



Grand River
Conservation
Authority



The Grand:
A Canadian
Heritage River

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Cover photo: The burn at the F.W.R. Dickson Wilderness Area lasted only an hour, but took months of planning.



Fire restores lost tallgrass

By Virginia Gauley
GRCA Forester

Good land management sometimes means striking a match and setting the land ablaze. It's hard to believe that the GRCA would do such a thing, but we do – with great care – after months of planning.

The flames transform the landscape, destroying what is there. But fire is also a creative force. Within weeks, tiny new green shoots begin to appear amid the blackened wasteland. These become the foundation for a new tallgrass habitat, an essential component of the ecology of the Grand River watershed.

Such fires, called “prescribed” or “controlled” burns, are a tool to recreate fire-driven ecosystems. They promote native vegetation, create critical wildlife habitat, enrich forest soils and restore important community types that require fire to be perpetuated.

Fire comes naturally to the land with lightning strikes, creating tallgrass habitat. For centuries, native cultures used fire as a key element in their agricultural technique. They set fire to the land so they could grow crops on it. Then they moved on after several years so the land could regenerate. (See the next article by Gary Warrick for more details.)

But decades of fire suppression in southern Ontario, combined with urbanization, modern agricultural land use and inappropriate land management, have severely depleted this vital habitat in the Grand River watershed.

Grasslands once flourished in southern Ontario, but today only three per cent of the 1,000 square kilometres of tallgrass habitat historically in southern Ontario remains. The open, sunny tallgrass habitat is a treeless plain composed of specialized grasses and wildflowers. It is a globally imperilled ecosystem and one of the most endangered ecosystems in Canada.

In our watershed, remnants of this habitat are scattered throughout Brant County, Haldimand County and Waterloo Region, but they are small and isolated patches.

Fire is the key to maintaining the structure and function of the tallgrass ecosystem. As one would expect, this habitat is dominated by native prairie grasses, along with other native wildflowers and herbaceous plants known as "forbes." It supports a diversity of species not often found in other habitats, a large number of which are considered rare on a global, national and provincial scale.

The GRCA-prescribed burns over the past several years have recovered some of these remnant prairie sites. The most recent prescribed burn was conducted this spring at the F.W.R. Dickson Wilderness Area, located just north of Pinehurst Conservation Area on Spragues Road near the Waterloo Brant Line. Prescribed burns have been carried out over the past 10 years on this site to increase the prairie remnants there.

Species of interest on the site include prairie grasses such as turkey foot, little bluestem and Indian grass as well as wildflowers such as round-headed bush clover and wild bergamot. Rare plant species found at the site include hoary puccoon and Virginia mountain mint.

However, carrying out a prescribed burn to increase this habitat isn't as easy as it may sound. It requires a lot of preparation beforehand, a well developed plan and trained professionals.

A team from Lands & Forests Consulting trained in prescribed burning was hired to ensure the burn was safe, secure and effective. A prescribed burn plan that followed Ministry of Natural Resources guidelines for prescribed burning was developed before the event, and it identified burn intensity, duration, pattern and other important details. A weather station was installed close to the burn site to monitor the relative humidity, temperature and rainfall prior to the burn.

Three consecutive days of warm, dry



Wild bergamot (top) and Canada wild rye are tallgrass prairie species.

weather is needed for optimal burn conditions. On April 12, after the snow had finally melted, we had one full week of hot, sunny weather without rain, making the conditions at the wilderness area perfect for burning.

After a month and a half of preparation, the prescribed burn lasted less than one hour. With GRCA staff and the prescribed burn team on hand, the event ran smoothly. The fire was under control at all times and covered all the targeted areas.

The upcoming months will determine the success of the event as the site begins to "green up" and the native prairie grasses and wildflowers begin to grow. Ongoing monitoring throughout the summer and fall will determine the effects of the burn on the existing prairie. The burn is expected to increase the size of the existing remnants, decrease competition from non-native grasses and make room for a growing population of native prairie grasses and wildflowers.

The GRCA will continue to seek out other opportunities for restoring tallgrass prairie habitats throughout the Grand

River watershed.

The fourth Ontario Tallgrass Prairie & Savanna Forum is Sept. 21-22, 2005, at Tim Horton Onondaga Farm, St. George. The theme is "Old prairies & new prairies." Information on the forum and publications are available by calling (519) 674-1543 or visiting www.tallgrassontario.org

Lessons from the past

By Gary Warrick
Wilfrid Laurier University

The Grand River watershed is overflowing with archaeological remains, says Gary Warrick, an archaeology professor at the Brantford campus of Wilfrid Laurier University. (He is also a member of the Grand Strategy Heritage Working Group.) His excavation of a Six Nations settlement in Brantford from 1800-1835 offers a fascinating picture of life in a Mohawk community in the early 1800s.

This is the first of two articles on excavations related to aboriginal residents and what we can learn from their sustainable lifestyle.

The excavation site of what was once called Davisville serendipitously fell into my lap.

In the fall of 1999 I learned that a fisheries biologist had found early 19th-century artifacts in the bottom of a cold-water stream, only a few metres from the Grand River.

Today the area of the settlement is protected in GRCA easement lands, traversed in sections by the Trans Canada Trail. Davisville's well-documented history, occupation by both Mohawk (Iroquoian speakers) and Mississauga (Algonkian speakers) peoples, and its remarkable state of preservation offer an ideal archaeological context for researching aboriginal life in early 19th-century Ontario.

According to historical records, Davisville or "Davis's Hamlet" was



Excavation of Davisville 1, a Mohawk cabin site in Brantford.

about five kilometres north of downtown Brantford between 1800 and 1835. It had about 30 Mohawk residents and, from 1825 to 1826, 70 to 100 Mississaugas from the Credit River. Their descendants now live at New Credit. A Methodist settlement, Davisville was led by Chief Thomas Davis (Mohawks) and Peter Jones (Mississaugas).

Funded by a grant from Wilfrid Laurier University, research began in May 2000. A visit to the coldwater stream confirmed that the biologist's discovery was a cabin site we called Davisville 1. Assisted by two students, including one from Six Nations, another concentration of 19th-century artifacts (Davisville 2) was found about 300 metres upriver. Test excavation of Davisville 2 in 2000 and 2001 found the telltale clues that confirmed it as a Mohawk cabin: pieces of trade silver, gunflints and abundant food bones of fish, wild birds and animals, as well as a root cellar.

The 2002 field season (funded by the Social Sciences and Humanities Research Council) was focused on uncovering the Davisville 2 cabin and searching for more cabin sites, as well as

the Methodist mission house.

Despite digging a shovel test every five metres for almost a kilometre on the north bank of the Grand River, only two more cabins were located. Both were very close to the mapped location of the mission house, but the mission house itself was not found. Shovel tests revealed a continuous blanket of pre-European artifacts – chert or flint tools and waste flakes, potsherds and bone fragments. Interestingly, no artifacts older than 3,500 years were found in the archaeological survey or excavations. The 2003 field season focused on the excavation of Davisville 1.

The Mohawks lived in a sustainable way surrounded by primeval oak forest until the 1830s. The cabins were only 10 giant steps from the water's edge. Maize fields were small and carved out of the forest on river flats, on the opposite bank of the river, in the present Brant Conservation Area. Hunting and fishing provided over 90 per cent of the meat on the table, with minor contributions from pork and chicken. The households were self-sufficient (hunting, fishing, gardening and trapping), but the occupants possessed many of the amenities of their Euro-Canadian neighbours, such as

fancy tea ware, glass windows and a brick hearth.

However, the material items the Mohawks used do not reflect a Euro-Canadian mindset. They lived in a clearly sustainable, traditional manner, in remarkable harmony with the ways of their ancestors. The Davisville cabins were occupied until the early 1830s and were probably abandoned because of destructive spring floods that had become commonplace as a result of Euro-Canadian land clearance.

The archaeological record of the past clearly documents just how quickly an environment can change when sustainable living is replaced by unbridled growth. Flood sediment accumulation shows human occupation over the past 170 years has changed the river far more than it did over the previous 3,300 years, because about 20 centimetres of flood sediments were deposited during each of these time periods. The archaeological past has much to teach, if we only listen.

Using historic maps, including a very accurate one made by Lewis Burwell, we searched for other Six Nations cabins along the river. In one case, we simply followed Burwell's map, paced out a distance from the Grand River along a coldwater stream, looked down at our feet and found a scatter of artifacts on the surface of the ploughed field that matched the age and location of a Six Nations cabin occupied in 1833. There were several surprise discoveries of sites, such as a large 1840s Cayuga village with 10 to 12 cabins in southern Brantford.

The overall pattern that emerged from the archaeological survey was a 19th-century Aboriginal landscape of farmsteads and small villages tethered to the Grand River, adjacent to coldwater streams, river flats and productive fishing holes. These people relocated every 20 to 30 years in response to environmental sustainability, such as regeneration of local supplies of fertile soil, firewood and game, reflecting a lifestyle practiced by Six Nations people for over a thousand years.

The archaeological exploration of

Davisville revealed a substantial Mohawk occupation, marked by structural remains of cabins and associated artifact-rich debris fields. What remained puzzling in 2003 was the whereabouts of the Mississauga occupants of Davisville. Archaeologically, they seemed to be invisible.

Stay tuned for part two in an upcoming edition of *Grand Actions*.



MILESTONES

Milestones are progress or products of *The Grand Strategy* Joint Work Plan.

Dumfries park now on the map

A new high profile sign is in place at Dumfries Conservation Area at Hespeler and Dunbar roads in Cambridge, thanks to support from the four Cambridge Rotary clubs.

Dumfries Conservation Area has been under-used, because many people don't



Elinor Hueton

know about it. The sign is a step toward increasing the prominence of the park and informing the public about the 75-hectare property.

In addition, an information kiosk about the park's history and activi-

ties was unveiled at the entrance along Dunbar Road. The sign and kiosk cost \$40,000, of which \$27,000 came from the four Rotary clubs, while the remaining amount was covered by an Ontario Trillium Foundation grant.

The land came into public ownership in 1967 when it was donated by Percy Hilborn, whose daughter Elinor Hueton is pleased with the changes. Signs and naturalization are part of the park masterplan, which was updated in 2004.



New Drayton Trail: The Riverside Walking Trail, Drayton's first trail, opened in July. From left are Coun. Mike Downey, Ray Ash, (behind) Allan Huberts, GRCA local member Pat Salter, Mayor Jim Green, Aaron Mitchell and Kristin Bignell. Mitchell and Bignell are two of the nine students who constructed the trail with help from the Drayton Rotary and Kinsmen clubs and the Grand River Conservation Foundation..



Grand new recreation facilities

New Cockshutt Canoe Launch: Above, representatives from the City of Brantford, the County of Brant and guests at the official opening of the Cockshutt Canoe launch. The launch was a long-awaited goal of the Brant Waterways Foundation and is at the Cockshutt Bridge in south Brantford. A large paved parking lot and access lane complete the facility. It was funded by S.C. Johnson and Son Ltd. (\$80,000) and the Brant Waterways Foundation (\$30,000).



New Glen Morris canoe launch: From left, Ancient Mariners Bob Fraser, Barb Stebbing and Eric Thomlinson at the canoe launch in Glen Morris that is named after Thomlinson. It opened July 28, with the assistance of Brant Waterways Foundation, TD Friends of the Environment Foundation, the Grand River Conservation Foundation, the Ancient Mariners Canoe Club, the County of Brant and the GRCA.



LOOK WHO'S TAKING ACTION

Festival's 10th anniversary

Janet Baine
GRCA Communications

Over the past decade, 40,000 elementary school students have learned about water during the Waterloo-Wellington Children's Groundwater Festival, held at Doon Heritage Crossroads.

And they're not afraid to share their knowledge with their parents, noted Waterloo Region Chairman Ken Seiling.

"There are too many in our age category who haven't got the message," he said at the luncheon marking the 10th anniversary of the festival, which ran the week of May 30. "I know my kids are after me all the time, pushing the water thing."

His children have been quick to tell him to turn off the tap when he's brushing his teeth, and at other times, he pointed out.

The Grade 2 to 5 students come with their classes and move from one educational display to the next, learning about water and specific things they can do to protect this resource.

The water festival is "obviously paying dividends," said James Etienne, Guelph's director of environmental services.

"The message has really gotten through. The water festival is doing a great job. Thank you for all your efforts," he told organizers.

The festival is co-chaired by Peter Gray, a hydrogeologist and partner in Frontline Environmental, and Tracey Ryan, supervisor of conservation services with the GRCA.

"Waterloo is the largest municipality in Canada that relies on ground water," Gray said.

He and a group of dedicated volunteers brought the children's groundwater festival idea to Ontario after visiting a similar event in Nebraska 13 years ago.

Gray has formed the Children's Water Education Council to bring the idea to other communities, and now there are 13 children's water festivals in Ontario. Visitors from Brantford, Haliburton, Sudbury and Halton Region came to the



LCBO employees from southern Ontario canoed the Grand from Paris to Brantford to clean up the river and \$4,000 was donated for Carolinian tree planting: \$1,500 from LCBO, \$1,500 from Banrock Station Wetlands Foundation and \$1,000 from GRCF. From left are Chris Churchill (Banrock Station/Churchill Cellars), Ralph Beaumont (GRCF), Adam Fernley (Heritage River Canoe Company, which supplied the canoes), Dan Walsh (Brant Conservation Area assistant superintendent) and Bill Peat (LCBO).

festival because they are planning to organize children's water festivals in their own communities. The concept is catching on.

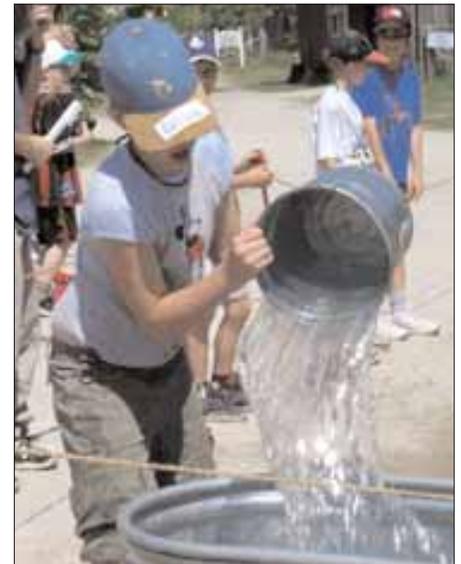
A second Grand River watershed festival will begin next year when the Brantford-Brant Water Festival begins.

Water festivals cost \$65,000-\$100,000 and run for several days, bringing in hundreds of children each day. This year the event continued

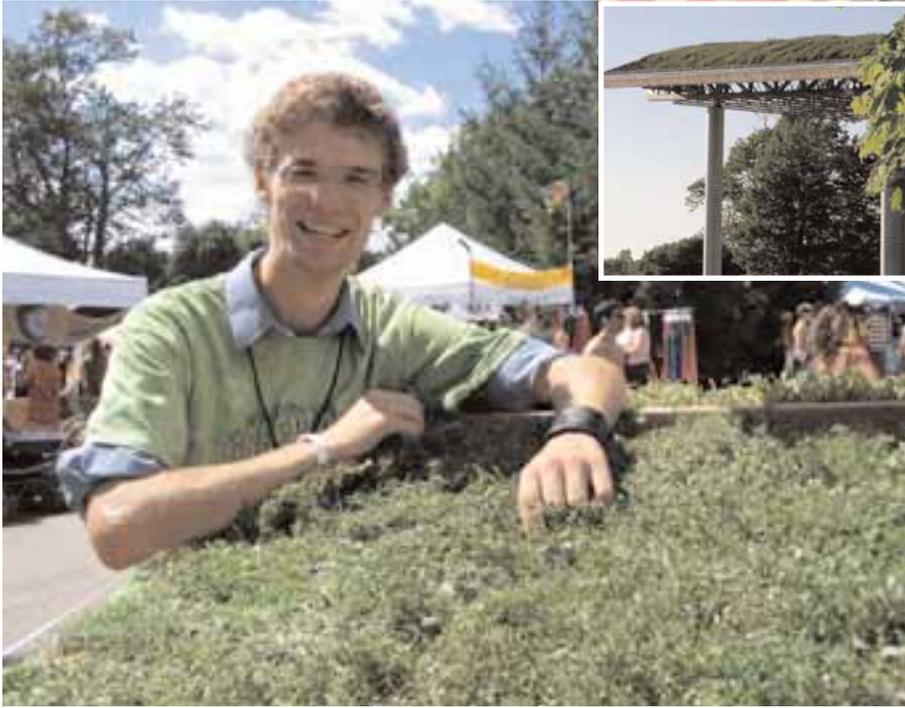
Saturday so that families also had the opportunity to visit.

The festival requires 100 volunteers each day, and many are high school students. Gray is seeing kids who have come as participants now returning as volunteers in high school.

He believes in the festival because children impact the actions of the adults around them when it comes to water conservation and protection.



Children's concern for water conservation will reach far into the future.



Aiden Abran and a team of volunteers solicited funds for the \$20,000 green roof above the stage (inset) at Hillside Festival 2005.

Hillside stage roof goes green at Guelph Lake

By Janet Baine
GRCA Communications

A roof covered in plants has been installed above the stage at Guelph Lake Conservation Area, thanks to the fundraising efforts of the Hillside Festival.

A permanent stage was constructed at the conservation area after the temporary stage blew down during a storm. A dedicated team of volunteers solicited funds for the green roof, which had been installed in time for Hillside's festival goers to see this July.

Hillside is committed to educating people about sustainable environmental issues and the green roof is part of that, along with reusable plastic dishes and solar and wind power.

The roof has a membrane, growing medium and an unusual grassy top, says Lloyd Grinham, a Guelph architect and treasurer of the festival. The grass and wildflowers along the edge of the roof

replace what might grow if the stage were not there.

Green roofs are good for the environment in several ways. They help manage storm water by retaining most of the rainfall that lands on them and they filter pollutants and cut down on storm water runoff. They also cut the cooling costs of buildings, saving energy and money. They increase habitat for organisms, plants and animals, freshen the air and cut down on greenhouse gas emissions. In fact, the list of environmental benefits touted by Green Roofs for Healthy Cities, an organization created to develop the North American market, is very long.

The down side is that this technology is costly. Hillside's green roof cost \$20,000, and \$5,000 was raised last year.

Green roofs are sprouting up across the watershed as more people embrace the technology in spite of the higher cost. Grinham has installed one on a

500-square-foot section of his own home in Guelph – he wants to see which plants will do well in the shade. Former Guelph mayor Karen Farbridge has taken the same approach and installed the green technology that is widely used in Europe on a portion of her roof.

The GRCA is considering installing a green roof on a building near the headquarters this year. One was approved for the City of Waterloo's city hall this spring. Waterloo's environmental services department coordinator, Karen Moyer, initiated the project and received a Green Roof Civic Award of Excellence from Green Roofs for Healthy Cities.

For more information, visit the Web site www.greenroofs.org

Dunnville marsh gets \$20,000 boost

Habitat restoration at Dunnville Marsh got a boost in July with a \$20,000 grant made by the James N. Allan Family Foundation to the Grand River Conservation Foundation.

"Our family's heritage has strong ties to the Dunnville area and we are delighted to take part in returning the marsh to its original natural values," says president Scott Allan, the grandson of former MPP Jim Allan, who represented the Haldimand-Norfolk riding from 1951 to 1975.

The Dunnville Marsh is 950 acres of provincially significant wetland and is located north of Lake Erie. It was donated to the GRCA by the Nature Conservancy of Canada in 1993 and is part of a coastal wetland system that provides high-quality habitat for mammals, birds, fish, amphibians and reptiles.

Funds from the James N. Allan Family Foundation will support next spring's large-scale return of agricultural land to marshland. A steering committee of stakeholders will provide input into the planning for this project.



WHAT'S HAPPENING?

Justice O'Connor at Water Forum Sept. 16

The man who wrote the book on drinking water safety in Ontario will be a featured speaker at the fifth annual Grand River Watershed Water Forum on Sept. 16 in Cambridge.

Justice Dennis O'Connor was appointed to investigate the causes of the Walkerton tragedy. His two-volume report included more than 120 recommendations.

The theme of the forum is "A Fine Balance – Managing Growth and Water." Speakers and panelists will address provincial growth policies and their impact on the environment and communities of the Grand River watershed and beyond.

In addition to the speeches and discussions, displays highlighting innovative water technologies and consulting services and new environmental programs will be featured.

More information on registration, exhibit space and sponsorships is available in the 2005 Water Forum section of the GRCA Web site, www.grandriver.ca

Water Forum posters are available from Sonia Morgan, (519) 621-2761 ext. 304. Registrations can be made online.



Tree planting at The Record's Mother's Nature Day at Laurel Creek Nature Centre. From left are Karen Klink (RIM), Peter Krause (GRCA), Fred Kuntz (The Record), Mayor Herb Epp (City of Waterloo), RIM's Blackberry mascot, and Rick Relf (10,000 Trees Project).



The 2005 Envirothon winners (from left): Rachel Daub, teacher-advisor Leslee Urquhart, Nancy Yang, Daina Anderson, Cindi Do and Corrine Arthur with Eastern Bluebird nesting boxes that they constructed and installed.

Kitchener team wins Ontario envirothon

By Jennifer Burdick
Ministry of Natural Resources

A team of students from Grand River Collegiate Institute (GRCI) in Kitchener came out the winner in a competition among 95 high school teams from across the province in an Envirothon.

The Envirothon, also called the "environmental Olympics," is an annual competition for high school students with a keen interest in environmental issues. This province-wide event has approximately 200 schools and 5,000 students participating.

The four-day 2005 provincial competition took place in Hamilton and was called "Surprisingly Natural Hamilton." The event included guest speakers, hands-on workshops and the Envirothon testing sessions. Participants also toured Niagara Falls, hiked Dundas Valley and visited an eco-house.

Students were tested on major environmental issues, including aquatics,

soils, forestry and preserving cultural landscapes. The team from GRCI had been preparing for this competition for almost a year.

"The Envirothon is a great opportunity and valuable experience for those interested in natural resource management," says Corinne Arthur, a member of the GRCI team.

Their top provincial placing led them to the Canon North American Envirothon Competition in Missouri July 18th to 24th, where they competed against teams from all over North America. The Kitchener team placed 17 out of 51 teams and were in the top 10 in three out of six categories.

Each year local students are encouraged to participate in a regional Envirothon coordinated by the Wellington County Stewardship council, Grand River Conservation Authority and the Waterloo and Brant Stewardship Network. For more information on the Envirothon contact Al Murray at 519-826-4920.



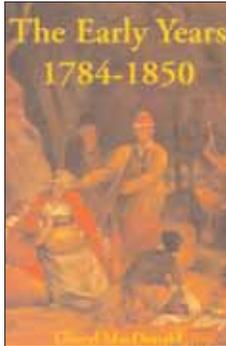
NOW AVAILABLE

Book on Early Haldimand History

The first in a planned six-part series, Haldimand History The Early Years 1784-1850, by

Cheryl MacDonald, looks at settlement, early transportation, political development and social history.

Did you know Haldimand was nearly called Manchester? That



a Grand River businessman was exiled to Tasmania for his part in the 1837 rebellion? And that the Hamilton & Port Dover Plank Road (now Highway 6) created controversy almost as soon as it was built? This book, with over 100 pages, a names index and over 40 illustrations, costs \$20 and was printed by Heronwood Enterprises.

It is available online from the publisher at www.heronwoodent.ca and at Haldimand County libraries, Haldimand County Museums, and from local book stores.

New book tells of African hope on the Grand

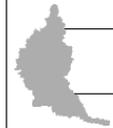
African Hope Renewed Along the Grand River 1400-1800s is a compendium of African settlement in the five

counties along the Grand River.

Starting with the story of slavery in West Africa in the 1400s, it also covers slavery in the West Indies and colonial America, and freedom in Canada with the arrival of black refugees in Ontario on the underground railway system.

“My purpose for writing was to preserve some of this history along the Grand River,” says author Angela E. M. Files. The 136-page book was produced with financial assistance from the Ontario Trillium Foundation and it has full-colour maps and photos.

It is available at the Brantford public libraries and can be purchased from the Brantford Museum on the Square for \$30, or by calling the author directly at (519) 753-1249.



The Grand Strategy Calendar

Cobblestone Festival, Aug. 10-21 on the grounds of historic Hamilton Place, Paris. The festival offers numerous events, including the play, “The Ballad in Vera’s Icebox” and 10 one-act plays. More information is available by calling (519) 442-1890 or by visiting www.cobblestonefestival.ca

Grand River Watershed Water Forum, Friday, Sept. 16, 8 a.m. to 4 p.m., GRCA Headquarters, 400 Clyde Road, Cambridge. The theme is “A Fine Balance Managing Growth and Water.” See article page 7 for more information, or click on the water forum link at www.grandriver.ca

Ontario Tallgrass Prairie & Savanna Forum, September 21-22 at Onondaga Farm, Brantford. The theme is “Old prairies & new prairies.” Information on the forum is available by calling (519) 674-1543 or visiting www.tallgrassontario.org

Grand River Watershed Biothon, noon to 4 p.m., Saturday Oct. 1, Laurel Creek Conservation Area, Waterloo. Free family event includes mother nature’s bingo, bug catching, and walks at 1 p.m., 2 p.m. and 3 p.m. This is a fundraiser for the Living Classroom Campaign for Outdoor Education and donations are appreciated. For information call Guelph Lake Nature Centre at (519) 836-7860.

Run for the Toad, Saturday, Oct. 1, Pinehurst Lake Conservation Area. The annual Run for the Toad is a 25- or 50-km trail race for the whole family and is expected to attract 550 participants. Visit www.runforthetoad.com for more information.

Trails Workshop II, Oct. 21, 9 a.m. to 2 p.m., GRCA Headquarters, 400 Clyde Road, Cambridge. Follow-up workshop for trail users, trail providers, and municipalities to discuss trail linkages in Waterloo, Wellington and Dufferin. For information, contact Lawrence Murphy at (519) 821-2373.

About this newsletter

This newsletter is produced bi-monthly as a communications tool by the Grand River Conservation Authority on behalf of the partners in *The Grand Strategy*. This newsletter can be seen at www.grandriver.ca

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Deadlines for submissions are the 15th of January, March, May, July, September and November. Submissions may be edited for length or style.

Tax deductible donations and sponsorships toward the cost of producing this newsletter are always welcome.

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