



the Grand Strategy:

[Ten Year Review](#)
[invitation to participate](#)
[background](#)
[issues](#)
[partners in action](#)
[the vision](#)
[how to participate](#)
[Grand Actions](#)
[newsletter](#)

What's Inside:

[Where has all the Water Gone?](#)

[MILESTONES](#)

[WHAT'S HAPPENING?](#)

[LOOK WHO'S TAKING ACTION](#)

[DID YOU KNOW?](#)

[GRAND ACTIONS CALENDAR](#)

[Let's Hear From You](#)

July / August 1999

Where has all the Water Gone?

Dwight Boyd

The landscape is looking a little different this year in the Grand River watershed. Ponds and streams throughout the watershed are showing the effect of the much lower than normal precipitation received over the past 24 months. Some ponds that have not been dry in recent memory are drying up this year. Even the large streams and rivers are reduced to what seems at times to be a trickle. In some areas, householders are having problems with shallow water wells and farmers worry about their crops.

The conditions we see today are the result of the lower than normal precipitation received since June 1997. Records from Shand Dam indicate that, over the past 2 years, 30% less precipitation fell than the long term normal. Not only has less precipitation occurred, but fewer cloudy days, warmer weather and the long growing season in 1998 caused more water to evaporate back to the atmosphere. The combination of less precipitation coupled with evaporation stresses the wetlands, ponds, stream and shallow aquifers throughout the watershed.

Long-term records from Shand Dam and the Guelph area suggest similar dry periods have occurred in the early 1960's and early 1930's. The current dry period is similar to the dry period experienced in the early 1930's. These extreme dry periods appear to occur approximately every 30 to 40 years. The current dry period may be the result of the strong El Nino event that occurred in 1997. This was a large El Nino event and it's effects seem to persist into 1998-1999.

To date in 1999 precipitation is 22% less than the long term average at Shand Dam. Although heavy snowfalls occurred in January, much of the water in the snow pack either seeped into the ground or evaporated back up into the air. This resulted in a very light runoff to streams and rivers throughout the watershed. Given the light runoff there was not sufficient water to fill Conestogo Dam and Luther Marsh. Conestogo dam was filled to 80% of its normal May 1st storage. The reservoirs are used not only for flood control in the wet months but also to add water to the river during the summer. This ensures that there is adequate water volume and quality for downstream communities that depend on the river for water supply. This is the first year since 1958 that insufficient water was available to fill GRCA reservoirs.

As a result of having less water available to add to the Grand River this summer, a modified operating strategy for 1999 was approved by the

GRCA board in April. This strategy allows GRCA to moderately reduce the flows to the river and ration the available water throughout the season.

Experience from 1998 shows that the Grand River system is more resilient than previously thought, and river water quality is not unduly impaired despite lower flows from the reservoir.

Other strategies for dealing with drought are being developed. The Grand Strategy Water Managers' Working Group are preparing a drought contingency plan on how to deal with extreme dry conditions. The Provincial Government has struck an inter-ministerial committee to examine the current dry conditions and if any Provincial response should be initiated. The Ontario Federation of Agriculture (OFA) is developing an Information Sheet to provide advice to agricultural landowners about how to deal with water shortages and avoid conflicts. This information will be available shortly, and more information can be obtained from OFA at (416) 485-3333.

The recent rains are encouraging. Lately rains have occurred on about a weekly basis, which may be suggesting a return to more normal precipitation conditions. Till then, we can all help a little by practicing good water conservation habits in our homes, gardens and workplaces...and keep our fingers crossed for a little more rain!

MILESTONES

Grand River Scenic Parkway

On Sunday June 13, 1999 the Grand River Scenic Parkway Inaugural ceremony was held at Ruthven Park and attended by about 85 guests. The Grand River Scenic Parkway follows existing routes along the Grand River and extends through Six Nations lands and the Regional Municipality of Haldimand -Norfolk to the mouth of the Grand River. The attractive route signage incorporates the Canadian Heritage Rivers logo in the design. To date, 48 signs have been installed.

This project was spearheaded by the Regional Municipality of Haldimand-Norfolk and the Lower Grand River Steering Committee, and represents a key element in attracting new visitors to the southern Grand River area. This exciting project was a cooperative effort among the municipalities, Six Nations, the Grand Erie Business Centre, Ruthven Park, and the Lower Grand River Steering Committee.

Upper Grand Watershed Study

Over the past two years, staff from the GRCA have worked with a community steering committee and the public to complete the Upper Grand River Watershed Study.

This broad-based study covers the headwaters of the Grand River, an area of 655 square kilometres north of Highway 9, and includes parts of Melancthon, Amaranth, East Luther-Grand Valley, Proton, Dundalk and West Luther.

The study depended on existing information and analytical tools. Use of community knowledge and information already available from the larger Grand River Watershed Management Plan helped to minimize costs.

The low-budget study included limited, very practical field work including stream and land use studies, and technical expertise was supplied from

the community and GRCA staff. Issues in the Upper Grand were identified through a series of steering committee meetings and public input, and most have a direct link to water resources. The identified issues included:

- farm drainage, particularly the construction of outlet drains under the *Drainage Act*;
- peat extraction and its impact on the local environment and the local road system;
- commercial water taking and its impact on local wells and wetlands;
- fisheries and the link between improved fisheries and increased eco-tourism in the area;
- preservation of remaining natural areas and development of methods to minimize impacts on the natural environment;
- water quality management; and
- opportunities for eco-tourism based on increased appreciation of the high quality environment in the Upper Grand.

The report notes that 9.5% of land in the study area is covered by wetlands compared to less than 3% in adjacent watersheds. There is also a higher percentage of forested land than in the rest of the Grand River watershed.

The study identifies opportunities and guidelines for restoration in certain areas. The report summarizes what is known about watershed issues, what this means and what can be done to make improvements. The study also gives details on how individuals can get involved in improving the Upper Grand. The study provides a basis for the community and its partners to develop an action plan for local environmental initiatives. For more information contact Joe Farwell, (519) 621-2763, ext. 241 or email jfarwell@grandriver.ca

Joseph Schneider Haus Designation

On June 14, 1999, the good news came to Kitchener. Joseph Schneider Haus has been recognized as a National Historic Site for its importance both historically and architecturally. In 1997, staff and Friends of the Joseph Schneider Haus started the process required to confirm national historic site status for the well-known Queen Street landmark. This involved lengthy research, letters of support from local historians, site visits by the Historic Sites and Monuments Board representatives and preparation of a research report. The outcome of the Board's deliberations was then sent to be endorsed by the Minister of Canadian Heritage, the Honourable Sheila Copps.

A gala celebration is planned sometime in the next year. Meanwhile, this unique building is open to the public, and many special programs help visitors to understand the culture of the early 19th century and experience a part of the daily life of the Mennonite family who were pivotal in making Kitchener the centre of German culture in Ontario. During July and August, the museum is open from Monday to Saturday, 10 a.m. to 5 p.m., and Sundays, 1 p.m. to 5 p.m. For winter hours or information on special programs please call (519) 742-7752.

WHAT'S HAPPENING?

Uniroyal Chemical Progress

by Jeff Merriman, P. Eng.

Uniroyal Chemical has operated a plant in Elmira since 1941. Originally, it produced chemicals for the Allies in World War II. Today, Uniroyal produces crop protection products, synthetic oil and speciality chemicals such as antioxidants to prolong the life of rubber products, plastics and lubricants.

Waste disposal practices in those early years left chemical contamination in the ground and groundwater beneath our site. Until 1997, traces of those contaminants in the upper aquifer seeped into Canagagigue Creek. This impacted the overall health of fish and other aquatic life in the creek.

In 1997, we installed an upper aquifer groundwater containment and treatment system. This system pumps contaminated water out of the ground before it can reach the creek, treats it to remove contaminants and discharges it back to the creek. The system has operated exceptionally well, cleaning the groundwater to standards better than those required by the Ministry of the Environment. This containment and treatment system is one of four that Uniroyal operates. The other three are in the deeper municipal aquifer. Treated water from those systems is also discharged to Canagagigue Creek.

The benefits to water quality and the aquatic environment in the creek have been dramatic - a regrowth of bank vegetation in previously barren areas, an increase in benthic organisms (creek insects) and a significant increase in the types of fish in the creek.

A biomonitoring study undertaken by ESG International in 1998 found a total of 23 species of fish in the creek, including game fish such as smallmouth bass and northern pike. The study report stated that "there have been significant improvements in water quality and habitat conditions in the study area" and "Canagagigue Creek supports a diverse and healthy fisheries community".

While the positive results we have seen to date are gratifying, more work needs to be done. Other contaminants in the creek - both upstream and downstream of Uniroyal - need to be addressed. Our Uniroyal team is committed to working with the GRCA, the MOE and other stakeholders to continue to improve the water quality and habitat in Canagagigue Creek.

Jeff Merriman is the Senior Environmental Engineer at Uniroyal Chemical. Uniroyal is pleased to offer tours of the groundwater cleanup systems operating at their plant and interested people should contact Mr. Merriman at (519) 669-1671, ext. 378, or email jeff_merriman@uniroyalchemical.com

Children's Groundwater Festival

Between May 31st and June 4th, the Waterloo-Wellington Children's Groundwater Festival hosted it's fourth annual festival at Doon Heritage Crossroads in Kitchener. About 4,000 students in grades 3 to 6 attended this year, bringing the total participation over the past four years to 19,000. Students experienced a curriculum-based school program which educated them about the importance of responsible management of our water resource. Over forty learning centres incorporated hands-on learning activities designed to be interactive, interesting and entertaining.

Hope for the Chestnut

An introduced blight threatens the survival of the native sweet (or American) chestnut. The tree, once a dominant force on the landscape and in the economy, has dwindled over the past several decades to a few scattered groves and individuals, often surviving only as stump sprouts. Now, Ontario farmers are giving the chestnut a helping hand while experts develop a recovery plan.

Twenty-four demonstration planting sites will be established from Windsor to Ottawa, within and beyond the traditional chestnut range. Fifty chestnuts will be planted at each site, together with other native trees and shrubs in stream buffer, windbreak, and reforestation plantings. The plantings will demonstrate some of the conservation techniques employed by Ontario's progressive farmers while also helping the recovery of the sweet chestnut.

The demonstration sites are a program of the Ontario Soil and Crop Improvement Association, with federal government financing from Agriculture and Agri-Food Canada's National Soil and Water Conservation Program, as administered by the Agricultural Adaptation Council in cooperation with the Ontario Farm Environmental Coalition. Other contributors include the Norfolk Field Naturalists, the Canadian Chestnut Council, the Canadian Forest Service, Wildlife Habitat Canada, the Ontario Ministry of Natural Resources, and the Grand River Conservation Authority. Many other forest conservation and agricultural groups have provided advice and expertise to the project.

In the Grand River watershed, four demonstration sites were planted this spring with cooperating farmers: three by the Grand River Conservation Authority, and one by the Brant Resource Stewardship Network. Wilson Pate planted a piece of fragile land near Brantford some years ago with a mix of evergreens and hardwoods. This planting was augmented this spring with ash and chestnut. Larry Davis established a windbreak with a mix of species including chestnut, also in Brant County. Near Woodstock, Ken Peers planted a grove of chestnuts adjacent to an existing buffer strip along a stream. The trees were planted on a fairly wide spacing and crops will be grown in between for the first few years. A drain crossing Gerald Martyniuk's farm near Rockwood was buffered with a mixed planting of oak, hickory and chestnut.

The seedlings were grown at the GRCA's Burford Nursery from appropriate seed sources. You can find out more about chestnuts and other conservation action issues by contacting Jennifer Hawkins at (519) 621-2763 ext. 270, or email conservationaction@grandriver.ca

A Year on the Grand

On May 21st, the Wellington County Museum and Archives hosted an overwhelmingly successful opening of a multi-media interpretation of the Grand River. The exhibit features thirty beautiful and inspiring batik landscapes by the noted Salem artist Linda Risacher Copp, with original guitar music by Wayne Bridge and a videographer's view of the river by Paul Kelly. The exhibit will be at the Wellington venue until July 18, 1999 and will spend the a year on the Grand, travelling to Dufferin County, Kitchener, Brantford and Cayuga.

Grand Discovery

Plans are currently underway for an exciting new venture called the Grand Discovery. The project is being developed by the Alcohol and Drug Recovery Association of Ontario and the GRCA, and will involve elementary school students across the watershed. They will use art to

discover the history, ecology, economics and other values of the watershed, and to celebrate the Grand as a Canadian Heritage River.

The project will use a "train the trainer" approach to reach as many youths as possible and will be led by Christine Bretherick, a former art teacher with the Upper Grand School Board. Student art will be displayed at several public venues and on a web page. Students will also be given the opportunity to write about their experience and publish their observations. The project is planned for this fall and spring of 2000. Anyone interested in helping out should contact Mary Napper at (519) 624-8855 or email adrao@kw.igs.net

Heritage Planning Course

fall by the University of Waterloo Heritage Resources Centre in association with the School of Planning and Priority Grow of Glen Morris, Ontario. The course provides training opportunities for graduate students, planners and citizens playing a role in heritage planning.

Topics include heritage planning, communications, economics, tourism, conservation and politics, with a focus on the Grand River watershed. The Tuesday evenings seminars will be offered both for university credit and for possible certification for those interested in such a qualification in heritage planning. For information call Heather Fraser at (519) 888-4567, ext. 2072 or email hrc@fes.uwaterloo.ca

Hedgerow Happenings

This spring, students from Centre Wellington District High School and GRCA staff planted a demonstration hedgerow in Mapleton Township on land owned by Martin Degroot and Ineke Booy of Rothsay. In the past and today, hedgerows and fencerows were removed to enlarge fields in order to accommodate modern farming equipment and practices. Hedgerows are field borders with a mix of usually deciduous trees, shrubs and vines, and are often thought of as wild or unkempt.

Martin DeGroot and Ineke Booy can see many benefits to hedgerows. These include:

- increased crop yields from reduced soil erosion and greater shelter
- enhanced food and cover for wildlife and beneficial insects
- improved air and water quality.
- diversified landscapes for recreation and viewing opportunities
- reduced drifting snow at the road

By connecting the hedgerow to a nearby woodlot, Martin and Ineke hope to bring more songbirds to their farm house.

The native trees and shrubs used in the planting were purchased by Martin and Ineke with their 1998 Conservation Farm Award of \$500 (see *Grand Actions February 1999*). Much of their 550 acres have been certified for organic production and most recently, they started to process their own milk as organically certified dairy products like ice cream and frozen yogurt. On your way north past Rothsay be sure to stop in at Triangle Farms for their delicious ice cream.

LOOK WHO'S TAKING ACTION

>Gilbert MacIntyre and Son Funeral Home

The Gilbert MacIntyre and Son Funeral Home in Rockwood and Guelph is providing funding for major improvements to the hiking trail system in Rockwood Conservation Area, and also creating a Family Memorial Service Area in the park. Up to \$300,000 over 20 years will be provided in funding.

Over 75,000 visitors enjoy camping, swimming or canoeing at this scenic area in the village of Rockwood just east of Guelph. Creation of a more formal trail system is important to the environmental health of Rockwood Conservation Area. Visitors will be directed along improved paths, promoting regeneration of the natural forest and protecting the unique glacial pothole formations in the park.

The project is a partnership with The Grand River Foundation and the GRCA. For more information please contact Ralph Beaumont, (519) 621-2763, ext. 271.

Environmental Sustainability Awards

The first annual Environmental Sustainability Awards celebration was held at the City of Kitchener Rotunda on June 1, 1999. The intent of this event was to celebrate the achievements of community groups, individuals, agencies, schools and businesses who are leaders in environmental sustainability. The event was hosted by Native Plant Source, The Chamber of Commerce of Kitchener and Waterloo, the GRCA, the City of Kitchener, Water and Earth Sciences Associates, Canada Trust, Ontario Ministry of the Environment and Union Gas.

Award winners included:

- Waterloo-Wellington Children's Groundwater Festival for its contribution to educating children about water management and the environment – Education Category
- K-W Field Naturalists for work in establishing the region's system of Environmentally Sensitive Policy Areas and providing over 65 years of dedicated nature study within the region – Natural Heritage Category
- Ken Hunsberger, a dairy farmer from Wilmot Township for innovative efforts to eliminate soil erosion and pollution from farm activities – Agriculture Category
- Waterloo Inn for recycling everything from textile materials to leftover food, resulting in substantial savings and diverted garbage from landfill – Business Category
- Friends of the Grand River for their dedication to improving, maintaining and protecting the environment in the upper Grand River watershed – Volunteer Category
- Lillian Croal, the "blue box lady" for spearheading Blue Box program and advocating recycling - Volunteer Category
- Dorothy Russell for her life-long commitment to the environment – Lifetime Achievement Category
- Eden Mills Millpond Conservation Association for actions which show a commitment to community sustainability – Grand River Watershed Sustainability Award

We salute all of the nominees for the tremendous amount of energy, enthusiasm and support for improving environmental health in the Grand River watershed.

Heritage Foundation Awards

On Tuesday June 8, 1999, the Waterloo Regional Heritage Foundation

held it's Annual General Meeting. The evening began with a tour of Ontario Table and Chair Inc. on Allen Street in Waterloo. The second floor of this lovely heritage building was the venue for presentation of the Awards of Excellence.

This program recognizes outstanding contributions in heritage preservation in areas such as archaeological, architectural, archival, cultural, educational, genealogical, historical individual, literary, media and natural. The following people received awards:

- Jan Gayman and Margaret Reid, for teaching, over the last decade, a local history unit to grade two students. The children learn the history of Doon with projects that include a timeline, visits to Doon heritage Crossroads and local cemeteries, a driving tour, quilt making and a collectors corner.
- Stephanie Marie Barber, for her work focussing on the plight of the Sonneck home on Queen Street in Kitchener. Stephanie was instrumental in alerting the public through education and appeal. The home was saved from destruction and is currently being restored by the new owner.
- Gretchen McCulloch, for her work as curator of the Homer Watson House and Gallery and development of both the gallery and the Doon School of Fine arts as national landmarks.
- Eddie Koch, for demonstrating a "labour of love" for heritage properties by purchasing four properties at Irvin and Frederick Streets in Kitchener, researching their history, and restoring them with his own funds.
- Andrew W. Taylor (1907-1986), for his significant commitment to many heritage groups in his lifetime, both with his writings for the Waterloo Historical Society and the Ontario Genealogical Society and his three published local history books.
- The Sally Thorsen Award of Excellence was given to Susan Burke for her outstanding achievements and consummate passion for heritage and the community during her tenure as curator of the Joseph Schneider Haus.

The evening concluded with a lively presentation by Heritage Architect Nick Hill on the restoration of the historic Sheave Tower in Doon.

DID YOU KNOW?

- The average Canadian uses 350 litres of water daily.
- 85 to 95 litres of water are used during the average five-minute shower with a standard shower head.
- A five minute shower with a low-flow shower head will use about 35 litres of water.
- The flow of the Grand River at Brantford annually averages 56 cubic metres per second.
- A flow of 1 cubic metre per second can fill 2,000 backyard swimming pools per day, or 1,000 rail tank cars per day.
- A "hot day" is classified by Environment Canada as one with temperatures above 30°C and usually, in the Grand River basin, about 10 days per year have such temperatures.
- In southern Ontario, air moisture usually comes in air masses from the Gulf of Mexico, while less than 20% comes from evaporation from local waters or the Great Lakes.
- Monticello, in the north of the Grand River watershed, receives only 18 mm of rain in an average January while Dunnville on Lake Erie receives 27 mm.
- In an average year, snow falls at Monticello every month except July and August.
- The mean annual temperature in the Grand River basin, 13,000

year ago, during the Wisconsin ice age, was probably around -4?? C.

- Xeriscaping is the design of gardens and landscaping using plants that require less water. Many native plants and grasses adapt better to dry conditions than do some traditional "garden" plants.
- Charles Dudley Warner's famous complaint "Everyone talks about the weather but nobody does anything about it" first appeared in print on August 24, 1897.
- In 1952, the bands of fur on Woolly Bear caterpillars supposedly foretold a long and severe winter. In spite of this folklore, the winter was one of the mildest in years.

Email Submissions

Many readers have asked about submitting articles and photos in electronic form. We can receive your submissions by email and your photos in digital format. To give us a good quality picture in print, photos should be in tiff format, at 300 dpi. An 8-bit grayscale photo is preferred as it gives a more manageable file size than a full colour file, although this is not essential. Email files to bveale@grandriver.ca

THE GRAND ACTIONS CALENDAR

Grand River "Champion of Champions" Pow Wow, July 24 and 25, 1999, at the Chiefswood Tent and Trailer Park, Six Nations. Six Nations people compete in a weekend of singing, dancing and drumming. For information, contact Odrohekta at (519) 758-5444.

7th Annual Mill Race Festival, Cambridge, Saturday, July 31, 1999 at the Mill Race Park amphitheater, Cambridge, from 1 p.m. to 11 p.m., with traditional folk music and dance. Other events will take place in nearby downtown locations. These include Children's Stage performances, arts and crafts, dancing and concerts at six different venues. For more information call (519) 653-1424 or 1-800-749-7560.

50th Annual Six Nations Native Pageant, August 6 and 7, 20 and 21, 1999. An outdoor play on Six Nations history held in a natural forest amphitheatre on Friday and Saturday evenings 7 to 10 p.m. at Sour Springs Road, Six Nations of the Grand River. Tickets, adults \$5, children 12 and under, \$2. Contact Odrohekta (519) 758-5444, or Earl McNaughton (519) 445-2926.

Spruce It Up Day, Brantford, Saturday, August 7, 1999. Community Clean up and Ward Challenge. 10 a.m. to 12 noon, "Barrels of Fun" at Victoria Park, Brantford. Bring your own brush and paint a garbage can. BBQ and other entertainment. For more information contact Susan Sager at (519) 751-9900 or 1-800-265-6299 or email ssager@city.brantford.on.ca

Communities in Bloom '99, Brantford. Friday, August 13, 1999 is Judgement Day! Brantford is growing for gold ...again. For more information on this and other events contact Susan Sager at the address above.

54th Fergus Scottish Festival and Highland Games, August 13 to 15, 1999, at the Fergus Community Centre. Day tickets or weekend passes available. Phone (519) 787-0099 or email scottish@sentex.net

Welcome Home event at Myrtleville House Museum, 34 Myrtleville Drive, Brantford, on Sunday August 29, 1999. A family celebration with activities for all. For information, call (519) 752-3216.

The Canadian Chestnut Council Annual Meeting, Saturday, September 25, 1999, at the Horticultural Experimental Station, Simcoe (corner of Blue Line road and Highway #3) from 10 a.m. to 3 p.m. The guest speaker is Dr. Sandra Anagnostakis, plant pathologist from the Agricultural Experimental Station, New Haven, Connecticut. For more information contact Peggy Lang, (519) 759-3491.

For more information about The Grand Strategy
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For newsletter enquiries or submissions
contact the Editor, **Dave Schultz**, at the above address.
Newsletter submissions must be made by the 15th day of each month to
be included in the following month's newsletter.

Donations and corporate sponsorships towards the cost of producing this
newsletter are always welcome. Please contact **Ralph Beaumont** at
(519) 621-2761 for more information.



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