

## Clean Air Day– 2011 Action Hero Awards presentation

On Clean Air Day 2011 (June 8) PAMZ celebrated the day by hosting an awards ceremony to recognize the 2011 Action HERO Award Winners. The ceremony was held at Red Deer City Hall. The Action Hero Award Program is one way of encouraging local businesses, organizations and individuals to take up new initiatives to reduce the formation of ground-level ozone.

Action HERO stands for Action for a Healthy Environment by Reducing Ozone. Ground level ozone can be formed from emissions of nitrogen oxides and volatile organic compounds. These compounds are produced from sources such as industrial processes, power plants, motor vehicles and smaller motorized equipment such as lawn mowers and chain saws. At higher concentrations, ground level ozone can result in respiratory and other health problems, damage to vegetation and crops and lower quality of life in general. It's not a serious problem yet in Central Alberta and PAMZ wants to keep it that way.

The Action HERO Award Program is a component of a larger extensive Ozone Management Plan developed by PAMZ in 2008 that is being implemented in stages over the next ten years. In 2011, PAMZ is now into its third year of the plan, and the first year of implementing its medium-term objectives. These objectives are more action-oriented than our short-term objectives were that mostly focussed on educating ourselves and others about ozone and public outreach.

The PAMZ Action HERO Award is catching on. In 2010, the award's inaugural year there was one recipient. The five 2011 winners represent a good cross-section of the various sectors in our zone - 1 municipality, 1 individual small business and 3 large companies.

The City of Red Deer received its second Action HERO Award this year for their incorporation of Air Quality Targets into the City's new Environmental Master Plan. Two recognized leaders in Red Deer's Business Community, ATCO Gas and Lafarge Canada received their awards for adopting corporate and fleet idle free policies. Lafarge also initiated an idle free schools program where they are providing signage and education to local schools to reduce idling.

Bonavista Energy Corporation was selected as an Action HERO Award recipient because of the work it has done to reduce emissions of Benzene, Toluene, Ethylbenzene and Xylene (BTEX) compounds from its dehydration units.



*Red Deer Deputy Mayor, Terra Veer, receiving the City's Action HERO Award from PAMZ Executive Director, Kevin Warren.*

Berry Architecture and Associates of Red Deer won an award for their green approach to building, housing and retrofit design that results in lower energy requirements and with that, the lower air emissions associated with the energy's production.

The Action HERO Award presentation ceremony is an annual Clean Air Day Event. Readers are invited to put forward the names of any individual or company who is deserving of an Ozone Action HERO Award so that PAMZ can recognize them at next year's ceremony which will be held June 6, 2012.

### UPCOMING EVENTS

For more  
information visit  
[www.pamz.org](http://www.pamz.org)

**Synergy Alberta Conference**  
Capri Centre Red Deer  
October 24-26th

**Red Deer River Watershed Alliance  
General Meeting** October 27th  
Lacombe Memorial Centre  
[www.rdrwa.ca](http://www.rdrwa.ca)

**Waste Reduction Week**  
October 17-23rd  
Intended to raise public consciousness  
about waste and its environmental and  
social ramifications. The WRW theme  
is "**Too Good To Waste**"  
[www.wrwcanada.com](http://www.wrwcanada.com)

**Clean Air Strategic Alliance Board  
Meeting** December 1st, C.A.S.A.,  
10th floor, 10035 108 ST, Edmonton

**PAMZ Board Meeting**  
November 23, 3-6 PM,  
GH Dawe Centre, Red Deer,

## PAMZ launches 2nd Annual Photo Contest

*Get your camera ready!  
This year there are 6 different categories.*

- The contest is open to all amateur photographers who reside or work within the PAMZ region. Photos must be taken within the PAMZ region.

- A maximum of three (3) entries are allowed per person.

Prizes will be awarded in each of the 5 categories in the amounts of 1st - \$200 and 2nd - \$100. In addition, there is a Youth Category (Photographers under 18 years in age, competing in all of the categories below) 1<sup>st</sup> Place Winner \$200 and Runner-up \$100.

- Photos will be judged in the following 5 categories:

*Atmosphere/Air*

*Nature*

*Urban*

*Industry*

*People*

- An entry form must be completed for each photo entered and all entries must be emailed in jpeg format.

- Entry forms are available on the PAMZ website. The deadline for the contest is March 1, 2012.

## Local Air Quality Health Index

Now you can find the current Air Quality Index for Red Deer on the PAMZ homepage.

Air Quality Health Index (AQHI) is a new public information tool that helps Canadians protect their health on a daily basis from the negative effects of air pollution. This tool has been developed by Health Canada and Environment Canada, in collaboration with the provinces and key health and environment stakeholders.



The Air Quality Health Index or "AQHI" is a scale designed to help you understand what the air quality around you means to your health.

It is a health protection tool that is designed to help you make decisions to protect your health by limiting short-term exposure to air pollution and adjusting your activity levels during increased levels of air pollution. It also provides advice on how you can improve the quality of the air you breathe.

This index pays particular attention to people who are sensitive to air pollution and provides them with advice on how to protect their health during air quality levels associated with low, moderate, high and very high health risks.

The AQHI communicates four primary things;

1. A number from 1 and 10+ indicating the quality of the air. The higher the number, the greater the health risk associated with the air quality. When the amount of air pollution is very high, the number will be reported as 10+.
2. A category that describes the level of health risk associated with the index reading (e.g. Low, Moderate, High, or Very High Health Risk).
3. Health messages customized to each category for both the general population and the 'at risk' population.
4. Current hourly AQHI readings and maximum forecasted values for today, tonight and tomorrow.

The AQHI is designed to give you this information in one place along with some suggestions on how you might adjust your activity levels depending on your individual health risk from air pollution.

The AQHI is calculated based on the relative risks of a combination of common air pollutants which are known to harm human health. These pollutants include:

Sulphur Dioxide **SO<sub>2</sub>**, Hydrogen Sulphide **H<sub>2</sub>S**, Total Reduced Sulphurs **TRS**, Carbon Monoxide **CO**, Ozone (**O<sub>3</sub>**) at ground level, Particulate Matter (**PM<sub>2.5</sub>/PM<sub>10</sub>**) and Nitrogen Dioxide (**NO<sub>2</sub>**).

The AQHI is measured on a scale ranging from 1 to 10+. The AQHI index values are also grouped into health risk categories as shown below. These categories help you to easily and quickly identify your level of risk.



- 1-3 Low health risk
- 4-6 Moderate health risk
- 7-10 High health risk
- 10 + Very high health risk

*The information in this article was sourced from the Alberta Environment website.*

## Martha Kostuch Scholarship Recipient Announced

This scholarship was established to assist students graduating from high schools within PAMZ's boundaries in recognition of their outstanding environmental service and leadership as well as the promise of future achievement in environmental stewardship.

The Scholarship celebrates the legacy of Dr. Kostuch. "Martha" made a significant impact on how environmental management policy was developed in Alberta advocating for effective collaboration among stakeholders. She was a founding director of PAMZ and was involved with many other organizations including the Alberta Prairie

Acid Rain Coalition, Friends of the Old Man River, and the Clean Air Strategic Alliance.

This year's scholarship recipient is **Colby Morris** of **Sundre**, Alberta. Colby was the valedictorian his high school class in 2011. He will be pursuing his post-secondary education in Environmental Science at the University of Lethbridge and hopes to find employment in the environmental field of reclamation. He submitted an outstanding application detailing his scholastic achievements along with an engaging essay explaining his passion for the environment.



*Al Simcoe (PAMZ Chairman) presenting Colby Morris with the 2011 Martha Kostuch Scholarship.*

## Hydraulic-Fracturing— ERCB Releases New EnerFAQ

September 19th the Energy Resources and Conservation Board (ERCB) released EnerFAQ 14 Horizontal Multistage Hydraulic Fracturing. Hydraulic Fracturing is a newer technology which is seeing increased use in Alberta as it allows oil and gas companies to enhance productivity by accessing a larger surface area of the target formation or by creating permeability in rock that does not normally permit fluid flow.

Horizontal multistage fracturing is the process by which multiple fractures are created along the horizontal section of the wellbore in a series of consecutive operations. The technology used in this operation varies, but all operate under similar engineering principles. The fracturing operation occurs once drilling and perforating operations are completed. Currently, most multistage fracturing is being used to complete new wells. However, existing vertical wellbores can be re-entered and completed using this fracturing method in an effort to enhance production.

Using mechanical means or fluid pressure, each segment of the horizontal wellbore is isolated and fractured individually. Frac fluid is pumped from the surface at a predetermined and constantly monitored rate to the "toe," the farthest isolated segment in the horizontal section. When the fracture is created, proppant-laden fluid is pumped into the fracture to keep it open. Once complete, the process is repeated for each segment in the wellbore, working back towards the "heel."

After all segments have been fractured, hydraulic pressure is removed from the formation and the fracturing equipment leaves the location. The wellbore pressure is then reduced to allow the frac fluid to be recovered at surface, known as flowback; often only a portion of the frac fluid and proppant is recovered, while the remainder is retained in the formation being fractured. Some of the flowback fluids can be recycled for use in fracturing other wells.

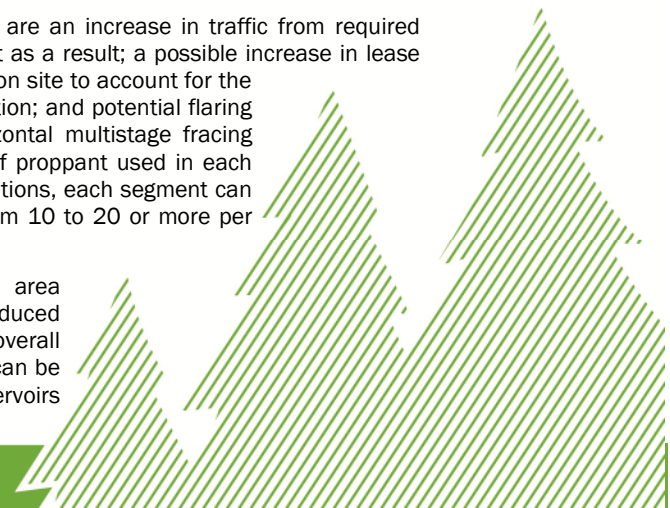
It is at this point that conventional well clean-up and testing operations occur. Short-term well testing is carried out to determine the well's productivity and this is when most flaring will occur. The duration of flaring depends on whether infrastructure exists to test in line.

During horizontal multistage fracturing operations, typical activities that occur are an increase in traffic from required equipment and materials and, depending on the season, an increase in dust as a result; a possible increase in lease size to accommodate any extra equipment and materials; a longer presence on site to account for the additional time required for the fracturing operation, often several days in duration; and potential flaring and testing of the well to determine productivity. The duration of a horizontal multistage fracturing operation depends on the number of segments to be fraced, the amount of proppant used in each segment, and downhole pressures, among other factors. Under optimal conditions, each segment can take six to eight hours to complete. The number of segments can range from 10 to 20 or more per well.

Use of the technology has many advantages for both the company and area residents. Potential benefits include enhanced recovery of the resource, reduced number of well leases, and the need for fewer access roads. In addition, the overall time that drilling and servicing equipment and trucks spend in a given area can be reduced as companies are able to more effectively develop hydrocarbon reservoirs through fewer wells.



*Century Hydraulic Fracturing work-over at a well site in Northern Alberta*



## Member Profile: Jennifer Lutz

Jennifer was raised on a farm near Balzac where livestock and agriculture became her passion. A family tradition of raising purebred Draft horses led her to Olds College taking Equine Science. After graduating she worked at the College coordinating continuing education courses. She later took a job in California executing promotional activities for a vineyard where she delivered agriculture education with the assistance of a six-horse hitch of Percheron draft horses.

Coming home to her farm at Eagle Hill, Jennifer noticed her neighbours in agriculture having more discontent with the oil and gas industry. A turning point for Jennifer was hearing a neighbour adamantly justify the taking of an oil company representative's life. Obviously, better solutions had to be found. This event inspired her to get involved with the Sundre Petroleum Operators' Group (SPOG). SPOG is an organization of representatives from the Energy Resources Conservation Board (ERCB), oil and gas companies, local government and community groups in the Sundre/Caroline area who aim to create long-term relationships based on mutual trust, honesty and respect by sharing pertinent information and creating solutions that benefit all stakeholders.

Jennifer jokes the only thing she knew about the oil and gas industry was "you don't put gasoline in a diesel engine". What she learned in SPOG was a way to help neighbours and the oil and gas industry work together and build relationships that better serve the community. Jennifer was the SPOG coordinator for the next 5 years.

It was around this time she met a really good-looking farmer and, after a seven-year courtship, they got married. Jennifer joined his family farming operation near the Reed Ranch School. In 2006 she started a new job at the ERCB Red Deer Field Centre as a Community and Aboriginal Relations Advisor. In this position Jennifer felt she could make a greater difference having regulatory backing to support positive stakeholder relations.

Her free time includes helping operate the family's feedlot, overseeing 2600 acres of cereal crops and managing a cow-calf operation. Jennifer and her daughter, Sarah, are also carrying on her grandfather's legacy by showing draft horses. Her "small" herd of Percherons competes at shows and Jennifer hooks them up to wagons for farm tours.

Jennifer's first involvement with PAMZ was a public member with SPOG. Working for the ERCB, Jennifer continued working



on the PAMZ Communication Committee, Technical Working Group and the Executive Board. She has seen first hand how ERCB works closely with PAMZ on emerging issues and air quality. She believes oil and gas, agriculture, residences and landowners belong to one community and ultimately need to work together to create an environment where all can thrive and prosper. Jennifer believes mutually beneficial solutions can be achieved with effective communication, collaboration and cooperation.

Jennifer loves the multi-stakeholder aspect of PAMZ quoting Margaret Mead: "A small group of thoughtful people could change the world. Indeed, it's the only thing that ever has." Jennifer goes to great lengths to make a difference and PAMZ is great venue to do this.