sites of bankrupt companies.

But the ratio has also been used by environmentalists, activist investors groups and other public policy critics to highlight what they say is a looming abandonment crisis in Alberta.

Regan Boychuck heads Reclaim Alberta, an advocacy group arguing for tougher rules, and told the News that he sees potential changes to the system as a "gift" to industry.

"It's pretty amazing to hear that from the AER about a regulatory program that's been in place for 17 years," he said.

"These numbers ... are now an embarrassment and an obstacle to companies that are trying to raise money."

“(That’s) all lenders care about ... if you’re in the red zone where you’ll have to start spending money to start cleaning up, you’re not an attractive investment.

“It’s a gift to put that behind the curtain.”

Media reports on Thursday quoted Energy Minister Sonya Savage saying the new system could be in place by the end of the first financial quarter of 2020.

This month the Alberta Auditor General said it would investigate the abandonment regimen and how it is financed.

Last year, the Supreme Court presented more hurdles to securing financing when it ruled that environmental cleanup costs could be placed ahead of secured creditors in bankruptcy proceedings.

Industry officials told the News this week that they agree the LLR requires updating and they support a review.

“There certainly are opportunities for enhancement of the LLR system to support more of a risk-informed approach and the companies ability to address end of life liabilities,” said Richard Wong, the director of western operations for the Canadian Association of Petroleum Producers.

“We support the review and believe there needs to be more timely and efficient inactive (well) liability reduction in the province.”

Industry in general has argued the system is based on out-dated pricing models, but also the decreasing costs of abandonment caused by technological change.

Boychuck’s group also says the system doesn’t take into account potential worst-case scenarios such as wide or more rapid than expected transition from fossil fuels.

“We’ve known for a long time that it (the LLR system was) going to be cancelled, and taking down the company specific is the first step before that,” he said.

City’s situation

The City of Medicine Hat’s LLR sat at 1.02 in November.

That means that its assets – including potential revenue from operating the wells until the end of their useful economic life – were valued at slightly more than the current liabilities.

Because future revenue and reserves are taken into account, ratios only rise as production continues unless wells are reworked to recover more petroleum, thereby boosting reserves and potential income.

A company’s rate can also drop when low production or money-losing wells are retired, capped and the area reclaimed.

Medicine Hat plans to begin a \$90-million reclamation program this spring with a first batch of 2,000 total well closures over three years. Only about 500 wells would remain.

That corresponds with figures about liabilities in its own financial reports and statements that say that if wells were operated until the end of life, potentially for another decade, the total cleanup cost could be as high as \$250 million or more.

City officials have told the News that since the program targets wells that are losing money due to low production and low commodity price, the move makes financial sense from both an operational and long-term standpoint.

City of Medicine Hat, as a municipality, has different accounting and disclosure practices than privately owned or even publicly traded companies.

VULCAN SOLAR FARM — CANADA'S LARGEST — RECEIVES KEY \$500-MILLION INVESTMENT

(Source: Calgary Herald) Construction of Canada's largest solar farm in Alberta is poised to proceed with the infusion of \$500 million from a Denmark-based investment group.

The decision by the world's large renewable energy fund, Copenhagen Infrastructure Partners, to bring global investors into the 1,900-hectare project on farmland near the village of Lomond in Vulcan County is a watershed for the industry, said Dan Balaban of Calgary-based Greengate Power Corp.

"This show of confidence is great news for Albertans . . . It really speaks to the quality of the Alberta renewable energy resource," said Balaban, CEO of the company that's spearheading the project.

The Travers Solar Energy Project, to be one of the world's largest, will feature 1.5 million panels set amid grazing land. It should begin taking shape in the middle of this year and be completed in late 2021, he said.

It's projected to produce 400 MW (megawatts) of electricity with the potential of powering 100,000 homes and creating 500 full-time jobs during construction. The next-largest solar farm is in Ontario, with a capacity of 100 MW.

Key to this production is the fact southern Alberta enjoys an average of more than 300 days of sunny skies annually.

"Over the last decade, the cost of solar energy went down by 90 per cent, making it competitive with natural gas," added Balaban.

The project is part of a veritable solar energy rush in Alberta that includes the construction by Ireland-based DP Energy of [a 25 MW project on 63 hectares of land](#) in Calgary's Shepherd Industrial Park.

Meanwhile, Ontario-based Canadian Solar Solutions has acquired a 20-year contract to supply electricity to government facilities with the building of three solar farms located near the communities of Jenner, Hays and Tilley in southeastern Alberta, which will create 100 MW of capacity.

Additionally, a \$200-million solar facility which will produce 130 MW is being built by Calgary-based Perimeter Solar about 125 kilometres south of Calgary.

Power produced by the Travers facility is slated to be fed into the province's wholesale market and electricity grid.

Together, these proposed or soon-to-be-completed solar projects could produce 4,000 MW of energy — though it's not likely that all of them will be built.

According to the Alberta Electric System Operator, about 10,300 MW was being generated in Alberta on Monday.

"We need to recognize energy production is going through a revolution," said Balaban.

While the current provincial government doesn't offer subsidies to the industry, other policies such as a [carbon tax on large emitters](#) encourage the production of cleaner renewables, he said.

"It's allowing them to go forward on a non-subsidy basis," he noted.

Alberta's planned phase-out of coal-fired power generation by 2030 is also a boon for renewables, which will be needed as a replacement, he added.

In a Monday tweet, Alberta Energy Minister Sonya Savage called the funding announcement "good news...This \$500 million investment will result in 500 FT jobs for Alberta during construction!"

Skeptics of wind and solar power point to their reliance on weather conditions, but Balaban said a massive increase in investment in the development of batteries — to store renewable energy outside of peak generation hours — will be a game-changer.

The Travers project won't initially include such batteries, but they'll likely be installed within this decade, he said.

"Once these projects come online and operate reliably without subsidies," they'll be accepted as a supplement to other energy sources, said Balaban.

Solar generation comes into its own on the sunniest and hottest days when the demand for air conditioning power peaks, say proponents.

But for now among renewables, it lags behind power produced by wind turbines due to the lack of utility-sized plants.

SPILL CLEANUP AT GORGE CREEK COULD TAKE WEEKS, MAYOR SAYS

(Source: CTV News) VICTORIA -- As crews continue to clean up a spill from a home heating oil tank into a sensitive ecosystem in Esquimalt, the mayor is pleading with people to make sure more leaks aren't happening.

On Friday, the Township of Esquimalt found the source of an oil slick in the Gorge Creek into the Gorge Waterway.

A faulty home heating oil tank is what caused the leaking hydrocarbons, and Mayor Barb Desjardins said the person likely didn't know they were at fault until the township asked people to check their homes.

"I think that is likely what triggered someone to take that look and say 'Oh Dear, something is happening,'" said Desjardins.

An environmental contractor hired by the township will continue cleaning up the spill this weekend.

"The township made the decision to bring in an external contractor with a little more expertise and equipment than ourselves," said Jeff Miller, engineer for the Township of Esquimalt.

He adds that hydrocarbons can spread out very easily.

"It can cover a lot of area with a small amount," said Miller.

Desjardins said the amount of damage could be in the tens of thousands of dollars.

"I believe it would fairly substantial, when you look at the work having to be done and you look at the fact that we had to hire an environment specialist," she said. "It is a financial responsibility, yes."

The Townships of Esquimalt does have bylaw around discharging into waterways and Desjardins says council will need to sit down and discuss fines for this incident.

"This cleanup will continue potentially for another two weeks," she said. "just to make sure everything is dealt with."

Many people at the Gorge Waterway say they were disappointed to see the amount of damage.

"It's sad," said Ngaire Rathgaber. "My mom and my daughter come down here all the time, seeing the park like this is really sad."

Another person expressed concern over the number of birds in the park. Desjardins is asking anyone who sees an animal in distress to call the BC SPCA's Wild Animal Rehabilitation Centre. "If there are animals in distress we will be all over that with bringing in more help," she said.

WISEST SUMMER RESEARCH PROGRAM

WISEST is preparing for another successful Summer Research Program (SRP) for 2020. Each year we place 40 eager grade 11 students in paid summer work for 6 weeks in fields that their gender is underrepresented. For girls and non-binary students, this is STEM (science, technology, engineering & math). In addition to the work experience, students participate in a full schedule of personal and professional development sessions and activities that are an integral part of their SRP experience.

Would your organization like to host a WISEST SRP Student this summer in an off-campus Industry Placement? WISEST is allowing for a few companies to request students for this summer. Financial support of the program, while appreciated, is not mandatory.

More details about the program can be found at: www.uab.ca/WISEST and you can email fervone.goings@ualberta.ca to explore this possibility.

Program Dates: July 2 – Aug 14, 2020.
Project Proposals open March 1, 2020.

RECYCLING COUNCIL OF ALBERTA LAUNCHES CIRCULAR ECONOMY PODCAST

(Source: EnvironmentJournal.ca) The Recycling Council of Alberta (RCA) is helping Albertans to explore and support the “circular cities” concept. The RCA recently launched a new podcast, “On the Cusp: Alberta’s Circular Podcast,” to share inspiring projects on leading local, national and international ideas about changing behaviours, and policies to create a circular economy.

The podcast will provide stories on how to foster and grow circularity through sharing platforms, design, procurement, resource conservation, reuse centres and more.

According to RCA, Albertans are on the cusp of moving from a linear, take-make-dispose economy, to one where communities and organizations are designing programs to reduce waste, reuse and recycle materials. The RCA’s vision is a waste-free world and the mission is to promote, facilitate, and advocate for a circular economy in Alberta through waste reduction and resource conservation.

The first episodes feature recycled content from presentations at the 2019 RCA Sea Change conference that took place in Jasper on October 2 – 4, 2019. Anthony Rossi, vice president of global business development at Loop discusses the reusable supply chain. Ruben Anderson, a consultant on sustainability, speaks on behaviour change. Usman Valiante, senior policy analyst with Corporate Policy Group LLP, focuses on the circular economy for plastics. Peter Demong, a councillor for the City of Calgary, and Jason London, with Calgary’s waste and recycling services, provide a presentation on Alberta’s next steps toward extended producer responsibility.

The podcast is available on the [RCA website](#) and also through the podcast app on iTunes and Google Play.

DRAFT SCIENCE ASSESSMENT OF PLASTIC POLLUTION CONFIRMS NEGATIVE IMPACT OF PLASTIC POLLUTION ON THE ENVIRONMENT IN CANADA

Plastic pollution has emerged globally as a key environmental issue with increasing concerns on the impacts it has on the environment, human health, and the economy. Plastic ends up in our landfills; litters our parks and beaches; and pollutes our rivers, lakes, and oceans. Small particles of plastic are also pervasive in our environment, and people and wildlife are exposed through air, water, and food. To protect human health, safeguard the environment, and grow the economy, we must take action to reduce plastic pollution.

Today, the Minister of Environment and Climate Change, the Honourable Jonathan Wilkinson, and the Minister of Health, the Honourable Patty Hajdu, published the Draft Science Assessment of Plastic Pollution, which sheds light on the extent of the plastic pollution problem in Canada.

The Assessment confirms that larger plastic items like bags and straws can physically harm animals and negatively affect their habitat. Wildlife worldwide are injured or die when they mistake plastic for food or become entangled. The report also highlights microplastic pollution, noting evidence of negative effects on animals and the environment and uncertainties regarding the potential for effects on humans, which require more research. That is why, the Government of Canada will further invest in research that will help expand our understanding of the impacts of plastic. Scientists are invited to apply for [funding](#).

The Assessment reviews the available scientific information regarding the impact of plastic pollution on the environment and human health. It confirms that plastic pollution is everywhere in the environment, including on shorelines, in surface waters, sediment, soil, groundwater, indoor and outdoor air, drinking water, and food.

This draft science assessment of plastic pollution will help inform the Government of Canada's actions and policies as it follows through on its commitment to ban harmful single-use plastics. The Government is working to have new regulations in place as early as 2021, where supported by scientific evidence and warranted.

The Draft Science Assessment of Plastic Pollution will be published on January 31, 2020, in Part I of the *Canada Gazette* for a 60-day public comment period. Public comments will inform the final science assessment.

Quick facts

- The Draft Science Assessment of Plastic Pollution surveys the existing state of science and looks at the presence and effects of macro- and microplastic pollution on the environment and human health.
- Globally, about 8 million tonnes of plastic pollution enter the oceans each year. This amount is equivalent to dumping one garbage truckload of plastic into the ocean every minute.
- Canadians throw away over 3 million tonnes of plastic waste every year. Only 9 percent is recycled while the rest ends up in landfills, waste-to-energy facilities, or the environment.
- In 2018, Canadians removed over 116,000 kilograms of litter from shorelines across Canada through the Great Canadian Shoreline Cleanup. The most commonly littered items on our shorelines are single-use or short-lived products (many containing plastics) such as cigarette butts, bottles and caps, bags, and straws.
- In Canada, up to 15 billion plastic bags are used every year and close to 57 million straws are used daily.
- By improving how we manage plastic waste and investing in innovative solutions, we can reduce 1.8 million tonnes of carbon pollution, generate billions of dollars in revenue, and create approximately 42,000 jobs.

Associated links

- [Draft Science Assessment of Plastic Pollution](#)
- [Increasing Knowledge on Plastic Pollution Initiative](#)
- [Information on plastic pollution](#)
- [Canada to ban harmful single-use plastics and hold companies responsible for plastic waste](#)
- [Zero plastic waste: Canada's actions](#)
- [Canada-wide strategy on zero plastic waste and phase 1 of action plan](#)
- [Ocean Plastics Charter](#)
- [Canada's Plastics Science Agenda](#)

HELP ENVIRONMENT AND CLIMATE CHANGE CANADA UNDERSTAND HOW TO BETTER FRAME ENVIRONMENTAL PROTECTION INFORMATION

Environment and Climate Change Canada's (ECCC) Pollution Prevention team would like to hear from you! Our team has many digital communication products that we want to improve. Your feedback regarding *how you search and use information* to protect the environment will help us.

We invite you to attend a 1-hour feedback session, either in-person or teleconference with two ECCC employees.

The results of this feedback session will help ECCC understand how we can adjust our digital communication products to better suit your needs concerning environmental protection information.

ECCC is committed to respecting the personal privacy of individuals who participate in consultations. Participation in our feedback session is voluntary and your responses will be confidential. Your acceptance or refusal to participate will in no way affect any relationship with ECCC or the Government of Canada. Any questions or comments regarding this privacy notice or the administration of the *Privacy Act* at ECCC may be directed to ECCC's Access to Information and Privacy Division: ec.aiprp-atip.ec@canada.ca

If you are interested in participating in this project, or would like more information, please contact us via email at ec.planp2-p2plan.ec@canada.ca.

WORLD'S BIGGEST ICEBERG MAKES A RUN FOR IT

(Source: BBC News) The world's biggest iceberg is about to enter the open ocean.

A68, a colossus that broke free from the Antarctic in 2017, has pushed so far north it is now at the limit of the continent's perennial sea-ice.

When it calved, the berg had an area close to 6,000 sq km (2,300 sq mi) and has lost very little of its bulk over the past two and a half years.

But scientists say A68 will struggle to maintain its integrity when it reaches the Southern Ocean's rougher waters.

"With a thickness to length ratio akin to five sheets of A4, I am astonished that the ocean waves haven't already made ice cubes out of A68," said [Prof Adrian Luckman from Swansea University, UK](#).

"If it survives for long as one piece when it moves beyond the edge of the sea-ice, I will be very surprised," he told BBC News.

- [World's biggest iceberg is on the move](#)
- [315 billion-tonne iceberg breaks off Antarctica](#)

[A68 split from the Larsen C Ice Shelf in July 2017](#). For a year, it hardly moved, its keel apparently grounded on the seafloor.

But the prevailing winds and currents eventually began to push it northwards along the eastern coast of the Antarctic Peninsula, and during this summer season the drift has undergone a rapid acceleration.

The iceberg, currently at 63 degrees South latitude, is following a very predictable course.

Image copyright NASA/John Sonntag Image caption A68 is about 150km long but only 200m or so thick. It has the profile akin to a few sheets of A4 paper stacked on top of each other. Rough seas should break it apart

When it pops above the tip of the peninsula, the massive block should be swept northwards towards the Atlantic - a path researchers refer to as "Iceberg Alley".

Many of Antarctica's greatest bergs even make it as far - and beyond - the British Overseas Territory of South Georgia at roughly 54 degrees South.

The biggest ever recorded iceberg in the modern era was the 11,000-sq-km block called B15, which calved from the Ross Ice Shelf in 2000.

One of its last remnants, now measuring "just" 200 sq km, is halfway to the South Sandwich Islands, east of South Georgia.

Objects this big have to be constantly monitored because they pose a risk to shipping. Satellite images, like the ones shown on this page, are the obvious way to do this.

Image copyright Copernicus Data/Sentinel-1/ESA/A.Luckman Image caption Pine Island Glacier in West Antarctica is about to release a big iceberg (white shading)

While they keep an eye on A68, scientists are also watching for two other, soon-to-birth bergs.

One is about to come off the front of Pine Island Glacier in the West Antarctic. This will be a little over 300 sq km when it calves. The block is already riven with many cracks.

"I expect that the new iceberg will break into many pieces soon after it calves," said Prof Luckman.

The other imminent large berg is forming in eastern Antarctica, on the edge of the Brunt Ice Shelf.

This should be about 1,500 sq km - roughly the area of Greater London.

The putative berg has garnered a lot of attention because [Britain's Halley research station had to be moved](#) to make sure it wasn't in harm's way.

The berg will calve when a big rift, dubbed Chasm 1, finally slices through a section of ice measuring less than 10km in length. Precisely when, no-one can say. "The rift is widening, but only at a steady rate, and the rift tip is hardly advancing," Prof Luckman told BBC News.

REMEDIAION 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

ITRC Remediation Management of Complex Sites - February 11, 2020, 1:00PM-3:15PM EST (18:00-20:15 GMT). This training course and associated ITRC guidance: Remediation Management of Complex Sites (RMCS-1, 2017), provide a recommended holistic process for management of challenging sites, termed "adaptive site management." By participating in this training course we expect you will learn to apply the ITRC guidance document to: identify and integrate technical and nontechnical challenges into a holistic approach to remediation; use the Remediation Potential Assessment to identify whether adaptive site management is warranted due to site complexity; understand and apply adaptive site management principles; develop a long-term performance-based action plan; apply well-demonstrated techniques for effective stakeholder engagement; access additional resources, tools, and case studies most relevant for complex sites; and communicate the value of the guidance to regulators, practitioners, community members, and others. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

Investigation, Design, Construction, and Optimization of a Large-Scale Combined In Situ Thermal Treatment and Enhanced Bioremediation Remedy - February 12, 2020, 1:00PM-3:00PM EST (18:00-20:00 GMT). The Society of American Military Engineers (SAME) Denver Post and Philadelphia Post along with the US Environmental Protection Agency (EPA) are hosting a series of webinars based on talks given at recent Design and Construction Issues at Hazardous Waste Sites (DCHWS) Symposiums. The mission of the DCHWS symposiums is to facilitate an interactive engagement between professionals from government and the private sector related to relevant and topical issues affecting applications of engineering and science associated with cleaning up hazardous waste sites. The symposiums also serve as a platform to facilitate the exchange of information, encourage dialogue, share experiences, and build and enhance communication among design and construction professionals. The presentation in Philadelphia focused on remedial design, construction, and operation of the in situ thermal treatment and enhanced bioremediation remedies. The webinar will provide an update on site progress since the end of 2017 and focus on the technical, contractual, and financial challenges associated with transitioning the project from EPA to the New Mexico Environmental Department after 10 years of RA-O. It will also cover the process of transitioning from ERD to monitored natural attenuation and long-term vapor intrusion mitigation and lessons learned. Finally, the webinar will present the GIS-based dashboard that we're using to integrate operation, VOC, geochemical, and microbial data to support continued system optimization (particularly ahead of the transition of RA-O to the state). For more information and to register, see <https://clu-in.org/live>.

ITRC Characterization and Remediation of Fractured Rock - February 13, 2020, 1:00PM-3:15PM EST (18:00-20:15 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 site 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 Petroleum Vapor Intrusion: Fundamentals of Screening, Investigation, and Management - February 20, 2020, 1:00PM-3:15PM EST (18:00-20:15 GMT). Chemical contaminants in soil and groundwater can volatilize into soil gas and migrate through unsaturated soils of the vadose zone. Vapor intrusion (VI) occurs when these vapors migrate upward into overlying buildings through cracks and gaps in the building floors, foundations, and utility conduits, and contaminate indoor air. If present at sufficiently high concentrations, these vapors may present a threat to the health and safety of building occupants. Petroleum vapor intrusion (PVI) is a subset of VI and is the process by which volatile petroleum hydrocarbons (PHCs) released as vapors from light nonaqueous phase liquids (LNAPL), petroleum-contaminated soils, or petroleum-contaminated

groundwater migrate through the vadose zone and into overlying buildings. The ITRC Technical and Regulatory Guidance Web-Based Document, Petroleum Vapor Intrusion: Fundamentals of Screening, Investigation, and Management (PVI-1, 2014) and this associated Internet-based training provide regulators and practitioners with consensus information based on empirical data and recent research to support PVI decision making under different regulatory frameworks. The PVI assessment strategy described in this guidance document enables confident decision making that protects human health for various types of petroleum sites and multiple PHC compounds. This guidance provides a comprehensive methodology for screening, investigating, and managing potential PVI sites and is intended to promote the efficient use of resources and increase confidence in decision making when evaluating the potential for vapor intrusion at petroleum-contaminated sites. By using the ITRC guidance document, the vapor intrusion pathway can be eliminated from further investigation at many sites where soil or groundwater is contaminated with petroleum hydrocarbons or where LNAPL is present. For more information and to register, see <https://www.itrcweb.org> or <https://clu-in.org/live>.

New Documents and Web Resources

Interim Recommendations for Addressing Groundwater Contaminated with PFOA and PFOS. These recommendations provide clear and consistent guidance for federal cleanup sites being evaluated and addressed under federal programs, including the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) and corrective action under the Resource Conservation and Recovery Act (RCRA). The recommendations in this guidance may also be useful for state, tribal, or other regulatory authorities (e.g., federal facility cleanup programs and approved state RCRA corrective action programs); though, many states have promulgated state standards that may be considered ARARs under CERCLA. View or download from <http://www.epa.gov/pfas/interim-recommendations-addressing-groundwater-contaminated-pfoa-and-pfos>.

EUGRIS Corner. New Documents on EUGRIS, the platform for European contaminated soil and water information. More than 22 resources, events, projects and news items were added to EUGRIS in January 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.

New ESAA Members

ESAA's Board of Directors and staff would like to welcome the following new member:

Full Members:



Baseline Water Resource Inc.

#7, 3800 - 19 Street NE

Calgary, AB T2E 6V2

Phone: (403) 282-3999

Web: www.baselinewater.com

Brent Bowerman, President

e-mail: brentb@baselinewater.com

Profile

Baseline Water is a Calgary based professional services company specializing in water resource management and environmental consulting. Baseline Water was incorporated in 2006 and is authorized to practice in Alberta, British Columbia and Saskatchewan. Our technical team includes Geologists, Hydrogeologists, Hydrologists, Hydrogeochemists, Biologists, Water Well Experts and Environmental Scientists. Baseline Water's diverse team handles a wide variety of projects and supports our clients every step of the way.



Core Environmental Consulting Inc

10803 - 138 Street
Edmonton, AB T5M 1P1

Phone: (587) 985-3555

Web: www.core-canada.com

Shawn Samborsky, Project Director
e-mail: ssamborsky@core-canada.com

Profile

We are partners and trusted advisors. Our passion is using sound science to provide guidance to our clients for environmental management. CORE Environmental Consulting is an employee owned company with a focus on our clients' objectives. We provide well thought out, creative options to address environmental issues and understand that economics are a key consideration in any project.

Upcoming Events

CLRA Alberta Chapter - 2020 AGM & Conference



List of Preliminary Presentations & Speakers Now Available!

Conference Dates: February 26 - 28, 2020

The conference consists of:

- Two days of presentations with over 40 different speakers
- Networking breaks
- Sponsor booths
- Wednesday evening networking reception
- Thursday evening social, banquet*, and award presentations



**Tickets to for the Banquet on Thursday, February 26, are available for members, non-members, and students who would like to attend the banquet only.*

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CALL FOR ABSTRACTS: ESAA SESSION AT BEST 2020

ESAA has been invited by the British Columbia Environment Industry Association (**BCEIA**) to provide a technical session at **BEST 2020**, May 6-8th at the Chateau Whistler.

ESAA is inviting *member companies* to submit abstracts for consideration. The session of three (3) talks will focus on water issues and/or contaminated sites as related to Alberta projects. Potential topics include, but not limited to:



- groundwater contamination
- groundwater management
- surface water
- produced water
- modelling
- monitoring
- hydraulic fracturing
- emerging contaminants
- saline contamination
- industrial re-use
- risk management
- wetlands
- treatment
- difficult or unique locations

Abstracts should be no longer than 500 words (including bio), should include a presenter biography, and be submitted as a *Word Document* by no later than midnight on Friday, February 7th, 2020.

Send abstract submissions to Joe Chowaniec via email to: chowaniec@esaa.org

For more information about *BEST 2020*, visit: <https://bceia.com/best/>

Note: Speakers are responsible for their registration fees and associated travel expenses.

INFO SESSION ON EXPANDING TO THE U.S. MARKET?

Entering the U.S. market is not as easy as you may think.

Join SCALA Global Accelerator and @TECEdmonton for a FREE presentation & interactive forum on how your company can expand to the U.S. with a customized & affordable solution.

1:1 sessions also offered on March 13.

For more information visit: <https://www.eventbrite.ca/e/info-session-learn-ways-to-expand-in-the-us-market-tickets-91048210649>

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
Environmental Technologist (Job# 38097)	City of Edmonton	2020-02-07	Full-Time	more
Senior Environmental Specialist	LEHDER Environmental Group	2020-02-08	Full-Time	more
Archaeology Field Technician	H3M Environmental	2020-02-29		more
Intermediate Environmental Engineer	Secure Energy	2020-02-28	Full-Time	more
Senior Environmental Site Assessment Specialist	SNC Lavalin Inc.	2020-02-29	Full-Time	more
Field Director/ Supervisor	H3M Environmental	2020-02-29	Full-Time	more
Archaeology Permit Holder	H3M Environmental	2020-02-29	Full-Time	more
Junior Environmental Scientist	Trace Associates Inc.	2020-02-29	Full-Time	more
3544 - Business Lead (Calgary, Alberta)	SLR Consulting (Canada) Ltd.	2020-03-07	Full-Time	more
3544B - Project Manager (Lloydminster, Alberta)	SLR Consulting (Canada) Ltd.	2020-03-07	Full-Time	more
3544C - Environmental Practitioner II	SLR Consulting (Canada) Ltd.	2020-03-14		more
Environmental Engineer, Scientist or Geologist - 2 to 4 Years Experience	Langan	2020-03-31	Full-Time	more
Environmental Engineer, Scientist or Geologist - 4 to 8 Years Experience	Langan	2020-03-31	Full-Time	more
Environmental Scientist or Biologist - 5 to 10 Years Experience	Langan	2020-04-30	Full-Time	more