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Comments & submissions are welcome!

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

EnviroTech 2018 Updates

April 3-5, 2018
 Hyatt Regency Calgary

DRAFT PROGRAM NOW AVAILABLE

ESAA is pleased to announce that the draft program for the inaugural *EnviroTech* is now available. The program will feature:

- Opening panel discussion on the *Future Challenges Facing the Environment Industry*
- Two keynote presentations: Timothy Allen, Photographer - the Human Planet and National Geographic Photographer, Paul Nicklen
- 48 presentations covering a variety of subjects areas including: Air, Climate Change, Forensics, Groundwater, Human Health, Stakeholder Engagement, Wetlands, Waste, Wastewater and much more
- Three (3) Professional Development Courses
- Regulatory Updates Session
- Two networking receptions

The full program can be found online at www.esaa.org/envirotech/agenda/

Professional Development Courses

April 3rd, 2018
 Hyatt Regency Calgary

ESAA is pleased to announce that **EnviroTech 2018** will feature three (3) **professional development courses** on Tuesday, April 3rd. The courses being offered are:

- Introduction to Air Quality
- Introduction to Environmental and Regulatory Law
- Waste Classification and Disposal in Alberta

Course fees include: Course materials, continental breakfast, lunch, coffee breaks and access to the *EnviroTech* opening reception.

Registration is limited to 25 students per course. Special pricing available for ESAA Members and Conference attendees.

Full details online at: <http://www.esaa.org/envirotech/agenda/courses/>

Registration Reminder: Registration is open for EnviroTech 2018. Approximately 60 delegate spots remain available. Visit: www.esaa.org/envirotech/agenda/ for additional details.

Closing Keynote Luncheon Sponsorship still available. For additional details contact Lorraine Hamdon at: lorraine@tl2.ca.

ESAA BOARD OF DIRECTORS ELECTION - FINAL LIST OF NOMINEES

The ESAA Board of Directors is pleased to announce the final slate of candidates for the upcoming Board of Directors election to be held at the **ESAA AGM** on **March 2nd, 2018** in Edmonton, Alberta.

There will be four **(4)** positions open for the ESAA Board of Directors, each for a three **(3)** year term.

- **Peter Bradshaw**, BOS Solutions
- **Darren Cherniak**, North Shore Environmental Consultants Inc. (*)
- **Darrell Haight**, Trace Associates Inc. (*)
- **Kevin Hunsche**, TerraPro Inc.
- **Chris Nielsen**, DBS Environmental
- **Karen Schmidt**, Osprey Scientific Inc.
- **Brandon Spiller**, Vertex Resource Group Ltd.
- **Rob Traynor**, SLR Consulting (Canada) Ltd.
- **Mark Zan**, Envirotech Engineering

* **Candidate nominated by the ESAA Board**

Registration is free for the event and will include refreshments and hot hors d'oeuvres. Please RSVP via the following registration link: www.esaa.org/events/#id=184&cid=153&wid=401

Note: It is important that you RSVP so that we can make sure there is adequate food, beverage and seating.

NOTICE OF ESAA ANNUAL GENERAL MEETING ***2:00 pm – March 2nd, 2018*** ***MKT – [8101 Gateway Blvd, Edmonton](#)***

NOTICE IS HEREBY GIVEN that the Annual General Meeting of the Members of the Association will be held in Edmonton, Alberta, on March 2nd, 2018, at the hour of 2:00 pm for the following purposes:

1. to approve the minutes of Members dated April 4th, 2017;
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 15th day of January 2018.

BY ORDER OF THE BOARD

Per: ESAA President

2018 AGM Documents including the **AGM Notice**, **AGM Agenda**, **2018 AGM Minutes**, and **AGM Proxy** information can be found online at: <http://www.esaa.org/2018agm/>

Registration is free for the event and will include refreshments and hot hors d'oeuvres. Please RSVP via the following registration link: www.esaa.org/events/#id=184&cid=153&wid=401

Note: It is important that you RSVP so that we can make sure there is adequate food, beverage and seating.

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RFP: ASSESSMENT OF ENVIRONMENTAL REMEDIATION OPPORTUNITIES FOR ALBERTA COMPANIES IN CHINA BR-18-SP-001-RFP

The following RFP issued by the Alberta Government may be of interest to companies.

Issued by: Department of Energy, GoA

Details: <http://vendor.purchasingconnection.ca/authenticated/OpportunityVendors.aspx?Guid=7BD783BC-44C5-4F2D-888F-1AFA6EB7A907&>

Closing Date: February 23rd.

ALBERTA ECOTRUST WINTER UPDATE

Alberta Ecotrust is a charitable organization guided by a vision of healthy ecosystems for all Albertans and our mission is to inspire and mobilize those who champion and protect the environment.

[Check Out the Program for #EcoGather18](#)

Are you ready for some big idea generation with 200+ industry, nonprofit, government, Indigenous, academic and youth leaders? Then get your ticket today for **Create The Future**, Alberta Ecotrust's third annual Environmental Gathering! **Early bird pricing ends February 9th.**

With our design and innovation guides Dr. Alex Bruton, President of [The Innograher](#) and Jeff Couillard, Founder, Attainability Group confirmed and excited, *the Gathering* will focus on idea creation, experimentation and designing solutions including a stellar line-up of change makers presenting big ideas and strategies to create Alberta's environmental future.

Sponsorships are still available, see <https://albertaecotrust.com/gathering2018/> or contact w.spooner@albertaecotrust.com for details.



[Opportunities to Act on Climate in Alberta](#)

Great things are happening with Alberta Climate Connect! Launched in the fall of 2017, Alberta Climate Connect (ACC) is a province-wide network of organizations and citizens dedicated to increasing climate literacy and action in the province. Together we're working to mobilize Albertans on climate change action that reduces emissions, adapts to changing ecosystems, and builds resilience in Alberta communities.

We believe that meaningful climate solutions must address a range of social, economic and environmental concerns and incorporate a range of knowledge and approaches, including equity. So we aim to bring a diverse cohort of leaders and organizations from all sectors of society – nonprofits, businesses, and government – to work on these challenges together. ACC aims to provide a high impact learning and networking experience for people who are interested in engaging Albertans to take meaningful action on climate change.

Check out two initiatives we're excited to share: the Alberta Narratives Project and the Climate Leadership Program! Apply to be a Research Collaborator on The Alberta Narratives Project by February 14th. See <https://albertaecotrust.com/climateconnect/> for details!

[Meet Our Fall 2017 Grantees!](#)

Alberta Ecotrust's Grant Review Committee invested in eight awesome projects that address gaps in lake water quality data, engage recreationalists in our national parks, empower youth to participate in citizen science. Get the full story on these and other great initiatives at <https://albertaecotrust.com/blog/>.

[Thank You To Our Partners](#)

Accenture • Alberta Tomorrow Foundation • Athabasca Watershed Council • Bow River Basin Council • Canadian Parks and Wilderness Society - Southern Alberta • Cenovus Energy • ConocoPhillips Canada • Cows and Fish • Environmental Law Centre • Imperial • Miistakis Institute • Pembina Institute • Pembina Pipeline • RBC Foundation • Southern Alberta Land Trust Society • Suncor Energy Foundation

To learn about becoming a partner or supporting our mission please contact Wanda Spooner at 403-209-2245, ext. 106 or w.spooner@albertaecotrust.com.

NEW DATA SUGGESTS VICTORIA HARBOUR IS B.C. COAST'S DIRTIEST BODY OF WATER

(Source: CTV News) A new pollution monitoring program has found that Victoria's Inner Harbour is the most polluted body of water along B.C.'s coastline.

The data comes from a coast-wide program called [PollutionTracker](#), which was created by [Ocean Wise](#), a global conservation group based out of the Vancouver Aquarium.

The program collected sediment and mussel samples from 55 coastal locations between 2015 and 2017, including four sites within Victoria's harbour.

High levels of contaminants were found in the samples, including now-banned polychlorinated biphenyl – a chemical found in things like coolant, flame retardant, hydrocarbons and pharmaceuticals.

The four sites in the harbour, which is under the jurisdiction of Transport Canada, were found among the top five most-contaminated sites in B.C.

The City of Victoria said while the results aren't pretty, they're not surprising considering the harbour's industrial history.

"It's upsetting and concerning," said Victoria Coun. Charlayne Thornton-Joe. "I was looking up photos from the late 1800s and you can see the industry that was being done, whether it was ship-building, whether it was mills. All that existed back then, and of course back then there was no consideration of the environment."

The harbour's geography, with its shallow and slow-moving water, could also be partly to blame as pollutants more or less stay put and get swallowed by fish and other animals.

"They really reflect what we've released or used historically," said Peter Ross, a researcher with Ocean Wise. "A lot of these chemicals don't break down. We find them persisting in the environment, we find them accumulating in killer whale food webs."

Ocean Wise said the threat to endangered southern resident killer whales, which frequent the waters off Victoria, is of particular concern.

"PCB levels in habitat, including sediments, are high enough to contaminate the food chain and deliver PCB's to our killer whales," said Ross.

The organization said the data doesn't suggest the water is unsafe for humans, but it will act as a baseline to measure future improvements.

SURVEY AT RESOLUTION ISLAND FINDS MORE CONTAMINATION

(Source: <http://www.nunatsiagonline.ca>) The federal government will return to Nunavut's Resolution Island this summer, after additional contaminated areas at the former military base were identified for remediation, according to project applications filed with the Nunavut Impact Review Board.

The proposed cleanup could take until 2019, the application said, and it comes 12 years after the original \$65-million cleanup on the island ended.

High-priority areas mentioned in the application include the removal of contaminated soil and collection and disposal of hazardous debris and waste fuel.

Existing fuel storage systems at the base will also be decommissioned, and road and air strips are scheduled for renovation as the cleanup continues, said a letter included in the NIRB application from Indigenous and Northern Affairs Canada—which has since been [split into two new departments](#).

Resolution Island, which sits southeast of the mouth of Frobisher Bay, off Baffin Island, was the site of military base BAF-5, which was established in 1954 to transmit information from the Distant Early Warning, or "DEW," Line to military bases in southern Canada and the United States.

The site continues to be used as a short-range radar station by the Department of National Defence, but between 1996 and 2006 a federally funded remediation program brought the base into compliance with the Canadian Environmental Protection Act and Fisheries Act.

BAF-5 was one of 21 DEW Line sites across the Arctic included in that cleanup program, with final costs estimated at over \$575 million in 2014.

A 25-year monitoring program has been in place on Resolution Island since the original cleanup ended, and the additional contaminants were identified during a regular survey.

The remains of military bases across the eastern Arctic—which were most active during the Cold War—remain a source of contention over which government, or level of government, is responsible for the cleanup of contaminated debris.

That debris can include toxic petroleum hydrocarbons, polychlorinated biphenyls, or PCBs, and pesticides.

Last year, Transport Canada announced it would pay \$4.5 million for the [cleanup of an old military dump outside Iqaluit](#) at the Sylvia Grinnell Park Territorial Park. This is part of an agreement to clean up areas around the city's airstrip left over from its operation as a U.S. base during the Second World War and into the 1960s.

Other waste areas around Iqaluit that have yet to be remediated are in West 40, Federal Road, Apex, Upper Base and Lower Base.

And debate continues over the [cleanup of abandoned U.S. airbases in Greenland](#) between the U.S. and Denmark, over which state will pay for the removal of radioactive runoff and other dangerous contaminants that threaten to leak into the environment.

GOVERNMENT OF CANADA UNVEILS OVERHAUL OF ENVIRONMENTAL LEGISLATION

(Source: The Globe and Mail) The federal government is proposing to overhaul the way environmental assessments are conducted in Canada, with the aim to reduce red tape, provide greater transparency and allow greater input from the public and Indigenous populations.

At the same time, Ottawa says it will replace the National Energy Board with a Calgary-based oversight body designed to respond to emerging energy developments that will make faster decisions guided by science and Indigenous knowledge.

Liberal cabinet ministers held news conferences in cities across the country on Thursday to roll out the long-promised environmental legislation.

Bureaucrats told reporters at a news conference in Ottawa that an Impact Assessment Act will repeal what is now the Canadian Environmental Assessment Act and the National Energy Board will be replaced by a new Canadian Energy Regulator.

The changes are aimed at broadening the reviews from standard environmental assessment to those that are focused on sustainability and take into consideration a broad range of potential outcomes including a project's impact on health, society, Indigenous peoples, jobs and the economy over the long term.

The Canadian Environmental Assessment Agency would be renamed the Impact Assessment Agency of Canada and would work with the provinces and territories to ensure "one project, one assessment," a government official told reporters.

The reviews, which would include a gender-based analysis, would ensure that projects are consistent with Canada's international commitments on climate change. And there will be more money for public participation, including that of Indigenous groups.

At the same time, the government is promising that the reviews will be more predictable and efficient and will give companies enhanced clarity. The proposed new law stipulates that assessments of major projects must be completed within two years while those that are not subject to the Impact Assessment act must be done within 300 days, down from the 450 days that are currently allowed.

One of the primary aims of the regulatory overhaul is to give more say to the Indigenous people who are affected by development in their territories. Consideration of Indigenous knowledge would be mandatory for all reviews.

But, while the United Nations Declaration on the Rights of Indigenous Peoples says they must be given "free, prior and informed consent" over projects in their regions, a government official the Ottawa will merely "aim" to meet that objective.

The roll-out of new environmental legislation, in many ways rewrites regulations that were loosened or eliminated under the previous Conservative government.

Earlier this week, Fisheries Minister Dominic LeBlanc announced proposed changes to the Fisheries Act that he said would protect coasts from negative effects of heavy-oil projects.

On Thursday, the government said it would bring forward a new Navigable Waters Act that would apply environmental protections to Canada's vast network of lakes, rivers and canals and give communities a say in projects that affect their navigation.

GOVERNMENT OF CANADA TAKES STEPS TO ENSURE A CLEAN ENVIRONMENT AND STRONG ECONOMY
February 8, 2018 – Ottawa, Ontario – Government of Canada A clean environment and a strong economy go hand in hand – that's why the Government of Canada is bringing forward better rules for the review of major projects. Better rules will protect our environment, fish and waterways, rebuild public trust, and create new jobs and economic opportunities for the middle class and those working hard to join it.

Previous reforms to environmental laws and regulations eroded public trust and put our environment and communities at risk. In response, the government put in place interim principles for project reviews in January 2016, then launched a comprehensive process to review existing laws and seek Canadians' input on how to improve our environmental and regulatory system.

These better rules reflect what we heard from Indigenous Peoples, companies, provinces and territories, environmental groups, and the public over the course of 14 months. Under these better rules, decisions on projects would be guided by science, evidence and Indigenous traditional knowledge. Reviews would happen in partnership with Indigenous Peoples, as well as with provinces and territories, and communities will have their voices heard from the start. Companies would have more clarity about what is required of them, and review timelines would be more predictable. Project reviews would be both more rigorous and more efficient, with reduced legislated timelines and clearer requirements from the start.

The proposed changes include:

- **Restoring public trust:** We will increase public participation in project reviews, including a new early engagement phase. From the outset, we will recognize Indigenous rights and work in partnership with Indigenous Peoples.
- **Transparent, science-based decisions:** We will ensure decisions are based on robust science and Indigenous traditional knowledge, and make easy-to-understand summaries of decisions publicly available.
- **More comprehensive impact assessments:** We will be replacing the Canadian Environmental Assessment Act, 2012, with the Impact Assessment Act, and expanding the types of impacts studied to understand how a proposed project could affect not just our environment, but also health, social and economic impacts, as well as impacts on Indigenous Peoples, over the long-term. Reviews will include gender-based analysis.
- **One project, one review:** We will reduce duplication and red tape by establishing the Impact Assessment Agency of Canada (currently the Canadian Environmental Assessment Agency) to lead all federal reviews of major projects, working with other bodies like the new Canadian Energy Regulator (currently the National Energy Board), the Canadian Nuclear Safety Commission and Offshore Boards, and in cooperation with provinces and territories and Indigenous jurisdictions.
- **Making decisions timely:** Project reviews would benefit from reduced timelines compared to the current system, and will be rigorously managed to ensure they are more timely, with fewer stops of the legislated clock.
- **Revising the project list:** We are seeking Canadians' [feedback](#) on a more robust project list, identifying types of projects within federal jurisdiction that could pose major risks to the environment and would therefore require review.
- **Protecting water, fish and navigation:** Restoring lost protections for all fish and fish habitats – not just those that could be affected by major projects – by amending the Fisheries Act. Further, protections under the Canadian Navigable Waters Act (currently the Navigation Protection Act) will be expanded to better protect the right to travel on all navigable waters in Canada, covering countless rivers, lakes and other waterways. This includes extra protections for those waterways most important to Canadians and Indigenous Peoples.

- **Increased funding:** The government will invest up to \$1.01 billion over five years to support the proposed new impact assessment regime and Canadian Energy Regulator; increased scientific capacity in federal departments and agencies; changes required to protect water, fish and navigation; and increased Indigenous and public participation.

The new rules proposed today must still be passed by Parliament. Until the new rules come into effect, existing laws and interim principles for project reviews will continue to apply to projects under review. The government will seek input from Canadians on regulations and policy changes required to accompany the legislation. Once the new rules come into effect, the government will not be revisiting project decisions made under previous legislation.

With hundreds of major resource projects – worth over \$500 billion in investment – planned across Canada over the next 10 years, these better rules are essential to protect our environment and communities while making sure good projects can get built to create jobs for the middle class. Under these new rules, proposed projects would be held to a high standard – because that’s what Canadians expect and deserve.

Related Products

- [Benefits for Canadians infographic](#)
- [Benefits for Indigenous peoples](#)
- [Benefits for companies](#)

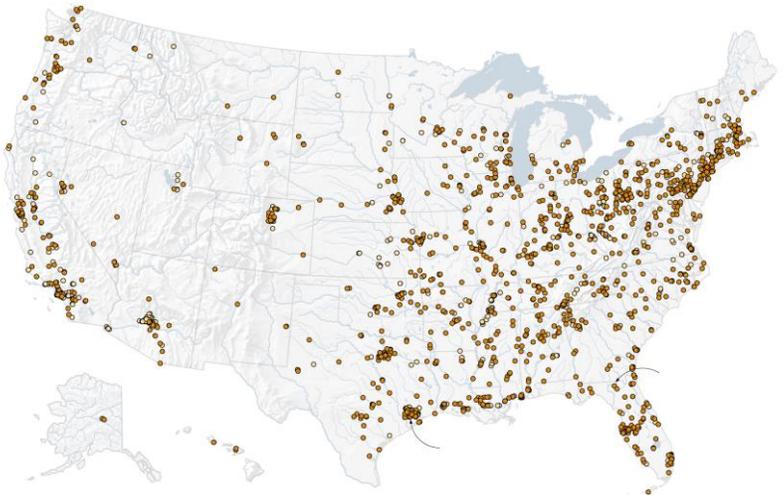
Associated Links

- [Environmental and regulatory reviews](#)
- [Interim approach and principles for project reviews](#)

US FLOODS ARE GETTING WORSE, AND 2,500 CHEMICAL SITES LIE IN THE WATER’S PATH

(Source: New York Times) Anchored in flood-prone areas in every American state are more than 2,500 sites that handle toxic chemicals, a New York Times analysis of federal floodplain and industrial data shows. About 1,400 are located in areas at highest risk of flooding.

As flood danger grows — the consequence of a warming climate — the risk is that there will be more toxic spills like the one that struck Baytown, Tex., where Hurricane Harvey swamped a chemicals plant, releasing lye. Or like the ones at a Florida fertilizer plant that leaked phosphoric acid and an Ohio refinery that released benzene.



More Than 2,500 Sites That Handle Toxic Chemicals Are Located in Flood-Prone Areas Across the Country.

Flooding nationwide is likely to worsen because of climate change, an [exhaustive scientific report](#) by the federal government warned last year. Heavy rainfall is increasing in intensity and frequency.

At the same time, rising sea levels combined with more frequent and extensive flooding from coastal storms like hurricanes may increase the risk to chemical facilities near waterways.

The Times analysis looked at sites listed in the federal [Toxic Release Inventory](#), which covers more than 21,600 facilities across the country that handle [large amounts of toxic chemicals harmful to health or the environment](#).

Of those sites, more than 1,400 were in locations the [Federal Emergency Management Agency](#) considers to have a high risk of flooding. An additional 1,100 sites were in areas of moderate risk. Other industrial complexes lie just outside these defined flood-risk zones, obscuring their vulnerability as flood patterns shift and expand.

The presence of chemical sites in areas vulnerable to flooding is a holdover from an age where the advantages to industry of proximity to rivers and oceans — for transportation and trade, or for a ready supply of cooling water — seemingly outweighed the risks.

“Waterfronts are changing as a result of sea level rise,” said Jeanne Herb, an environmental policy expert at Rutgers University who has researched hazards posed by climate-related flooding to industries in New Jersey. “More often than not, these are facilities are on the water for a reason,” she said. “So how do we make sure that there are protections in place? That’s the big question.”

Federal law does not explicitly require sites in floodplains that handle toxic chemicals to take extra precautions against flooding. Nor do most states or local governments have such requirements.

President Barack Obama [signed an executive order in 2015](#) requiring planners of federally funded buildings, roads and other infrastructure to account for the impact of possible flooding from rising sea levels or more extreme precipitation. President Trump rescinded those rules last year.

The Times analysis focused on facilities on the federal toxic release database, which tracks sites handling chemicals that could be harmful to health and the environment if released. The list does not include properties like Superfund sites or wastewater facilities, or chemical sites where the predominant risks are fire or explosion, as opposed to toxic pollution.

The Times also examined reports of oil and chemical spills tallied by the [National Response Center](#), which is run by the Coast Guard. Companies are required by law to report spills to the N.R.C., although that database has been criticized as incomplete.

Still, the data does provide a glimpse into the thousands of spills that occur across the country each year.

By the time the murky flood waters had receded from the sprawling Chevron Phillips chemical plant in Baytown, 34,000 pounds of sodium hydroxide and 300 pounds of benzene — both highly toxic — had escaped through a damaged valve. The plant, a joint venture between Chevron and Phillips 66, is one of many that [filled the region’s streets with a stew of chemicals, debris and waste](#) in the days after Hurricane Harvey and its torrential rains.

Employees later pumped some of the tainted water into 80 steel tanks. But most of the product “was lost in the floodwater,” David Gray, an Environmental Protection Agency spokesman based in Dallas, said in an email.

A Chevron Phillips spokesman, Bryce Hallowell, declined to give further details of the spill. He stressed that the plant “was at the center of this incredibly powerful storm.”

The chemical site lies in a moderate-risk flood zone, defined by the government as having a 0.2 percent chance of flooding in any year. It was at least the third time in three years that the Chevron Phillips facility blamed heavy downpours for chemical leaks.

The spills underscore the vulnerability of America’s coastal industries to rising sea levels and extreme weather. This is the case along the Gulf Coast because the country’s oil, gas and petrochemicals industries are concentrated there.

At least 46 facilities [reported an estimated 4.6 million pounds of airborne emissions](#) beyond state limits between Aug. 23 and Aug. 30, 2017, the week spanning Harvey’s approach and landfall in Texas. The Chevron Phillips plant also reported one of the largest Harvey-related emissions of chemicals into the air.

But even as flooding risks increase, chemical companies continue to build in vulnerable areas. A boom in plastics manufacturing has brought billions of dollars of investment to the Gulf shoreline. The Chevron Phillips site had been in the midst of adding a new \$6 billion ethane processor, one of the biggest investments in the Gulf’s fast-growing petrochemicals industry.

Despite repeated flooding, the chemicals manufacturer still considered the site, at Cedar Bayou, to be “the optimal location” for its new ethane facility, Mr. Hallowell said. He declined to detail protections that have been considered or installed, or whether they were designed to withstand future floods.

When Tropical Storm Debby brought torrential rain to north and central Florida in mid-2012, it triggered a release of phosphoric acid from a chemical plant in White Springs that produces phosphates, which are used to make fertilizer.

Flooding knocked out the power supply to its pumping system, causing water mixed with chemicals to spill into a storm-retention pond, which eventually also overflowed into a creek that feeds the Suwannee River. Released in large quantities into the environment, phosphates and phosphoric acid can cause uncontrolled algae and duckweed growth, causing oxygen levels in lakes and rivers to drop precipitously.

“It was like the biblical flood,” said Mike Williams, a spokesman for Nutrien, which runs the phosphates plant in an area dotted with high-risk flood zones, defined by the government as having a 1 percent chance of flooding in any given year. The plant had prepared for the storm by lowering water levels at the ponds, but the flooding was “well off the charts,” he said.

Since then, the plant has invested in pumps and backup generators that would allow it to more effectively control excess flood water. Still, “the lesson learned is that every now and then there will be something that’s more than we planned for,” Mr. Williams said.

Floods, and the risks they pose to industrial sites, are not confined to the coasts or even to areas the government considers flood-prone. Record-breaking rains brought flooding to wide swaths of Alabama in May, inundating storage ponds at a Sabic Innovative Plastics plant on the banks of the Alabama River. About 4,500 pounds of sodium hydroxide escaped into a tributary.

The same plant, which is not on land considered flood-prone under federal guidelines, had flooded in 2011, releasing 125 gallons of tetrachloroethylene, according to a cleanup agreement reached with regulators. Tetrachloroethylene is a carcinogen and can affect the nervous system.

Shelia Naab, a Sabic spokeswoman, said the plant had been inundated with “extraordinarily high levels of rain in a very short period of time” and that levels in its ponds had reached unprecedented levels. “We do not believe there was a significant environmental impact as a result of this incident,” she said. The plant has since updated a stormwater bypass that stops rainwater from overrunning its storage ponds, she said.

The flooding at Sabic underscores how floodplain designations may be increasingly outdated as rains intensify and weather patterns change.

Heavy rains in northern Ohio in June 2015 inundated Toledo Refining, near the banks of the Maumee River, causing a leak of several million gallons of wastewater from its treatment ponds. The site, run by PBF Energy, one of the country’s largest suppliers of transportation fuels and heating oil, also reported a release of benzene.

James Lee, a spokesman for the Ohio Environmental Protection Agency, said the leak was not thought to have reached major bodies of water. Toledo Refining did not respond to requests for comment.

“Companies need to think carefully about the risks of flood, and the increased risks from climate change,” said Tom Neltner, chemicals policy director at the Environmental Defense Fund. “Saying ‘We’ve always done it this way’ doesn’t work anymore.”

Location data for Toxic Release Inventory sites is from the [2016 TRI Basic Data File](#). The TRI program’s preferred latitude and longitude coordinates indicate the center of a facility’s activity, but otherwise may point to alternative coordinates such as a street address, storage tank, or settling pond. The coordinates were matched against [FEMA’s digital national flood hazard maps](#), which provide coverage for approximately 90 percent of the United States population based on the 2010 census.

Because single points were used for sites that sometimes cover a wider area, the analysis reflects cases in which a facility lies entirely or partly in a high- or moderate-risk flood zone, based on TRI-provided coordinates.

FROM OIL TO SOLAR: SAUDI ARABIA PLOTS A SHIFT TO RENEWABLES

(Source: New York Times) DHAHRAN, Saudi Arabia — Life in Saudi Arabia has long been defined by the oil that flows from the kingdom. Over decades, the vast wealth it pumped out paid not just for gleaming towers and shopping malls but also for a government sector that employs a majority of working Saudis.

Now, Saudi Arabia is trying to tie its future to another natural resource it has in abundance: sunlight.

The world's largest oil exporter is embarking, under Prince Mohammed bin Salman, on an ambitious effort to diversify its economy and reinvigorate growth, in part by plowing money into renewable energy. The Saudi government wants not just to reshape its energy mix at home but also to emerge as a global force in clean power.

Reaching that goal is a big if. But the strategy is finally making progress after fits and starts.

Riyadh on Monday tapped ACWA Power, a Saudi energy company, to build a solar farm that would generate enough electricity to power around 40,000 homes. The project will cost \$300 million and create hundreds of jobs, according to Turki al-Shehri, head of the kingdom's renewable energy program.

By the end of the year, Saudi Arabia aims to invest up to \$7 billion to develop seven new solar plants and a big wind farm. The country hopes that renewables, which now represent a negligible amount of the energy it uses, will be able to provide as much as 10 percent of its power generation by the end of 2023.

"All the big developers are watching Saudi," said Jenny Chase, an analyst at Bloomberg New Energy Finance, a market research firm.

"The country has made grand plans and pronouncements, but various bodies within it have failed to agree on the new way forward," Ms. Chase added. She referred to the agreement as "the first step in creating what is widely expected to be a major market."

Saudi Arabia has talked a big game when it comes to renewables. It adopted ambitious targets for green power several years ago, but no major projects were carried out, and little changed. That is not unusual.

The country's biggest solar farm in operation covers a parking lot of the national oil company, Saudi Aramco, here in Dhahran. Lying just a couple of miles from a fenced-off area honoring the country's first commercially viable oil well, it generates enough power for a nearby office block.

Still, the experiment with solar power has been an important catalyst, and the company built a team of experts in renewable power. The experience helped Saudi Arabia focus on conventional solar panels over another system, known as concentrated solar, in which mirrors focus sunlight to create heat.

The renewables strategy finally started to take real shape when Khaled al-Falih [took over](#) as energy minister in 2016. Mr. Falih made solar and wind a priority for the kingdom, and set up [a new unit](#) last year to expedite the work. Much of the staff was drawn from Aramco.

Mr. Shehri, who had worked at Aramco before leading the kingdom's renewables program, said he faced an "extremely challenging" task. Meeting Saudi Arabia's targets would require contracts for a series of new facilities to be awarded by the end of 2020. "The only way this was possible," he said, "was because we have done previous work."

Saudi Arabia, with its vast oil resources, would seem an unlikely champion for renewables. But the country's location and climate mean it has plenty of promising sites for solar and wind farms.

The costs of installing and operating those two technologies have fallen drastically around the world in recent years. That means that even in a country where oil is plentiful, renewables beckon as a cheap, and clean, alternative to traditional fossil fuels.

For the project announced on Monday, Riyadh received bids for the solar farm, which will be built in Sakaka, in northern Saudi Arabia, that rivaled the lowest ever submitted at auctions anywhere. At 2 to 3 cents per kilowatt-hour,

a wholesale measure of electricity, solar power here would be below the cost of fossil fuel-generated electricity, Mr. Shehri said.

“Just look at the prices,” Ms. Chase said. “That is why they are doing it.”

A big push into wind and solar power would also have other benefits, notably allowing Saudi Arabia to sell more of its oil.

Saudis rely on air-conditioners for much of the year, and the scorching Arabian summer sends demand for power soaring. Much of that electricity today is generated at power plants fueled by oil. Last June, the facilities burned an average of 680,000 barrels of oil a day, according to [data supplied by the Joint Organizations Data Initiative](#), a monitoring group.

That figure — comparable to the output of a modest-size oil-producing country like Egypt — was down from nearly 900,000 barrels a day in 2015, but it still essentially represents wasted cash. Had it been sold overseas, [that crude](#) could have added \$47 million a day to government revenue, at current prices.

Selling oil internationally is central to funding the Saudi budget. The terms of the Sakaka project’s auction required that developers pay the upfront cost of the solar farm, in return for payments for the power they supply to the grid. That would allow Saudi Arabia to continue focusing on producing and exporting oil while it makes the shift to cleaner power.

In the 1920s, the area surrounding the Aramco offices here was little more than a series of rocky hills. But then a team of American geologists discovered crude, and everything changed.

Dhahran is now home to the headquarters of one of the world’s most advanced and prolific energy companies, with a series of research laboratories, training centers and even a golf course on site. What had been a scattering of small towns is now a major metropolitan area housing around four million people.

A major plank of the crown prince’s plan to transform the Saudi economy involves finding jobs for young people. Attracting investment into what is essentially a nonexistent sector in the kingdom, Mr. Shehri said, would mean “creating jobs, creating manufacturing.”

Still, despite the ambitious goals and positive language, the process by which Saudi Arabia has looked to expand its wind and solar capacity has raised concerns.

Analysts have pointed in particular to how Saudi leaders have chosen their preferred companies. When Riyadh produced a short list of two firms for the Sakaka project this month, it passed over one that had presented a lower bid than the finalists, leaving some experts worried about the transparency of the bidding process.

Local-supplier requirements might also deter some bidders. Mr. Shehri insisted that companies interested in the Sakaka project agree to spend 30 percent of the costs on domestic suppliers and expected that proportion to rise in subsequent bidding rounds. Many companies may find it difficult to justify building factories in Saudi Arabia just to construct one power plant.

The Saudi market’s sheer size, however, means it merits the attention of the world’s renewable energy companies. Paddy Padmanathan, the chief executive of ACWA Power, which also has other energy projects in the region, predicted in an interview last month that once the country’s energy authorities became comfortable with renewables, they would ramp up their goals for wind and solar power production.

“Most of what they will procure going forward, I am convinced, will be renewables,” he said.

ESAA Member News

GFL ACQUIRES ACCUWORX INC.

GFL Environmental Inc. (“GFL”) recently announced the closing of the acquisition of the Canadian operations of Accuworx Inc. including Sure Horizon Environmental Inc., based in Brampton, Ontario. Since its founding in 1989 by Jason Rosset, Accuworx has grown to be a leading provider of “cradle to cradle” environmental solutions for a broad base of liquid waste customers throughout Ontario. Accuworx’s services include industrial cleaning, emergency response, soil and groundwater remediation and liquid waste management which will complement and extend the service offerings of GFL’s existing liquid waste business in Ontario. Jason Rosset will remain with GFL working to further develop the customer base of our combined operations.

Patrick Dovigi, GFL’s Founder and CEO said: “Started by its founder, Jason Rosset, the key to Accuworx’s success has been its core entrepreneurial values: creating solutions that allow it to be a single source provider for all of its customers’ service needs. This aligns with GFL’s core values and strategy. Accuworx and Sure Horizon also have a committed, passionate employee base that bring the same level of commitment to service excellence for our customers as GFL’s employees. We are confident that this common commitment will make the integration of our service offerings seamless and allow us to continue to grow and serve our customers. We are excited to have Jason Rosset and employees of Accuworx in Canada join the GFL team.”

Jason Rosset, Founder of Accuworx said: “Accuworx has traveled a long way as an independent, trail-blazing company, and I am confident that this strategic fit with GFL represents an ideal opportunity for Accuworx and our employees to accelerate to the next chapter of growth while maintaining the entrepreneurial culture in which we have thrived.”

UPCOMING EVENTS

AWSN WORK RE-ENGAGEMENT PROGRAM EVENT TICKET INFORMATION

Every year AWSN (Alberta Women’s Science Network) selects one of its STEM (Science, Technology, Engineering, and Mathematics) programs to host a Speaker Series event. On March 1st, AWSN’s Work Re-engagement Program (WR Program) will be hosting this year’s Speaker Series event, titled “Connecting Employers & Female STEM Professionals with Career Gaps”, at the Calgary Petroleum Club.

We are increasingly concerned about the well-being of our local companies and female professionals, as Alberta is expected to face a labour shortage of approximately 49,000 by 2025, according to Alberta’s Occupation Demand and Supply Study. Additionally, a 2010 Statistics Canada study reported that the number of STEM female professionals in the workforce had not changed in 30 years. As an organization that advocates for equity in the workplace, we offer a solution that will help ensure changes are implemented within Alberta to improve the statistics for future generations.

The objectives of our event on March 1st are to connect employers and STEM female professionals with career gaps and to launch the next phase of our program. The evening will include a panel session, discussion about the WR Program, awards, complimentary LinkedIn headshots and complimentary web site consultations. CHRP-designated attendees will earn 3 CPD hours by attending this event.

We are confident that this event will provide great value to you, and have made ticket prices affordable to encourage greater participation. For complete event details and to purchase tickets, please visit www.wrprogram.ca. Early-bird pricing is in effect until February 15th.

We thank you for your participation in this important event that will help improve diversification and inclusion in Alberta’s STEM fields.

Industry Positions Openings

For more information visit ESAA's Job Board under the news section of www.esaa.org



Mapping & Data Analyst

Term: Full-Time
Number of Positions: 1
Application Deadline: February 28, 2018
Job Location: Calgary, Alberta

YOUR RESPONSIBILITY

- Generate maps and fence diagrams using ArcGIS and environmental management software.
- Create borehole logs using gINT.
- Work with technical staff to assist in integrating technology into fieldwork.
- Support technical staff in GPS data collection and maintain equipment.
- Provide outstanding service to the Trace team.

YOUR PROFILE

- Accuracy and quality are everything to you.
- You love data.
- You get results.
- Work well with others.
- Positive.
- GIS focused degree or certificate.
- Proficiency in ArcGIS, scripting tools (i.e. Python, JavaScript/REST API, VBScript, SQL), GPS systems
- You want to work for a company that cares.

Trace Associates Inc. (Trace) is a 100% employee-owned environmental consulting firm advising the energy, mining, industrial, forestry, real estate, and development market sectors. We provide services in environmental site assessment (ESA), remediation, reclamation, spill response, liability assessment, environmental auditing, GIS, regulatory advisory, and facility decommissioning.

Our Vision is to be the most respected specialized environmental consulting firm in Western Canada and our Mission is to be safe and be the best. Our Core Values are safety, excellence, and balance.

How To Apply: For further information or to apply, quote position no. CAN-AB-CAL-0100-26 and email your resume to info@traceassociates.ca or visit www.TraceAssociates.ca

INTERMEDIATE and SENIOR ENVIRONMENTAL
PROJECT MANAGER – Edmonton



Term: Full-Time
Number of Positions: 2
Application Deadline: February 28, 2018
Job Location: Edmonton

Terralogix Solutions Inc., an environmental consulting organization, is recruiting Environmental Project Managers for our Edmonton, AB location. The successful candidates will be involved in various aspects of a variety of

projects and will participate in both office and on site field work. The amount of field work will depend on the candidates various skill sets.

Qualifications:

- Bachelor of Science degree or Masters of Science Degree in Environmental Science, Environmental Engineering or other relevant Environmental Program along with 3 plus years of experience
- Experience with environmental site assessments, soil sampling, groundwater monitoring and site remediation
- Registration with a professional organization as either a professional or in-training
- Possess strong interpersonal skills, communication skills and technical writing skills and be able to work as a member of a multi-disciplinary team and independently.

Duties and Responsibilities:

- Conducting Phase I Environmental Site Assessments (ESA) and associated reporting
- Planning and conducting Phase II ESAs, including:
 - drilling and soil sampling activities
 - conducting groundwater monitoring and sampling programs
 - interpreting analytical laboratory results
 - analyzing and interpreting collected environmental data and writing technical reports
 - contractor management and cost tracking
- Assist with the design and implementation of remediation systems
- Planning and completion of reclamation activities
- Coordinate and complete vegetation management activities
- Reclamation Application and Onestop processes
- Comply with Health and Safety policies and principles

Compensation:

- Competitive Hourly and Overtime wage
- Competitive Benefit Package

To find out more about Terralogix Solutions Inc. please visit our website at www.terralogix.ca.

Application Details: To apply for these positions, please email your cover letter and resume to resumes@terralogix.ca and clearly indicate which position you are applying for in the title bar of the email.

**INTERMEDIATE ENVIRONMENTAL PROJECT
MANAGER – CALGARY**



Term: Full-Time

Number of Positions: 1

Application Deadline: February 28, 2018

Job Location: Calgary

Terralogix Solutions Inc., an environmental consulting organization, is recruiting Intermediate Environmental Project Managers for our Calgary, AB location. The successful candidates will be involved in various aspects of a variety of projects and will participate in both office and on site field work. The amount of field work will depend on the candidates various skill sets.

Qualifications:

- Bachelor of Science degree or Masters of Science Degree in Environmental Science, Environmental Engineering or other relevant Environmental Program along with 3 plus years of experience
- Experience with environmental site assessments, soil sampling, groundwater monitoring and site remediation
- Registration with a professional organization as either a professional or in-training
- Possess strong interpersonal skills, communication skills and technical writing skills and be able to work as a member of a multi-disciplinary team and independently.
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- Comply with Health and Safety policies and principles

Compensation:

- Competitive Hourly and Overtime wage
- Competitive Benefit Package

How to Apply:

To find out more about Terralogix Solutions Inc. please visit our website at www.terralogix.ca. To apply for these positions, please email your cover letter and resume to resumes@terralogix.ca and clearly indicate which position you are applying for in the email title bar.

PROJECT MANAGER – REMEDIATION

Term: Full-Time

Number of Positions: 1

Application Deadline: February 22, 2018

Job Location: Calgary



PROJECT MANAGER – REMEDIATION

Keneco is currently accepting applications for a Project Manager – Remediation to manage remediation projects at upstream well sites and facilities. This position will integrate into a team of Agrologists, Technologists and Technicians to execute all aspects of remediation projects across Western Canada.

The position duties will entail but not be limited to:

- Participate in all facets of contaminated site projects including Phase II ESA's and remediation projects;
- Coordinate field programs involving sampling and monitoring of soil, groundwater and remediation system operation and maintenance;
- Prepare a variety of environmental reports including Site Specific Liability Assessments, remedial options analyses, remedial action plans, and ground water monitoring reports;
- Develop and assist with the execution of marketing plans to explore new business opportunities, while managing current clients, to increase market share and the continued growth and expansion of Keneco Environmental;
- Assist in recruiting additional team members, as required;
- Liaising with regulators, clients and landowners/stakeholders;
- Participation in the on-going improvement of company policy, procedures and protocols (office, field and safety);
- Travel to locations to conduct site assessments may be required.

Qualifications:

- Degree or Technical Diploma in environmental science, engineering or related studies;
- Professional status or eligibility for professional status with a professional organization;
- 5 to 7 years of contaminated site assessment and remediation program experience including ground water and risk assessments (example – SST);
- Experience with a variety of remedial techniques including excavation, in-situ treatment, ground water remediation and risk assessment.
- Complete understanding of Alberta and Saskatchewan reclamation and remediation guidelines;
- Strong organizational and communication skills;
- Ability to work in a fast-paced, multi-tasking environment;

To apply for this position, please submit your resume (with title in the subject line) to:

Human Resources at hr@kenecoenviro.com

We thank all who apply, however only selected candidates will be contacted for interviews.

No phone calls please.



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ENVIRONMENTAL SERVICES ASSOCIATION OF ALBERTA
ESAA
now!
visit www.esaa.org
for more information