Grand River Conservation Authority

Agenda - General Meeting

PUBLIC

Friday, June 23, 2017

9:30 a.m.

Auditorium

Grand River Conservation Authority

400 Clyde Road, Box 729

Cambridge, ON N1R 5W6

Pages

1. Call to Order

2. Roll Call and Certification of Quorum – 13 Members constitute a quorum (1/2 of Members appointed by participating Municipalities)

3. Chair's Remarks

4. Review of Agenda

5. Declarations of Pecuniary Interest

6. Minutes of the Previous Meetings

7. Business Arising from Previous Minutes

8. Hearing of Delegations

   a. Lower Pines Community Association

      Mike Wieth - President, LPCA
      Derek Perumal - Vice President
      Bill Barnes
      Klem Moffet

      Correspondence in agenda item 10a was submitted by this delegation on behalf of residents of the LPCA.

15. **3rd Reading of By-Laws**

16. **Other Business**

17. **Closed Meeting**

    a. Minutes of the closed meeting of May 26, 2017

    b. Litigation Update

18. **Next Meetings**

    General Membership - July 28, 2017 - 9:30 a.m.

19. **Adjourn**

Regrets only to:

Office of the Chief Administrative Officer, Phone: 519-621-2763 ext. 2200 or espencer@grandriver.ca

May 25, 2017

Grand River Board of Directors

Bill &Marilyn Barnes
Site 704, Elora Camp Grounds
Lower Pines

Subject: The Lower Pines Closure Initiative

To Whom It May Concern,

<u>The Lower Pines a Family Treasure</u>

My wife, children, and grandchildren, have had the gift of spending summers for the past 30 plus years in the Elora Lower Pines. We have nurtured many lasting friendships in a family oriented community over our seasons in the Pines. We have respected the grounds at large, as natural and protected, while making our site a little show piece of heaven. It has been greater than winning the lottery for a Toronto based family, with family roots in the Alma, Fergus, and Elora regions, to have a facility like the Lower Pines to escape to. Both of my now adult children retain deep lasting memories of joy related to their summers with their beloved grand parents, who had the site prior. We now enjoy our grand children and their environmental enlightenment during summer weekends at the Pines. My wife and I fully understand that we do not own the site 704, however, the shear mention that someone would attempt to take this piece of heaven from our grasp is extremely shattering, lacks compassionate forethought, and fails to acknowledge the resultant consequences for the current residents.

<u>GRCA Embarrassment and Disgrace</u>

With respect to the general condition of the Lower Pines, over the past couple of seasons, my wife and I are disappointed with the lack of attention

by park personnel to the needs of the Lower Pines. We see little to no effort to maintain the feeder road with respect to gaping pot holes that could stop a tank and sites that I perceive are purposely not rented by the administration, that are left overgrown and not attended. I have personally had to cut the site across from me a number of times to keep the weeds and grass down as it becomes an eye sore and does detract from our site. I have for the past 3 years had to cut the public path way to the river between our site and my neighbour and I just did again today. The standing water that leaves a number of sites totally washed out and gushing down the road has only got to these extremes since the top section was initiated. I am confident that the technology exists to amend this distasteful nonsense once and for all. The park has been aware of it and it should have been fixed at the outset. The park, it would appear, is in some degree, engaging in a cloak and dagger exercise with the Lower Pines in that it is making every effort to discourage the residents at every turn. This practice if factual, is unbecoming and lacks professionalism on behalf of the Grand River Conservation Authority. The residents paid their ever increasing yearly park fee and related storage charges and should be entitled to the best of what the park maintains, re roads, grounds and facilities. Disgraceful conditions currently abound in what was a beautiful, professionally maintained setting in years past.

<u>Purchased Right to Have a Voice</u>

As family residents of the park for in excess of 30 years I am confident that the approximately $70,000 of support money that we have furnished without question of fee, has purchased us a ticket and the right to contend this irresponsible agenda to evict the residents of the Lower Pines.

Coupled with the 70K contributed, is the still undetermined total cost to the site holders with respect to being forced to try to move a mobile home with skirting and associated deck and sheds combined, that have not been moved in perhaps 30 plus years. In our particular case, we in addition have a standing $10,000 cedar gazebo, which is my wife's pride and joy, nestled in the trees that we were allowed by the park to have constructed ten years prior that we will be forced to move, perhaps in sections, at considerable expense. We also have invested over $4, 500 in contracted sod placement and yearly over seeding, yearly perennial and annual plants, all to make our site in the lower pines a thing of beauty and a credit to the park. We have been told that we could be facing $8,000 to $10,000 to complete the move and we

are not even confident that the sites offered up top will be large enough to accommodate our treasured gazebo. In retrospect, a move to the top section would be a disappointing final option, if actually feasible, especially when we are traditionally comfortably at home in site 704 by the river. As noted previously, it is home to us. Further, my personal labour hours over the past years, weekend after weekend, attempting to keep the site pristine can not be dismissed and left by the way side. At a fast look, that's close to $15,000 that will slip through my wife and my hands that additionally fuels our anger and dismay at the underhandedness of the park officials.

Family Financial Loss Going Forward

In addition, a further fall out of the park's decision is that our mobile home will lose its future re sale ability and value all based on the site location that it presently resides on. Again, I realize that the property is not ours, but the feature beauty of the site location and the associated mobile home combined, are an enticing package to any prospective buyer when the time ever comes for my wife and I to reluctantly give it up. We purchased this with that aspect ourselves, and believed that this format would perpetuate. The closure would also leave us with little or no avenue of placement for the home, while also destroying a grandfathered way of life. It is a reprehensible action that undermines the true spirit of community responsibility by the Grand River Association. The incumbent residents of the Lower Pines deserve better treatment and consideration.

Responsible Government

I understand and concur that the Pines requires a refurbishment, improvement, and or complete replacement of the sanitary facilities, the hydro, and water system. I do also believe that there are possible grants and or subsidies that the Grand River could apply for to save this entity that we loving call the Lower Pines, this especially when there are so many residents and family members depending on the Lower Pines.

The Elora Park is for the people and not intended to be a profit centre to the best of my current perspective. Perhaps community elected officials can assist in securing all or part of the funds required to make the necessary upgrades to the facilities for the Lower Pines. I have grave concerns that

there is another agenda by the Elora Park officials, who appear to dismiss any suggestions that could alleviate the problems in the Lower Pines.

Unprofessional Information Meeting May 18th 2017

The meeting that was held in Fergus, on the evening of May 18, 2017 was poorly directed with no lead speaker intended, only planned for concerned residents to peruse charts of costs and possible alternative plans. It was only at the dismay of the people who attended the meeting that the Elora executive was embarrassed into discussing the situation and taking minutes of the meeting. This was not a meeting of possible solutions, this was a message of closure and hidden agendas. The outcome was very emotional and demonstrative to say the least.

Going Forward

My wife and I are requesting a review of the situation related to the Lower Pines and a re think by the Board with respect to the devastating consideration of up rooting the residents of the Lower Pines. These residents while supporting the Elora Pines have also supported the local businesses in the area. I am confident that the "brain trust" of the Grand River Board are in fact, the responsible community minded trustees that I always envisioned and that all avenues will be considered with a favourable solution administered, to preserve the existing community called The Lower Pines.

Thank you in advance for your attention to this urgent matter and I trust that you will take all issues into account.
We can be reached at home 416-251-6902 or mobile 416-805-4139

Marilyn & Bill Barnes,
195 Hallmark Ave,
Toronto, Ont.
M8W 4L1

W.K. Barnes W.K. Barnes

M. J. Barnes M.J. Barnes

June 1 /17

To: The GRCA Board of Directors

From: John Gooyers & Patricia Kelly

Regarding: Elora Pines Lower Campground Lot 714

Dear Board of Directors,

My wife and I have been residents of **Lot 714 in the Elora Gorge Lower Pines** Campground since June 1997 (20 yrs.). We have a sister and brother-in law that have also residents in the Pines for over "25" years and another camp ground neighbour that have been there for over "35" years. We initially camped in the main park for many years but after my brother and sister-in law's purchase of a trailer on a river lot in the Pines in 1992 we saw what a beautiful camping community the Pines was. At that point we decided we would also like to be part of the Pines community and purchased a 45 ft. mobile home on site 714 in the Pines and have never looked back. Through the years we have met many new friends and neighbours in the camp ground. We are a close community socializing and enjoying camp fires together and helping one another. We also have a yearly Lower Pines Park Party Pot Luck dinner. The Lower Pines is a very friendly and welcoming camp ground. This is also a place where our children and grandchildren have enjoyed many good times spending the day by the river, fishing, barbecues and evening camp fires.

Over the years we have made many improvements to our site, such as planting approximately 40 trees and turning our river frontage from mosquito invested long grass area into an attractive grassed lot with a deck by the river so we can sit and enjoy the river and the wildlife. Many of our neighbours that are not on river lots come down and use the deck for the same purpose. It's a beautiful spot. In 2005 we decided we would like more space for our longer term plans and decided to put on a sunroom addition. Before starting the sunroom we went to the Park Superintendent (Dan Morton) and was given permission to do so. The sun room addition and the work we did to our site coincides with our longer term plans to live in the Pines over the summer and spend the winters somewhere warm as we near retirement. The sunroom construction took approximately 3 months at cost of over $20,000. The construction was very visible and at no time did GRCA stop while doing their security rounds and tell us it was not allowed. Note: Previous to our sunroom project there was a cottage like addition built on another lot which GRCA also allowed. There are also numerous other sites that have built on additions and sunrooms that were allowed to be built with the permission of GRCA.

GRCA's present proposal to move all the Lower Pines units to the Upper Pines would mean that our sunroom would have to be torn down and basically demolished. The estimated costs of tearing down the sunroom, repairing the trailer, moving the trailer and sheds and setting everything back up would be in excess of $30,000. **This is money we cannot afford at this time in our lives.** It is very unfair that something like this would even be considered when we have put so much into our site, especially without ever being told of a sewer issue. Many of the Lower Pine campers are retired or close to retirement and do not have the means or the money to do this. We have never had issues with the sewers on our site. If the sewers are a problem, **then they should be fixed without displacing everyone.** There is a lot of money generated from the Lower Pines campground each year and over the last 35 years. Our 2017 fee is $3000. If GRCA knew that there were issues with the sewers monies should have been set aside to do the repairs. In our meeting on May 24 with GRCA we were told that no monies have been set aside and that they want everyone to move out of the area. This is not right! GRCA had no explanation as to why money was not set aside to repair the Lower Pines sewers. From our understanding they have known to be an issue for many years but have kept it a secret from the Pines campers. If a city or town has an issue with areas of aging infrastructure they don't just stop servicing the area and tell the people they have to move out and their properties are worthless, they go in and fix the issue because they have collected tax money over the years for this type of thing. We love the Lower Pines Campground because of the river and the friendly community and do not want to move up to a field that would run along Middle Brook Rd where gravel trucks run up and down all day long creating loud noise and dust all day. There is no attraction to Upper Pines camping area. There always seems to be empty sites, many of the campers do not take care of their sites and have debris lying around, and people don't feel the area has anything to offer.

The Elora Pine Community Association is asking you to fix the problem in the Lower Pines campground by fixing the sewer issue so the Lower Pines will still be a "viable" camping area.

Sincerely,

John Gooyers / Patricia Kelly

Lot 714 Elora Pines Campground

Lorraine Neal and Paul Adams
204 – 170 Water St. N.
Cambridge, ON N1R 3B6

May 30, 2017

Grand River Conservation Authority
Board of Directors
400 Clyde Rd
Cambridge, ON N1R 7B7

To the GRCA Board of Directors,

Our relationship with the GRCA is one of long standing, and for the first time in decades we feel it is necessary to communicate directly with you. We started tent camping at Elora Gorge Conservation Area in the early 1990's with our children. By 2008 we made the decision to purchase our first recreational trailer as a seasonal camper, and overall, we have enjoyed every minute of our considerable time at Elora Conservation Park.

We continue to be seasonal campers not because of the amenities of the trailer, nor for what organized entertainment the park has to offer; rather, for us the enjoyment comes from being in the unique environment found there – the sights, sounds and smells. No matter how stressful the day is, one is guaranteed to be at rest and peace within minutes of arriving at our camp site. There is a therapeutic effect of the trees, the animals, and the fresh air.

The purpose of this letter is to tell you that removing the lower pines is disgraceful. We strongly believe that this plan is misguided, and for a variety of reasons.

The entire planning process has been marked by an insulting lack of communication. There has been no notable effort to communicate development plans to ALL registered seasonal campers. Where matters of development bear so directly on stakeholders, the GRCA Board should be transparent.

We do not dispute that there are serious concerns around the infiltration of groundwater (e.g.: phosphorus contamination). Rather than alleviating these concerns, however, short and long term complications of this nature will inevitably intensify under current development plans.

To see our peaceful, park-like setting relegated to a noisy, noxious thoroughfare that leads to 50 new sites is unthinkable to us. Ripping up the grass is one thing but tearing down mature trees is disruption on an entirely different (and more upsetting) scale. For decades, our camp site has offered a place of refuge from which to witness and experience natural beauty. Even in winter months, we often stroll by to 'check in' on the trailer – we walk in very slowly and quietly, and we have been rewarded: recently we found ourselves within three meters of a beautiful deer. The smell of the wet fur was amazing, and it made for an unforgettable experience. In another example of our site's natural value, we found ourselves sitting on the deck early in the morning, watching as the deer made their way through the

treed area only a short distance away - simply a magical and mystical moment. At other times, we have watched as many as five deer near the storage garage by the washroom/shower building. All of these interactions and observations will be impossible in the future if current plans go ahead.

The development will put a stop to campers' spring experiences: the frolicking of spring babies, whether they be groundhogs, rabbits, even the feral cats will no longer be able to use the space we hold so dear. Spring is the time of year for us to remember that **these living - breathing animals are not in our space, we are in theirs – therefore, we should care and respect not only for them but for their environment.**

Bird watching is another joyful past time that will be severely hampered by GRCA's planned development. With bird feeders installed around us, there are a number of song bird species that make regular stops. For four consecutive years, the same small bird has nested in the bird house we erected. The space we enjoy in the seasonal camping area is so full of rich and complex bird songs that it would be impossible to duplicate or imitate them all; the diversity is staggering. For the first time, this year we spotted a completely new bird species that we have never seen before: the diversity continues to grow, not to die off.

If GRCA continues with current plans, the birds and animals will disappear from the area: a prospect that would be devastating to us and to our neighbours. The deer clearly use this space as a path to the river and points beyond. There is so much life LIVING in the treed area that to take away their environment is extremely irresponsible -especially for capital gains.

For relative brevity, this letter does not even touch upon the ways in which the other construction activities will impact the environment and everyday living for seasonal campers (complex and troublesome challenges such as septic waste, noise levels, dust nuisance, solid waste, toxic air, and odour). With an addition of 50 new sites, we are alarmed by the potential for contamination of the entire area for untold years to come.

It is our sincere hope that the GRCA Board of Directors will seek input from all stakeholders, taking into consideration the valid thoughts and concerns of residents. We feel strongly that removing a mature treed space for 50 new units is not a viable development strategy.

Sincerely,

Lorraine & Paul

Lorraine Neal & Paul Adams

Site 876

To whom it may concern,

I write this as our 'victim impact statement', as I feel that it is, in effect, what we truly are if this proposed decision by GRCA is carried out.

Our relationship with GRCA began 48 years ago when we started camping at the Elora Gorge Campground in 1969. Our stays in the park were getting longer every year so in 1986, when we had the opportunity to move to the Lower Pines area, we did so.

In 1987 a deck and shed were constructed on our lot, flowers planted etc. Two of our little grandsons helped plant a tree in the front of our lot which is now 40 ft. tall. (Those boys are now men with children of their own)

From 1986 thru 1987 we had a lease agreement allowing us year round access to our trailer. The lot was leased at that time for $675.00 per year. As time went by, the cost increased and the length of stay was shortened considerably.

In the fall of 1994 we replaced our travel trailer with a Park Model trailer and in the spring, extended the deck to suit the trailer.

We have treasured our time spent in the Lower Pines. It has always been considered our 'little bit of heaven on earth'! We have lovingly cared for our lot by keeping it tidy, planting flowers etc.

Five generations have been enjoying our 'Elora Home'. We are a family who love nature. This is a 'bird-watchers paradise! It is a quiet serene environment .... we cannot imagine not being here in the summer.


Our Elora Home


Park Party Aug 22, 2009

As part of the Lower Pines Community and as residents who have been in the Lower Pines since inception, we have made many lasting treasured friendships. While we respect each other's privacy, we all look forward to our annual Lower Pines Potluck dinner which takes place in August each year. It's a time to enjoy an evening together and possibly meet any new neighbours.

Our home is located exactly 300km from our door to the Middlebrook entrance of the park. Why, you may ask, would you drive so far to get to our retreat? Because we LOVE it!

The Financial Impact of the GRCA Decision to move us out:

We understand that the cost of moving our unit and shed to the Upper Pines would possibly range between $5000 and $10,000 if we were even allowed to relocate there. As seniors now living on our pensions, we are not prepared to cover these costs.

Over 31 years, we have spent thousands of dollars for the privilege of living in the Lower Pines. We have always had good relationships with GRCA personnel and have never asked for more than having a dead tree cut down. We, in good faith, keep our end of the bargain but what is GRCA doing to keep theirs. We must keep the vacant lot beside us cut and in fact, spent 2 days cleaning, cutting and making it look presentable.....why?? We are told, as residents, to keep our own lots tidy, not the empty lots beside us! Our park is neglected!!!

We do hope that the GRCA board members will take a few moments to review our photos and see how we love this park and how very much it means to us.

Thank you for your consideration in this matter.

Roger & Gloria Congdon (Lot #717)

238E County Rd. 14 Cottam, ON

Phone: 519-839-6123

Cell: 519-322-8139

Gloria Congdon

Roger Congdon

HANLON CREEK CONSERVATION AREA - Niska Rd and Bridge in Guelph

Good day Ladies and Gentlemen, Distinguished Chair and Board Members.

My name is Nicole Abouhalka, a Guelph resident for the past 28 years. Since 2015 I have been involved for protecting the 1Lane Niska Rd Bailey Bridge, part of the Hanlon Creek.

In this capacity I am writing to you to request your widest and unwavering support for the Protection of the "Hanlon Creek Conservation Area" (HCCA) as is because lots of rumours are circulating regarding its sale.

A short History recap, if I may.

1948 Horace Mack purchased the land to make it "The Niska Game Farm" a Bird Sanctuary.

1959 The Niska Game Farm became the Kortright Waterfowl : a research depot to study Waterfowl, a haven for migratory birds.

1965 Official opening attended by many prominent Ontario Officials (from the Wellington County Museum Archives in Elora)

1977 With the support of Norm Jary, the mayor, and councillors, the Grand River Conservation Authority (GRCA) purchased the 116 acres Kortright Waterfowl Park with its buildings (now unused or destroyed due to neglect) for the price of then $320,000 as follows

50% : $ 160,000 Grant from the Ministry of Natural Resources of Ontario (MNRO)
40% : $ 128,000 City of Guelph, from the taxpayers money
Only 10% : $ -32,000 GRCA
"***For the Protection of the Hanlon Watershed"*** the Guelph Mercury February 1977

1994 The Speed River, a tributary of the Grand River, has been designated as a "**Heritage River.** It meets the Hanlon Creek at the level of the Niska Road bridge.

Worth noting as well that in the City of Guelph Planning of 1975 under

- Policy Statement/Open Space- Recreation (attachment page 1 in yellow)

4.2 "That the designated area of the Hanlon Creek Watershed be acquired and maintained as a Conservation Area and utilized as an "open-space resource"

- Planning Unit 8.2 Open Space - Recreation Policy Statements ((attachment page 2)

1. That the floodplains of the Speed River and the Hanlon Creek become regional open space and part of the Open Space System of the City of Guelph

3. That the Kortright Waterfowl shall be recognized as a compatible use in the Open Space Area of the Speed River Floodplain and the effects of adjacent urban development shall be minimized.

- Hanlon Creek Conservation Area Master Plan 1982 under Conceptual Plan "the HCCA is being planned to provide a natural setting open space for a diverse range of nature-based activities that include walking, cycling, bird watching and picknicking.

- All the development of facilities must be compatible with the policy of maintaining in **perpetuity** the area's natural setting elements that make it worthy of conservation.

If need be, there are lots of other documents to support keeping it protected.

I will just mention as well, see photo attached, that with the latest tax bill there was a flyer entitled "Where do my property tax dollars go?".

It is mentioned under "Public Services" Parks, Forestry 4.2%.

In the light of the few above points and with the various statements on the GRCA website:

Among others "Under **OUR MISSION"**

We will develop and implement programs, directly or with our partners, to improve water quality, reduce flood damages, maintain a reliable water supply, ***facilitate watershed planning, protect natural areas and biodiversity, and provide environmental education.***

We will be an environmentally responsible provider of outdoor recreation opportunities.

We will maintain a responsive, innovative, accountable and financially sustainable organization.

It seems to me that :

1 The GRCA is NOT the sole owner of the Grand River Valley Lands.

2 The Hanlon Conservation **Is to remain protected** from any residential development and **innovative** solutions to keep it viable should be found to keep it protected.

Thank you for your attention and all the necessary steps and efforts each one of you will take to maintain the status of the Hanlon Creek Conservation area, as it is and as it should stay, within your mandate and I am sure the goal of hundreds of volunteers and supporters.

Nicole Abouhalka

27 Wilsonview Ave.
Guelph. ON

4 Attachments

AH-H 1

City of Guelph District Plan for Southview Planning District 8 1975

References: Parks and Open Space System 1973; Guelph Transportation Study Marshall Macklin Monahan Ltd 1972-1974.

District Objectives : Open Space - Recreation

1. Provide for the preservation and conservation of natural areas within the District's landscape – particularly the Hanlon Creek and Speed River floodplains and the Kortright Waterfowl Park.

2. Provide for scenic open space areas.

3. Develop linkages between parks and recreation facilities to provide an open space network within the City-wide open-space system.

4. To provide access to all future open space and recreation facilities.

5. Provide for a tertiary transportation system within the open space network - i.e. bikeways and walkways.

6. Provide adequate space for active and passive recreation facilities to serve the District.

District Objectives: Transportation

1. Provide access to the major activity centres of the District and the City of Guelph.

2.Separate local and through traffic.

3. Minimize the disruption to abutting or adjacent land use resulting from the improvement of transportation facilities.

4. Reduce and avoid, where feasible, the exposure of residents to major traffic routes and associated noises, air pollution and safety hazards.

Policy Statement: RESIDENTIAL POLICY STATEMENT

1.10 That a hierarchy of streets be developed to facilitate the movement of traffic for local and service needs.

Policy Statement; OPEN SPACE - RECREATION

4.2 That the designated area of the Hanlon Creek Watershed be acquired and maintained as a Conservation Area and utilized as an open-space resource.

4.2.5 That intensive recreational use be discouraged adjacent to the stream.

Policy Statement: TRANSPORTATION POLICY

5.1.7 That Kortright Road may be closed at the Speed River when Stone Road is completed across the Speed River to Highway 24 South.

5.5 That transportation corridors be aligned to minimize disruption to the Hanlon Creek Watershed.

1

THE CONCEPT BY PLANNING UNIT

The Official Plan shows a large swatch of Policy Area 5 - Parks and Open Space - spreads down the route of the Hanlon Creek engulfing the Kortright Waterfowl Park.

Planning Unit 8.2

A local collector street will provide the access to this unit, winding down from Stone Road to the existing Downey Road extension.

The completion of Stone Road across the Speed River will enable the closing of Kortright Road it will then become access to the Kortright Waterfowl Park and the Open Space System.

Planning Unit 8.2: Open Space - Recreation Policy Statements

1. That the floodplains of the Speed River and the Hanlon Creek become regional open space and part of the Open Space System of the City of Guelph.

3. That the Kortright Waterfowl Park shall be recognized as a compatible use in the Open Space Area of the Speed River Floodplain and the effects of adjacent urban development shall be minimized.

4. In the event that the Hanlon Farm be offered for sale both the City and the GRCA cooperate in its purchase as a part of the Hanlon Creek Conservation Area consolidation and to preserve the building and site as a historic site.

PLANNING DISTRICT 8 SOUTHVIEW - BACKGROUND INFORMATION

The road transportation system for District 8 Southview was developed with the Hanlon Expressway as the major north/south arterial route for this area of the City. The three connective arterial roadways were Stone Road, Downey Road and an unnamed arterial at the south boundary of the City from the Hanlon to Downey (later abandoned). The collector roads were designed around these arterials and both collectors and arterials were oriented east to convey traffic to and from the Hanlon Expressway.

Collectors streets provided convenient access to the arterials while "*preventing through traffic in the neighbourhoods and the Conservation Area*". The identified collectors were College Avenue extension south of Stone (later abandoned), Woodland Glen Drive, and Ptarmigan Drive.

Current (OPA 48) Official Plan Policy on Collector Roads

Purpose of Collector Roads

- Collector roads are intended to move low to moderate volumes of traffic ***within*** specific areas of the City and collect ***local traffic*** for distribution to the arterial or Provincial highway system.

Hanlon Creek Conservation Area Master Plan 1982

Introduction

The City of Guelph District Official Plans indicate a desire of the City to develop the lands of the Hanlon Creek Watershed in sympathy with the natural features of the watershed that include rolling topography, streams and ponds, extensive woodlands, and agricultural fields. The future value of the Hanlon Creek Conservation Area depends on the ability of concerned bodies, whether they be developers, municipal officials or the Conservation Authority, to create and maintain a unique juxtaposition of a highly natural area within a highly urbanized environment.

Conceptual Plan

The basic concept for the HCCA is for nature-based recreation. A 1971 sociological study conducted as part of the Hanlon Creek Ecological Study identified two major recreational needs from survey responses from Guelph residents. The first was for accessible open space areas with diverse opportunity for recreation that involved the enjoyment of natural settings. The second was for facilities that involved organized and individually-guided water-based activities. Since the Guelph Lake Conservation Area will satisfy most of the needs of the second type the HCCA is being planned to provide a natural-setting open space for a diverse range of nature-based activities that include walking, cycling, bird-watching and picnicking.

Goals and Objectives

- The natural resources of the HCCA will be developed on the basis of the City of Guelph District Official Plans and Grand River Conservation Authority policies and regulations.
- Future development plans will be based on the recommendations of the Hanlon Creek Ecological Study and will provide open space and recreational facilities in accordance with GRCA standards and the needs of the City of Guelph.
- All development of facilities must be compatible with the policy of maintaining in perpetuity the area's natural-setting elements that make it worthy of conservation.

Where do my property tax dollars go?

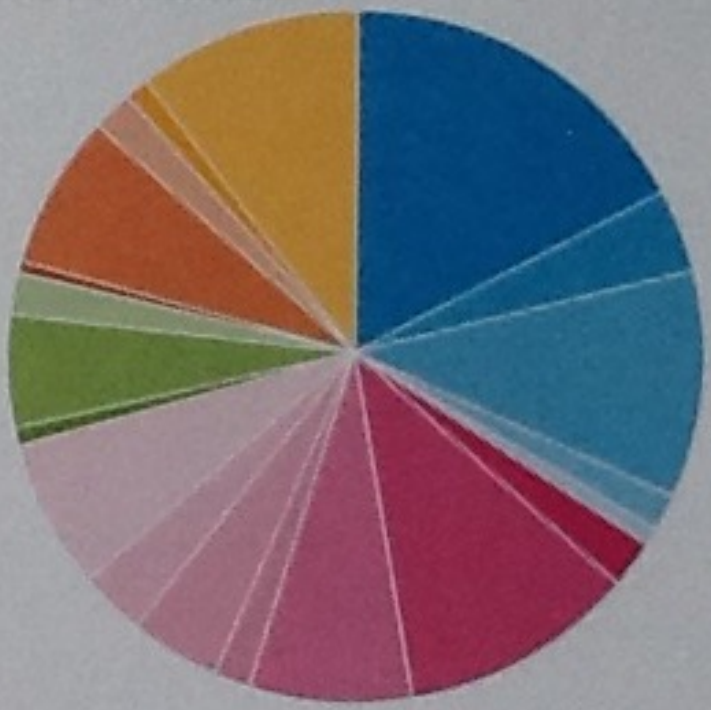
For every dollar the City collects in property taxes, $0.22 is provided to the province for education. The remaining $0.78 helps to fund public services. New for 2017 is the one per cent dedicated infrastructure levy. This levy will be shown separately on your tax bill. The public health levy now forms part of the general tax levy.

Other

Mayor and Council	0.4%
Administrative services	7.3%
Other services	1.9%
Dedicated Infrastructure Levy	1.0%
General and Capital Financing	10.5%

Local Boards and Shared Services

Police	17.4%
Library	3.9%
Social Services	10.6%
Public Health	1.7%
Boards and Agencies	0.7%



Infrastructure, Development and Enterprise Services

Engineering	0.8%
Waste	5.2%
Planning and Economic Development	2.2%

Public Services

EMS	2.3%
Fire	10.8%
Transit	7.6%
Recreation	1.6%
Parks, Forestry	4.2%
Culture and Tourism	3.1%

To: GRCA Board Members
Subject: RE: Conservation of Guelph's public river valley lands
Date: Thursday, June 15, 2017 3:45:21 PM

From: Bhaju Tamot
Sent: Thursday, June 15, 2017 11:46 AM
To: Grand River Conservation Authority
Subject: Conservation of Guelph's public river valley lands

Dear Board members of the Grand River Conservation Authority,

I strongly believe that conservation is a better way to use of Guelph's conservation land for future generation than allowing urban sprawl to continue to destroy greenspace next to the Speed Rive.

I don't support the selling of conservation land by GRC for local development.

Sincerely,

Bhaju Tamot

Ptarmigan Dr. Guelph

Grand River Conservation Authority

Report number: GM-06-17-67

Date: June 23, 2017

To: Members of the Grand River Conservation Authority

Subject: Elora Pines Campground Sanitary Servicing Upgrades

Recommendation:

THAT Option Five for the provision of sanitary services to the Pines Campground at Elora Gorge Conservation Area, as outlined in report GM-06-17-67, be approved; and

THAT prior to proceeding with the tendering of Stage One of the project a detailed cost estimate be presented to the General Membership.

Summary:

The GRCA purchased an existing trailer park in 1986 which was located adjacent to the Elora Gorge Conservation Area. This area is now referred to as the Pines Campground. The original campsites were developed in 1983. The existing services (sanitary, water and hydro) are approaching the end of their useful life. An engineering analysis identified a number of existing problems with the sanitary sewers. There are also concerns related to these sites due to the risks posed by the location of the sewage pumping station next to the river, the location of the sites within the inundation zone for the West Montrose Reservoir, and the fact that the sites are located within the regulated area (flood plain and steep slopes).

In addition, the GRCA has been working with the Ministry of the Environment and Climate Change (MOECC) to meet the requirements of the Elora Gorge CA Environmental Compliance Approval (ECA) for onsite sewage disposal systems. Under the terms of the ECA onsite sewage disposal systems were intended to be connected to the municipal system over a five year period or as individual systems fail. The five year period expires in 2018 and the GRCA is required to submit a work plan to the MOECC by July 18, 2017 outlining how the terms of the ECA will be met. The Pines Campground is the last major section of Elora Gorge CA that needs to be connected to municipal services.

Six servicing options were developed which would either repair or replace the existing services. The recommended servicing solution (Option Five) would extend the existing forcemain on the north side of the park to the Pines Campground to provide a connection to the Elora Water Pollution Control Plant (WPCP). The fifty (50) campsites in the lower, original section of the campground would be eliminated and replaced by an equal number of new, fully serviced (sanitary, water and hydro) campsites in the upper section of the campground. This option would be implemented in two stages. Stage One would be the extension of the forcemain through the park and the connection of the upper campground to

municipal services in 2017/18. Stage Two would involve the construction of new campsites in the Upper Pines in 2018 for occupancy in 2019. The total cost of this servicing solution is estimated at $1.6 million.

Report:

The Grand River Conservation Authority (GRCA) purchased the Elora Pines Trailer Resort Ltd in 1986 as part of the land assembly for the West Montrose Reservoir Project. The trailer park was located adjacent to the Elora Gorge Conservation Area and has served as the seasonal campground for Elora Gorge CA since it was acquired.

At the time of purchase the campground had been in operation for approximately three years with sites developed on full services (sanitary, water & hydro). Shortly after purchasing the property the GRCA eliminated 50-60 of the sites which were considered to be inappropriate due to their location in either wetland or floodplain areas. Fifty (50) of the original campsites are remaining.

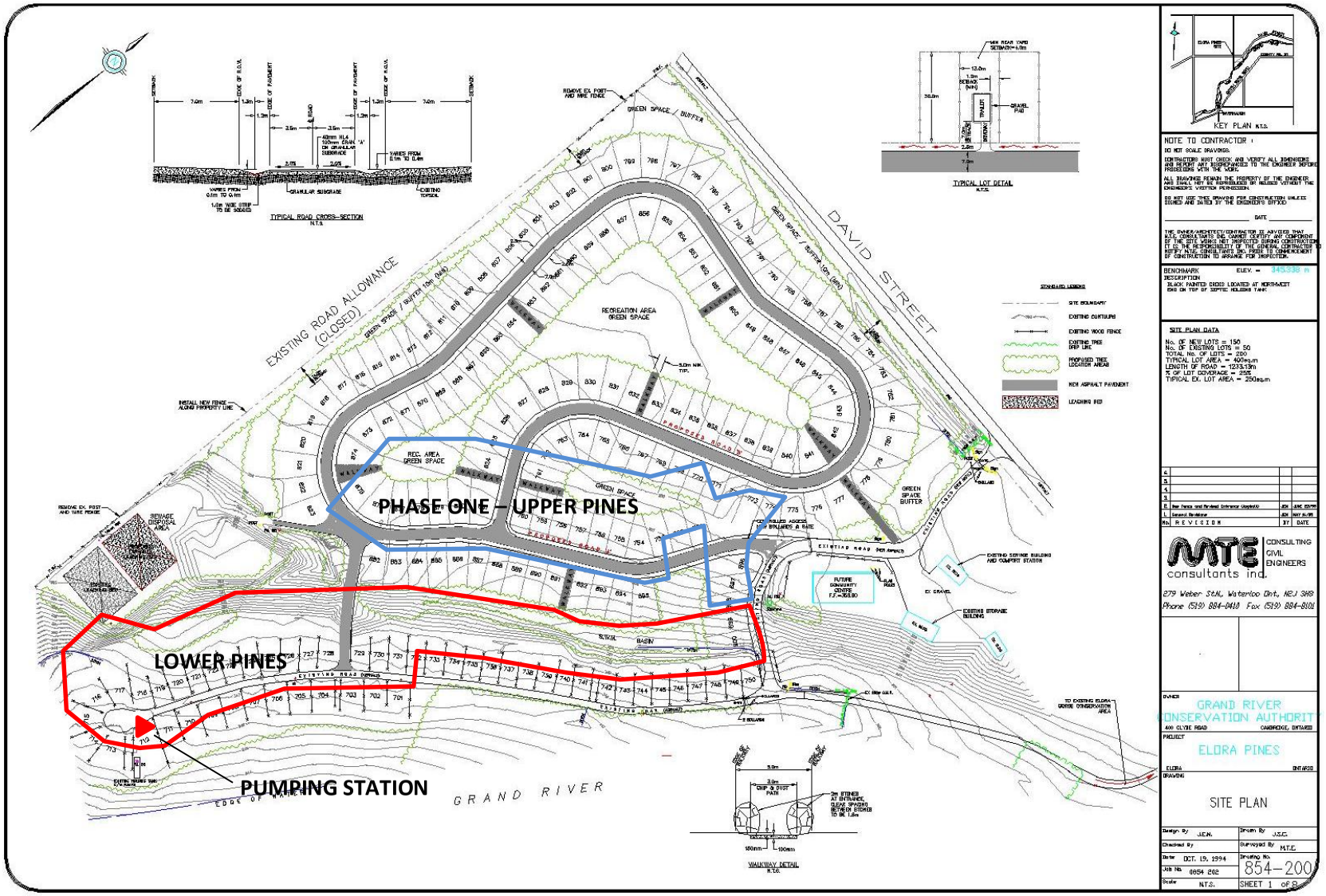
In 1996 the GRCA received site plan approval from the Township of Pilkington for the expansion of the campground which would create 150 new campsites on full services (sanitary, water and hydro) in the upper section of the campground (Upper Pines). The first phase of the expansion (35 campsites) was developed in 2001. The existing septic system was also upgraded at that time. The approved site plan for the campground expansion is shown on figure 1.

The sanitary, water and hydro services in the original section of the campground, referred to as the Lower Pines, are approximately 35 years old and approaching the end of their useful life. The sanitary sewers in the Lower Pines have been an on-going maintenance issue for many years. Repairs were made to the sewers in 2007 and 2010 which provided temporary relief but did not correct the problems.

The servicing issues related to the Lower Pines were presented to the General Membership in 2012. The replacement of the sanitary sewers and hydro services was proposed at that time. The cost of repairing the sewers was estimated at approximately $800,000 although this figure was not supported by engineering design. Initially the intention was to replace the sanitary sewers beginning in 2014 however the work was not completed due to a lack of funding. Conservation area reserve balances are now at a level that this project could be supported.

In addition to the concerns related to the sanitary sewers in the Lower Pines, there a number of other concerns related to the on-going presence of campsites in this location. First, sewage flows to a pumping station which is located immediately adjacent to the Grand River. While the pumping station is not located in the floodplain there is a risk that under a power or mechanical failure sewage could be discharged directly to the river. Second, the Lower Pines sites are located within the inundation zone for the West Montrose reservoir. This project is still an

Figure 1: 1996 Elora Pines Campground Expansion – 1996 Approved Site Plan


PHASE ONE – UPPER PINES
LOWER PINES
PUMPING STATION
DAVID STREET
EXISTING ROAD ALLOWANCE (CLOSED)
GRAND RIVER
RECREATION AREA GREEN SPACE
GREEN SPACE / BUFFER
TYPICAL ROAD CROSS-SECTION N.T.S.
TYPICAL LOT DETAIL N.T.S.
KEY PLAN N.T.S.
WALKWAY DETAIL N.T.S.
NOTE TO CONTRACTOR :
DO NOT SCALE DRAWINGS.
SITE PLAN DATA
No. OF NEW LOTS = 150
No. OF EXISTING LOTS = 50
TOTAL No. OF LOTS = 200
TYPICAL LOT AREA = 400sq.m
LENGTH OF ROAD = 1233.13m
% OF LOT COVERAGE = 25%
TYPICAL EX. LOT AREA = 250sq.m
CONSULTING CIVIL ENGINEERS
consultants inc.
279 Weber St.N, Waterloo Ont. N2J 3H8
Phone (519) 884-0410 Fax (519) 884-8101
OWNER
GRAND RIVER CONSERVATION AUTHORITY
400 CLYDE ROAD CAMBRIDGE, ONTARIO
PROJECT
ELORA PINES
ELORA ONTARIO
DRAWING
SITE PLAN
Design By J.E.N.
Drawn By J.S.C.
Checked By
Surveyed By M.T.E.
Date OCT. 19, 1994
Drawing No. 854-200
Job No. 0854 202
Scale N.T.S.
SHEET 1 OF 8

official “project” of the GRCA and the inundation area is included in municipal planning documents. Finally, the majority of the sites in the Lower Pines are located within the GRCA’s regulation limit for both floodplains and steep slopes. These sites would not likely be permitted under today’s regulations. The decision to make a major investment in infrastructure on GRCA property should be consistent with GRCA principles and objectives.

Seasonal Campground Regulations

Each year campers must submit and sign a “Seasonal Camping License Application”. This license contains terms and conditions governing the occupancy of a seasonal campsite. Under those terms and conditions the applicant camper agrees:

- to maintain a permanent residence elsewhere;
- that the Residential Tenancies Act does not apply;
- that GRCA staff or agents shall have access to campsites for maintenance, operations, servicing, development or security;
- that the camper shall not sell, transfer, lease, sublet or assign the campsite or trailer on the campsite without the prior written approval of the GRCA;
- that at the termination or expiry of the agreement the camper shall, at their cost, remove all trailers, improvements, vehicles and other items of personal property; and
- that no permanent structures will be permitted. Additional equipment not considered part of the manufactured unit, such as add-a-rooms or enclosures must remain portable.

In most GRCA seasonal campgrounds trailers must be removed from the site during the off-season. When the Pines Campground was first acquired it was decided that trailers could remain on the sites year round. As a result some trailers have not been moved for many years and are no longer capable of being moved due to mechanical condition. In addition, regulations requiring only non-permanent structures have been ignored for many years and permanent sunrooms, enclosed porches, peaked roofs, etc. have been added rendering a number of the trailers unmovable. Forty four (44) of the fifty (50) sites in the Lower Pines are occupied for the 2017 season. It is estimated that sixteen (16) of the trailers are unable to be moved.

Engineering Assessment

Walter Fedy and Art Bos Engineering & Environmental Services Inc. were retained in 2015 to complete an analysis of the condition of the existing sanitary system in the Lower Pines and to prepare options for the repair or replacement of the sanitary, water and hydro services.

The Phase One report (December 2015) identified a number of deficiencies with the existing sanitary services and sewage disposal system in the Lower Pines, including:

- heavy groundwater infiltration to sewers at 17 site connections, at manholes and at one broken pipe;
- potential for effluent (phosphorus) transmission from the existing tank area to the Grand River;
- thin overburden in the lower campground through which all drainage including enhanced infiltration waters from the upper campground must flow to the river;

- degraded sand in the septic bed partly due to hydraulic overloading;
- low gradient sewers relative to sewer size;
- debris in sewers; and
- initial signs of deterioration of concrete tanks, especially in upper distribution tanks.

The combination of shallow depth sewers and abundant ground water has resulted in the sewers being susceptible to frost heave. This may explain the number of leaks and breaks in the sewer lines. There have also been reports of odors emanating from the sewers in the past although this has not been reported in recent years.

Water quality analysis was conducted throughout 2016 to determine if phosphorus from the septic system was entering the river. The analysis indicated that phosphorus levels in the groundwater were not a concern. However, the consultants pointed out that the phosphorus levels could be artificially low due to the diluting effect of the groundwater that is being pumped into the septic bed.

Ministry of the Environment and Climate Change (MOECC) Requirements

The on-site sewage disposal systems at Elora Gorge Conservation Area, including the Pines Campground septic system, are regulated by an Environmental Compliance Approval (ECA) that was issued by the MOECC in 2013. The ECA recognized that the onsite sewage disposal systems at Elora Gorge had the potential to negatively impact groundwater. It was also recognized that there were potential issues with the sanitary system in the Pines Campground.

Consequently, the ECA identified that the GRCA would work towards connecting onsite sewage disposal systems to the municipal system within a five year period or as septic systems fail. The five year period expires in April 2018 and the GRCA is required to submit a work plan to the MOECC by July 18, 2017 outlining how the terms of the ECA will be met. The Pines Campground is the last major section of Elora Gorge CA that needs to be connected to municipal services.

Continued use of the existing septic system in the Pines Campground would require a full environmental impact assessment including hydrogeological studies. A new application for Environmental Compliance Approval would need to be submitted. The required studies and approvals process could take in excess of two years to complete. In addition, improvements to the existing septic bed would be required to meet current effluent quality standards including the addition of enhanced or tertiary pretreatment with nutrient control. Even with these improvements it is uncertain as to whether the MOECC would approve the continued use of the septic system when a municipal servicing option is available.

Phase Two of the project involved the development of sewage disposal and sanitary servicing options. The Phase 2 analysis was completed in early May 2017.

Sewage Disposal Options

The sewage disposal options are continue the use of the existing septic system or connect to municipal services. The cost of connecting the campground to municipal services ($542,000) is higher than the anticipated cost to complete studies and upgrades to the existing septic system ($440,000). However,

there are a number of advantages to connecting to the municipal system which outweigh the slightly higher implementation cost:

- Greater likelihood that it would be supported by the MOECC
- Lower long term operating costs
- Longer life expectancy, and
- Flexibility to add more serviced sites in the future (septic systems are built for a defined capacity).

Based on these considerations connection of the Pines Campground to the Elora Water Pollution Control Plant (WPCP) would be the logical sewage disposal option. The GRCA has initiated discussions with the Township of Centre Wellington with regard to extending servicing to the Pines Campground. Preliminary analysis of predicted sewage flows indicates that the sewage capacity already allocated to the GRCA may be adequate to accommodate additional flows from the Pines Campground.

Servicing Options

A total of six servicing options were considered. Options One through Four involved the repair or replacement of existing services in the Lower Pines. Sanitary, water and hydro services in the Lower Pines campground are located approximately 20-23 metres offset from the road edge and run beneath the existing trailers. Since access to the services is constrained by the location of the trailers some or all of the trailers would need to be moved from the site during construction in Options One, Two and Three. Option Four considered the replacement of existing services in the roadway to avoid the need to move any trailers.

Options Five and Six considered the relocation of the Lower Pines campsites to the Upper Pines. Option Five involved the development of fifty (50) new campsites on full services (sanitary, water and hydro) in the upper section of the campground to replace the fifty (50) existing sites in the lower section. Option Six involved the development of a similar number of sites in the Upper Pines but only water and hydro would be provided. This would be similar to the servicing provided in most seasonal campsites at other GRCA parks.

A summary of the servicing options, including the advantages and disadvantages of each, is shown in Figure 2.

Figure 2: Elora Pines Campground – Sanitary Servicing Options

Option	Description	Total Estimated Cost	Advantages	Disadvantages
1	**Repair Existing Sanitary Sewers**	$1,002,000	• Lowest capital cost solution • Maintains current revenue potential • Allows most trailers/buildings to remain	• Ongoing maintenance & monitoring of groundwater flows • Does not address sewage odour • Relocation of some trailers required • Does not address low-gradient sewers • Shallow sewers will remain subject to frost heave • Does not address aging hydro & water • Does not eliminate environmental risks related to the pumping station location
2	**Reline Existing Sanitary Sewers**	$1,240,000	• Avoids complete replacement of sewers • Maintains current revenue potential • Allows most trailer/buildings to remain • Provides slightly better service life compared to repairs only	• Same as above
3	**Replace Existing Sanitary Sewers in Same Location**	$1,926,000	• Opportunity to improve sewer grades • Maintains current revenue potential • Opportunity to replace hydro & water services at the same time	• Ongoing maintenance & monitoring of groundwater flows • Shallow sewers will remain subject to frost heave • All trailers/buildings must be moved • Does not eliminate environmental risks related to the pumping station location • Very high construction cost
4	**Replace Existing Sanitary Sewers in Road**	$2,428,000	• Improves sewer grades • Maintains current revenue potential	• Ongoing maintenance & monitoring required • Does not eliminate environmental risks

			• Avoids the need to move trailers • Opportunity to replace hydro & water services at the same time	related to the pumping station location • Requires blasting of bedrock to maintain vertical and horizontal separation between sanitary and water services • Highest construction cost
5	**Construct New Fully Serviced Campsites in Upper Pines (Sanitary sewers, water & hydro)**	$1,606,000	• Eliminates current & future groundwater infiltration concerns • Eliminates environmental risk regarding location of existing pumping station • Allows the campground to continuing operating with sanitary sewers • Maintains close to current revenue potential • Provides flexibility for additional campground expansion in the future • Provides the opportunity to gain day use area & river access	• All trailers/buildings must be moved • Still a relatively expensive option
6	**Construct New Partially Services Campsites in Upper Pines (Water & hydro only)**	$1,362,000	• Eliminates current & future groundwater infiltration concerns • Eliminates environmental risk regarding location of existing pumping station • Creates serviced sites that are consistent with other GRCA seasonal campgrounds • Lowest cost option that includes replacement of all services • Provides flexibility for additional campground expansion in the future • Provides the opportunity to gain day use area & river access	• All trailers/buildings must be moved • Requires a change in current campground operation • Generates the lowest revenue potential

After evaluating each of the six servicing scenarios, Option Five was selected as the preferred sanitary servicing approach based on the following considerations:

a) Financial Considerations
   - Adequate funding is available in Conservation Area Reserves to implement this option
   - Low long term operating costs
   - Maintains revenue potential at close to existing levels
b) Environmental Considerations
   - Meets the intention of the ECA for Elora Gorge Conservation Area
   - Eliminates the potential for effluent transmission to the river either through septic bed effluent or as a result of pumping station failure
   - Eliminates campsites from the West Montrose Reservoir inundation zone
   - Provides the opportunity to retire campsites, in other areas of the park, that are located in sensitive areas and replace them with serviced sites in the future
c) Operational Considerations
   - Lower, long term maintenance and operation requirements (e.g. annual monitoring and reporting)
   - Provides the opportunity to increase the supply of serviced sites
   - Provides future growth opportunities
   - Enhances the park user experience by giving visitors access to the river
   - Increases the amount of day use area available which provides a significant operational benefit to the park.

Communication with Seasonal Campers

Annually each seasonal camper receives a letter from the park superintendent outlining the process for reserving their site for the following season and to relay any changes or issues with respect to the campground. Concerns with respect to the sanitary sewers in the Lower Pines campground were communicated through the annual seasonal letter in 2009, 2012, 2015 and 2016. In August 2016 a separate letter was delivered to each seasonal camper outlining the results of the Phase One engineering analysis and the next steps in the process. On May 15, 2017 an information session was held with the seasonal campers to review the findings of the Phase Two analysis and to present a preferred servicing approach. Approximately 43 seasonal campers attended the meeting.

Phasing & Timing

The implementation of Option Five would be undertaken in two stages. Stage One would involve the installation of the forcemain from the Pines campground to connect to the existing forcemain at the North Washroom (approximately 1,200 m). The existing thirty five (35) campsites in the Upper Pines and the Pines washroom would be connected to the forcemain. It is proposed that Stage One work would commence in the fall of 2017 and be completed by May 1, 2018.

Stage Two would involve the development of fifty (50) new campsites in the Upper Pines area. It is likely that the approved site plan would be modified to meet current requirements. Engineering design and municipal approvals would take place during 2017 and early 2018. The tender for the campground development would be issued in the spring of 2018 with construction completed by late 2018. The new sites would be ready for occupancy in May 2019.

Potential Transition Options

The seasonal campers have been informed that 2017 may be the last year for site occupancy in the Lower Pines. Existing campers in the Lower Pines area will be given the opportunity to reserve one of the new sites in the Upper Pines if they so choose. In addition, staff are investigating two potential solutions that might permit trailers to remain in the Lower Pines for one additional year while the new campsites are being constructed. These options are:

1. Request the MOECC to permit the sewage flows from the Lower Pines to be pumped to the existing septic bed for one additional year.
2. Request permission from the Township of Centre Wellington to allow sewage flows from the Lower Pines to be pumped, using the existing pumping station, to the Elora WPCP via the new forcemain for one additional year.

Financial implications:

The Pines Campground, when fully occupied, generates $230,500 in revenue based on 2017 rates. The lower section of the campground accounts for $138,640 of that total. Option Five maintains the same number of campsites but with a slightly lower revenue generation of $228,100 due to the elimination of waterfront campsites which have the highest annual rates.

The total estimated cost to implement Option Five has been estimated at $1,606,000 (excluding HST) which includes engineering design fees and a 20% construction contingency. Assuming full occupancy of the campground, the capital cost of this project would be recovered over a 7 year period. The construction cost estimate will be refined through the detailed engineering design process. A subsequent report would be brought to the board with a revised cost estimate before proceeding to tender Stage One of the project.

Other department considerations:

None.

Prepared by:

Dave Bennett
Director of Operations

Approved by:

Joe Farwell
Chief Administrative Officer

Grand River Conservation Authority

Report:	GM-06-17-70
Date:	June 23, 2017
To:	Members of Grand River Conservation Authority
Subject:	Report of the Special Recognition Committee – Meeting of May 26, 2017

Recommendation:

THAT the report of the Special Recognition Committee with respect to its meeting held May 26, 2017 be received for information; and THAT the recommendation of the Special Recognition to the General Membership be approved.

Summary:

Not applicable.

Report:

The Special Recognition Committee comprised of members of the Grand River Conservation Authority (GRCA) met on May 26, 2017 to review and discuss the nominees for Grand River Conservation Watershed and Honour Roll Awards.

The Special Recognition Committee recommends that the following candidates receive a 2017 Watershed Award:

1. Apotex Pharmachem Inc.
2. Karen Bateman and Marilyn Swaby
3. Stewart Wright
4. Cambridge City Green
5. Nature Guelph

and, that the following candidate receives a 2017 Honour Roll Award:

1. Marilyn Murray

Submitted by:

Helen Jowett, Chair

Grand River Conservation Authority

Report number: GM-06-17-66

Date: June 23, 2017

To: Members of the Grand River Conservation Authority

Subject: Building Better Communities and Conserving Watersheds Act, 2017.

Recommendation:

That Report GM-06-17-66 *Building Better Communities and Conserving Watersheds Act, 2017* be received as information.

Summary:

On May 30, 2017 the Ontario Minister of Municipal Affairs introduced Bill 139, *Building Better Communities and Conserving Watersheds Act, 2017*. The bill includes proposed changes to the Conservation Authorities Act. On June 14 the Minister of Natural Resources and Forestry announced the Ministry's plan for implementing the changes proposed in the Act. The plan is titled *Conserving our Future: A Modernized Conservation Authorities Act*. The plan includes actions to clarify the role of Conservation Authorities, enhancing transparency in decision making, improving collaboration and engagement among watershed stakeholders, and modernizing funding mechanisms.

Report:

In 2015 the Province initiated a review of the Conservation Authorities Act (CA Act) which governs Ontario's 36 Conservation Authorities. In August 2015 the Grand River Conservation Authority provided detailed comments to the Province related to Governance, Roles and Responsibilities, and Funding. In the Spring of 2016, the Ontario Ministry of Natural Resources and Forestry (MNRF) posted a second discussion paper on the Environmental Registry which identified priorities for moving forward with the CA Act review: *Conserving Our Future: Proposed Priorities for Renewal*. This was followed up by several multi-stakeholder engagement sessions. The Grand River Conservation Authority provided comments on this discussion paper in August 2016.

On May 30, 2017 the Ontario Minister of Municipal Affairs introduced Bill 139, *Building Better Communities and Conserving Watersheds Act, 2017*. Schedule 4 of the bill includes proposed changes to the *Conservation Authorities Act*. Bill 139 includes a new statement of purpose for the *Conservation Authorities Act*: "The purpose of this Act is to provide for the organization and delivery of programs and services that further the conservation, restoration, development and management of natural resources

in watersheds in Ontario. " This is a positive statement of purpose that confirms the Province's recognition of the value of managing natural resources on a watershed bases.

On June 14, the Honourable Kathryn McGarry, Minister of Natural Resources and Forestry, held an event at the GRCA head office to announce the Ministry's plan for implementing the changes proposed in the Act. The plan is titled *Conserving our Future: A Modernized Conservation Authorities Act*, and the document is found on the Environmental registry at http://apps.mnr.gov.on.ca/public/files/er/mnrf-17-044-conserving-our-future-en.pdf.

The following material is copied directly from the plan, and it summarizes the five actions areas identified. The material includes a brief description of the action item, along with specific proposed actions.

1. ACTIONS FOR STRENGTHENING OVERSIGHT AND ACCOUNTABILITY: Proposals are being made to modernize the *Conservation Authorities Act* to strengthen oversight and accountability in decision-making and to ensure that decisions regarding the conservation, restoration, development and management of Ontario's natural resources are made in accordance with modern expectations for participation and transparency in decision-making.
    a. Updating appointment processes and requirements;
    b. Updating conservation authority governance practices;
    c. Enabling the MNRF to conduct program and operational reviews;
    d. Updating guidance on the use of dispute resolution mechanisms;
    e. Confirming expectations for conservation authority restructuring decisions.

2. ACTIONS FOR INCREASING CLARITY AND CONSISTENCY IN PROGRAMS AND SERVICES: The MNRF is proposing amendments to modernize the *Conservation Authorities Act* to increase clarity and consistency in the various roles and responsibilities undertaken by conservation authorities to further the conservation, restoration, development and management of natural resources.
    a. Clarifying the role of conservation authorities;
    b. Clarifying expectations for Provincially mandated programs and services;
    c. Clarifying expectations for municipally assigned programs and services;
    d. Clarifying expectations for watershed specific programs and services.

3. ACTIONS FOR INCREASING CLARITY AND CONSISTENCY IN REGULATORY REQUIREMENTS: The MNRF is proposing amendments to modernize the *Conservation Authorities Act* to increase clarity and consistency in regulatory requirements established by the Province under the authority of the act.
    a. Clarifying the scope of activities subject to conservation authority approval;
    b. Clarifying the scope of a conservation authority's review;
    c. Updating compliance mechanisms and enforcement tools;
    d. Enabling the Province to regulate other activities within the conservation authority's area of jurisdiction in the future.

4. ACTIONS FOR IMPROVING COLLABORATION AND ENGAGEMENT: The MNRF is proposing updates to modernize the *Conservation Authorities Act* framework to improve collaboration and engagement among all parties interested or involved in the programs and services provided by conservation authorities to further the conservation, restoration, development and management of natural resources in Ontario
    a. Increasing Indigenous, public and stakeholder outreach and engagement;
    b. Increasing Indigenous community participation in conservation authorities;
    c. Increasing coordination between Provincial ministries;
    d. Increasing collaboration between conservation authorities and the Province;
    e. Increasing collaboration and engagement on service delivery standards.

5. ACTIONS FOR MODERNIZING FUNDING MECHANISMS: The MNRF is proposing amendments to modernize the *Conservation Authorities Act* framework to update the funding mechanisms used by conservation authorities to support their programs, services and operations.
    a. Updating how costs are apportioned among participating municipalities;
    b. Increasing clarity and consistency in the development and use of fees;
    c. Exploring options for updating Provincial funding levels.

Next steps

The plan *(Conserving our Future: A Modernized Conservation Authorities Act)* has been posted on the Environmental Registry for public review. There is an opportunity to provide comments until July 31, 2017. Conservation Ontario and Conservation Authorities (including GRCA), along with several other groups and individuals, participated in the consultation process for the development of the plan. The Province's proposed changes address five key priorities identified and promoted by Conservation Ontario and the Conservation Authorities throughout the consultation stages. Specifically, they:

1. confirm the broad and important role of Conservation Authorities as valuable watershed-based natural resource managers in Ontario,
2. commit to explore options for updating provincial funding levels for existing provincially mandated programs such as natural hazards and potentially new programs such as wetland conservation and climate change adaptation,
3. establish a multi-ministry table to ensure increased coordination among provincial ministries regarding the wide range of support CAs provide to the multiple ministries,
4. require conservation authorities to meet public sector best management practices and standards, and
5. establish a multi-stakeholder Service Delivery Committee to address client service issues.

The proposed changes to the Act would enable the Ministry to make regulations; it is expected that the Ministry will prioritize its action plan, and implement changes over a four to five year period. Conservation Ontario and Conservation Authorities will request opportunities to provide input into any regulatory changes.

Conservation Ontario staff are reviewing the Minister's plan and are preparing a report for consideration at the June 26 Council meeting. The report will include an analysis of potential impacts on Conservation Authorities, and will form the basis for a submission to the Ministry under the environmental registry posting. Conservation Ontario's report will be circulated to the GRCA membership at the July board meeting, and any additional comments from GRCA can be submitted to the Ministry prior to the July 31 deadline.

The *Building Better Communities and Conserving Watersheds Act, 2017* is the culmination of several years of work and consultation between the Ministry of Natural Resources and Forestry and stakeholders with an interest in natural resource management. The inclusion of actions to clarify the role of Conservation Authorities, enhance transparency in decision making, improve collaboration and engagement among watershed stakeholders, and modernize funding mechanisms are all positive steps. GRCA staff will continue to participate in discussions with Ministry staff as new regulations are developed.

Financial Implication:

Not Applicable.

Prepared by:

Joe Farwell, P.Eng.
Chief Administrative Officer

Grand River Conservation Authority

Report number: GM-06-17-60

Date: June 23, 2017

To: Members of the Grand River Conservation Authority

Subject: Cash and Investments Status Report as at May 31, 2017

Recommendation:

THAT Report Number GM-06-17-60 – Cash and Investments Status Report as of May 31, 2017 be received as information.

Summary:

The cash position included Notes Receivable of the Grand River Conservation Authority as at May 31, 2017 was $27,437,728 with outstanding cheques written in the amount of $175,118.

The funds were invested in accordance with the guidelines adopted by the General Membership.

Report:

Attached.

Financial implications:

Interest rates, etc. are shown on the report.

Other department considerations:

Not applicable.

Prepared by:

Carol Anne Johnston
Senior Accountant

Sonja Radoja
Manager of Corporate Services

Approved by:

Keith Murch
Assistant CAO/Secretary-Treasurer

Grand River Conservation Authority
Cash and Investments Status Report
May 31, 2017

Date Invested	Location	Type	Amount	Rate	Maturity	2017
	C.I.B.C.	Current Account	2,453,012	2% Below Average Prime or .70%		
	Wood Gundy	Current Account	-	0.20%		
	C.I.B.C.	Property Account	9,520			
	C.I.B.C.	SPP Account	1,379,798	2% Below Average Prime or .70%		
	C.I.B.C.	U.S.	68			
	C.I.B.C.	PayPal Account	15,106			
	C.I.B.C.	Call Centre	22,820			
	Royal Bank	Conestogo	10,076			
	Royal Bank	Brant	11,003			
	Royal Bank	Luther	6,970			
			3,908,373			
September 9, 2009	CIBC Renaissance	Account	2,261,361	0.75%		11,384
October 1, 2014	CIBC Trust Savings	Account	2,780,509	0.75%		13,998
July 15, 2016	One Investment Savings	Account	4,030,439	1.15%		31,112
November 8, 2012	National Bank	Bond	1,940,000	2.69%	August 21, 2017	20,684
June 6, 2013	Royal Bank	Bond	1,000,000	2.26%	March 12, 2018	17,318
November 7, 2013	Bank of Montreal	Bond	1,746,000	2.24%	December 11, 2017	37,462
May 5, 2014	Royal Bank	Bond	987,000	2.26%	March 12, 2018	15,900
December 8, 2014	Laurentian Bank	Bond	1,578,000	2.81%	June 13, 2019	37,241
January 28, 2015	CIBC	Bond	726,046	1.80%	May 15, 2019	13,069
September 3, 2015	CIBC	Bond	2,000,000	2.15%	September 3, 2025	36,526
October 14, 2015	Laurentian Bank	Bond	1,996,000	2.50%	January 23, 2020	49,000
March 1, 2016	CIBC	Bond	1,300,000	1.70%	March 1, 2023	19,010
September 16, 2016	CIBC	Bond	1,184,000	1.30%	March 13, 2020	12,356
	Total G.R.C.A. Investments		23,529,355			315,059
	G.R.C.A. Funds		27,437,728			
	Outstanding Cheques		175,118			

Investment By Category and Institution

	% of Total Portfolio	% of Total Portfolio	
Government	0%	Gov't of Canada	0%
		Province of Ontario	0%
Banks	83%	C.I.B.C.	44%
		Bank of Nova Scotia	0%
		Bank of Montreal	7%
		Royal Bank	8%
		Toronto Dominion	0%
		National	8%
		Laurentian	15%
Other	17%	One Investment Program	17%

Grand River Conservation Authority

Report number: GM-06-17-61

Date: June 23, 2017

To: Members of the Grand River Conservation Authority

Subject: Financial Summary for the Period Ending May 31, 2017

Recommendation:

THAT the Financial Summary for the period ending May 31, 2017 be approved.

Summary:

The Financial Summary includes the 2017 *actual* income and expenditures. The budget approved at the February 24, 2017 General Meeting is included in the *Budget* column. The *Current Forecast* column will indicate an estimate of income and expenditures for the whole year. Any changes between the *Current Forecast* and the *Previous Forecast* will be discussed during the meeting. At this time a surplus of $NIL at year-end is anticipated.

Report:

The Financial Summary is attached.

Financial implications:

The activity summarized will result in a NIL net result at December 31, 2017.

Other department considerations:

The management committee and appropriate supervisory staff receive monthly financial reports and advise the finance department of applicable forecast adjustments.

Prepared by:

Sonja Radoja
Manager Corporate Services

Approved by:

Keith Murch
Assistant CAO/Secretary-Treasurer

GRAND RIVER CONSERVATION AUTHORITY
STATEMENT OF OPERATIONS
FOR THE PERIOD ENDING May 31, 2017

	SCHEDULE	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
REVENUE							
Municipal							
General Municipal Levy (Operating)	various	9,809,000	10,025,000	3,341,666	10,025,000	10,025,000	0
General Municipal Levy (Capital)	various	1,000,000	1,050,000	350,000	1,050,000	1,050,000	0
Special Municipal Levy	various	113,499	150,000	18,486	150,000	150,000	0
Other	various	977,680	800,000	1,039,723	800,000	800,000	0
		11,900,179	**12,025,000**	**4,749,875**	**12,025,000**	**12,025,000**	**0**
Government Grants							
MNR Transfer Payments	various	871,073	871,073	0	871,073	871,073	0
Source Protection Program-Provincial	various	1,159,446	835,000	699,926	1,970,000	1,970,000	**0**
Other Provincial	various	955,572	1,147,500	659,048	1,147,500	1,147,500	0
Federal	various	187,159	289,500	252,786	289,500	289,500	0
		3,173,250	**3,143,073**	**1,611,760**	**4,278,073**	**4,278,073**	**0**
Self Generated							
User Fees and Sales							
Enquiries and Permits	4	511,202	428,500	203,026	428,500	428,500	0
Plan Input and Review	4	411,561	398,000	133,828	398,000	398,000	0
Nursery and Woodlot Management	5	502,611	515,000	257,225	515,000	515,000	0
Consulting	4	0	0	3,726	0	0	0
Conservation Lands Income	10	59,091	71,000	3,965	71,000	71,000	0
Conservation Areas User Fees	13	8,533,069	7,300,000	2,346,136	7,300,000	7,300,000	0
Nature Centres and Camps	8	876,797	876,500	226,983	876,500	876,500	0
Merchandising and Sales	8	3,647	0	662	0	0	0
Property Rentals	11	3,082,548	2,929,700	1,540,697	2,929,700	2,929,700	0
Hydro Generation	12	487,033	470,000	162,788	470,000	470,000	0
Land Sales	10	408,750	0	0	0	0	0
Grand River Conservation Foundation	various	676,104	559,500	58,457	559,500	559,500	0
Donations	various	126,728	244,000	277,104	244,000	244,000	0
Landowner Contributions	5	193,448	300,000	138,595	300,000	300,000	0
Investment Income	14	443,137	450,000	66,732	450,000	450,000	0
Miscellaneous Income	various	55,333	48,000	943	48,000	48,000	0
Total Self-Generated Revenue		**16,371,059**	**14,590,200**	**5,420,867**	**14,590,200**	**14,590,200**	**0**
TOTAL REVENUE		**31,444,488**	**29,758,273**	**11,782,502**	**30,893,273**	**30,893,273**	**0**

GRAND RIVER CONSERVATION AUTHORITY
STATEMENT OF OPERATIONS
FOR THE PERIOD ENDING May 31, 2017

	SCHEDULE	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
EXPENSES							
OPERATING							
Water Resources Planning & Environment	1	1,908,913	2,181,300	937,664	2,181,300	2,181,300	0
Flood Forecasting and Warning	2	692,104	780,300	382,199	780,300	780,300	0
Water Control Structures	3	1,570,819	1,678,900	626,881	1,678,900	1,678,900	0
Resource Planning	4	1,796,981	1,922,900	778,267	1,922,900	1,922,900	0
Forestry & Conservation Land Property Taxes	5	1,305,453	1,489,700	722,389	1,489,700	1,489,700	0
Conservation Services	6	758,769	837,500	343,113	837,500	837,500	0
Communications & Foundation	7	598,583	676,900	259,688	676,900	676,900	0
Environmental Education	8	1,224,383	1,245,800	501,618	1,245,800	1,245,800	0
Corporate Services	9	2,882,470	3,244,705	1,312,126	3,244,705	3,244,705	0
Conservation Lands	10	1,980,934	1,926,200	812,827	1,926,200	1,926,200	0
Property Rentals	11	1,766,373	1,797,900	610,802	1,797,900	1,797,900	0
Hydro Production	12	211,224	65,000	154,850	65,000	65,000	0
Conservation Areas	13	6,671,933	6,550,000	1,959,716	6,550,000	6,550,000	0
Miscellaneous	14	45,814	70,000	33,275	70,000	70,000	0
Information Systems	16	1,071,038	1,105,000	502,477	1,105,000	1,105,000	0
Motor Pool	16	802,874	888,400	295,599	888,400	888,400	0
Less: Internal Charges (IS & MP)	16	(1,873,912)	(1,993,400)	(798,076)	(1,993,400)	(1,993,400)	0
Total OPERATING Expenses		**23,414,753**	**24,467,105**	**9,435,415**	**24,467,105**	**24,467,105**	**0**
CAPITAL							
Water Resources Planning & Environment	1	52,167	110,000	55,420	110,000	110,000	0
Flood Forecasting and Warning	2	119,443	190,000	76,314	190,000	190,000	0
Water Control Structures	3	1,044,865	1,500,000	285,178	1,500,000	1,500,000	0
Nature Centres	8	0	0	0	0	0	0
Conservation Areas	13	771,510	683,000	249,034	683,000	683,000	0
Corporate Services	9	0	0	0	0	0	0
Information Systems	16	178,349	250,000	105,522	250,000	250,000	0
Motor Pool	16	348,660	300,000	17,915	300,000	300,000	0
Less: Internal Charges (IS & MP)	16	(478,902)	(369,600)	(1,420,412)	(369,600)	(369,600)	0
Total Capital Expenses		**2,036,092**	**2,663,400**	**(631,029)**	**2,663,400**	**2,663,400**	**0**
SPECIAL							
Water Resources Planning & Environment	1	301,587	203,000	86,324	203,000	203,000	0
Flood Forecasting and Warning	2	170,975	200,000	83,292	200,000	200,000	0
Forestry	5	80,614	200,000	64,314	200,000	200,000	0
Conservation Services	6	1,154,929	983,000	497,106	983,000	983,000	0
Communications	7	0	0	0	0	0	0
Environmental Education	8	262,426	220,000	246,109	220,000	220,000	0
Conservation Land Purchases	10	67,239	0	48,731	0	0	0
Conservation Lands	10	396,830	587,000	53,062	587,000	587,000	0
Property Development	11	0	50,000	0	50,000	50,000	0
Hydro Generation	12	0	200,000	0	200,000	200,000	0
Miscellaneous	14	29,824	35,000	788	35,000	35,000	0
Source Protection Program	15	1,159,446	835,000	699,926	1,970,000	1,970,000	**0**
Total SPECIAL PROJECTS Expenses		**3,623,870**	**3,513,000**	**1,779,652**	**4,648,000**	**4,648,000**	**0**
Total Expenses		**29,074,715**	**30,643,505**	**10,584,038**	**31,778,505**	**31,778,505**	**0**
Gross Surplus		**2,369,773**	**(885,232)**	**1,198,464**	**(885,232)**	**(885,232)**	**0**
Prior Year Surplus Carryforward		**429,618**	**315,832**	**315,832**	**315,832**	**315,832**	**0**
Net Funding FROM/(TO) Reserves		**(2,483,559)**	**569,400**	**0**	**569,400**	**569,400**	**0**
NET SURPLUS		**315,832**	**0**	**1,514,296**	**0**	**0**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 1 - Water Resources - Planning and Environment
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	1,353,773	1,541,600	543,153	1,541,600	1,541,600	
Administration Expenses	268,994	306,900	221,665	306,900	306,900	
Insurance Expenses	124,652	126,000	115,267	126,000	126,000	
Other Operating Expenses	161,494	206,800	57,579	206,800	206,800	
Total OPERATING Expenditures	**1,908,913**	**2,181,300**	**937,664**	**2,181,300**	**2,181,300**	
Instrumentation	37,320	60,000	13,276	60,000	60,000	
Water Quality Monitoring Equipment	14,847	50,000	42,144	50,000	50,000	
Total CAPITAL Expenditures	**52,167**	**110,000**	**55,420**	**110,000**	**110,000**	
Grand River Water Management Plan	82,410	20,000	11,248	20,000	20,000	
Dundas Valley Groundwater	763	0	0	0	0	
Upper Blair Drainage	100,294	100,000	28,492	100,000	100,000	
Large Cover Placement Project	0	0	0	0	0	
Waste Water Optimization Program	118,120	83,000	46,584	83,000	83,000	
Drought Contingency Pilot Project	0	0	0	0	0	
Total SPECIAL PROJECT Expenditures	**301,587**	**203,000**	**86,324**	**203,000**	**203,000**	
Grand River Watershed Management Plan	20,000	0	0	0	0	
Planning Enforcement	0	0	0	0	0	
Total FUNDING to RESERVES	**20,000**	**0**	**0**	**0**	**0**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**2,282,667**	**2,494,300**	**1,079,408**	**2,494,300**	**2,494,300**	**0**
Funding						
Municipal						
General Municipal Levy (Operating)	1,981,700	2,030,600	676,867	2,030,600	2,030,600	
General Municipal Levy (Captial)	10,000	60,000	20,000.00	60,000	60,000	
Special Levies	113,499	150,000	18,486	150,000	150,000	
Municipal Other	26,534	0	0	0	0	
Government Grants						
MNRTransfer Payments	33,200	33,200	0	33,200	33,200	
Other Provincial	188,050	140,500	108,829	140,500	140,500	
Federal	22,410	0	5,840	0	0	
Self Generated						
Donations Other	0	3,000	0	3,000	3,000	
Funding From Reserves						
Grand River Watershed Management Plan	0	27,000	0	27,000	27,000	
Gauges	0	50,000	0	50,000	50,000	
TOTAL FUNDING	**2,375,393**	**2,494,300**	**830,022**	**2,494,300**	**2,494,300**	**0**
Net Surplus/(Deficit)	**92,726**	**0**	**(249,386)**	**0**	**0**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 2 - Flood Forecasting and Warning
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	387,398	449,700	158,205	449,700	449,700	
Administration Expenses	244,714	255,700	197,760	255,700	255,700	
Other Operating Expenses	59,992	74,900	26,234	74,900	74,900	
Total OPERATING Expenditures	**692,104**	**780,300**	**382,199**	**780,300**	**780,300**	
Hardware	81,180	88,000	68,914	88,000	88,000	
Stream Gauges	38,263	102,000	7,400	102,000	102,000	
Total CAPITAL Expenditures	**119,443**	**190,000**	**76,314**	**190,000**	**190,000**	
Floodplain Mapping Projects	170,975	200,000	83,292	200,000	200,000	
Total SPECIAL PROJECT Expenditures	**170,975**	**200,000**	**83,292**	**200,000**	**200,000**	
Total FUNDING to RESERVES	**70,000**	**0**	**0**	**0**	**0**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**1,052,522**	**1,170,300**	**541,805**	**1,170,300**	**1,170,300**	**0**
Funding						
Municipal						
General Municipal Levy (Operating)	507,745	527,345	175,782	527,345	527,345	
General Municipal Levy (Captial)	190,000	190,000	63,333	190,000	190,000	
Municipal Other						
Government Grants						
MNRTransfer Payments	252,955	252,955	0	252,955	252,955	
Other Provincial	170,975	200,000	266,786	200,000	200,000	
TOTAL REVENUE	**1,121,675**	**1,170,300**	**505,901**	**1,170,300**	**1,170,300**	**0**
Net Surplus/(Deficit)	**69,153**	**0**	**(35,904)**	**0**	**0**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 3 - Water Control Structures
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	1,067,474	1,136,000	416,110	1,136,000	1,136,000	
Administration Expenses	16,997	28,000	5,642	28,000	28,000	
Property Taxes	180,221	183,500	0	183,500	183,500	
Other Operating Expenses	306,127	331,400	205,129	331,400	331,400	
Total OPERATING Expenditures	**1,570,819**	**1,678,900**	**626,881**	**1,678,900**	**1,678,900**	
Total CAPITAL Expenditures	**1,044,865**	**1,500,000**	**285,178**	**1,500,000**	**1,500,000**	
Total FUNDING to RESERVES	**314,000**	**0**	**0**	**0**	**0**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**2,929,684**	**3,178,900**	**912,059**	**3,178,900**	**3,178,900**	**0**
Funding						
Municipal						
General Municipal Levy (Operating)	1,287,050	1,278,550	426,183	1,278,550	1,278,550	
General Municipal Levy (Capital)	800,000	800,000	266,667	800,000	800,000	
Government Grants						
MNR Grant	400,350	400,350	0	400,350	400,350	
Provincial	442,724	700,000	150,636	700,000	700,000	
Self Generated						
Miscellaneous	0	0	0	0	0	
TOTAL REVENUE AND FUNDING FROM RESERVES	**2,930,124**	**3,178,900**	**843,486**	**3,178,900**	**3,178,900**	**0**
Net Surplus/(Deficit)	**440**	**0**	**(68,573)**	**0**	**0**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 4 - Resource Planning
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	1,547,162	1,656,500	580,046	1,656,500	1,656,500	
Administration Expenses	193,047	213,800	177,364	213,800	213,800	
Other Operating Expenses	56,772	52,600	20,857	52,600	52,600	
Total OPERATING Expenditures	**1,796,981**	**1,922,900**	**778,267**	**1,922,900**	**1,922,900**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**1,796,981**	**1,922,900**	**778,267**	**1,922,900**	**1,922,900**	**0**
Funding						
Municipal						
General Municipal Levy (Operating)	1,001,132	981,832	327,277	981,832	981,832	
Government Grants						
MNR Provincial Grant	114,568	114,568	0	114,568	114,568	
Other Provinicial	22	0	9,964	0	0	
Self Generated						
Solicitor Enquiry Fees	64,935	50,500	26,320	50,500	50,500	
Permit Fees	446,267	378,000	176,706	378,000	378,000	
Plan Review Fees	411,561	398,000	133,828	398,000	398,000	
TOTAL REVENUE	**2,038,485**	**1,922,900**	**674,095**	**1,922,900**	**1,922,900**	**0**
Net Surplus/(Deficit)	**241,504**	**0**	**(104,172)**	**0**	**0**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 5 - Forestry & Conservation Lands Property Taxes
FOR THE PERIOD ENDING May 31, 2017

How much does it cost, and who pays for it?	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
Expenditures and Funding to Reserves						
Compensation and Benefits	538,843	524,200	258,067	524,200	524,200	
Administration Expenses	54,914	42,500	48,616	42,500	42,500	
Property Taxes	160,690	172,600	1,261	172,600	172,600	
Other Operating Expenses	551,006	750,400	414,445	750,400	750,400	
Total OPERATING Expenditures	**1,305,453**	**1,489,700**	**722,389**	**1,489,700**	**1,489,700**	
Ecological Restoration	80,614	200,000	64,314	200,000	200,000	
Total SPECIAL PROJECT Expenditures	**80,614**	**200,000**	**64,314**	**200,000**	**200,000**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**1,386,067**	**1,689,700**	**786,703**	**1,689,700**	**1,689,700**	**0**
Funding						
Municipal						
General Municipal Levy (Operating)	626,300	632,700	210,900	632,700	632,700	
Municipal Other						
Government Grants						
Provincial	0	0	1,522	0	0	
Federal	1,839	0	28,380	0	0	
Self Generated						
Nursery	433,051	500,000	255,006	500,000	500,000	
Landowner Contributions (Tree Planting)	193,448	300,000	138,595	300,000	300,000	
Donations - Foundation	68,311	57,000	0	57,000	57,000	
Donations - Other	52,308	200,000	255,906	200,000	200,000	
TOTAL REVENUE	**1,375,257**	**1,689,700**	**890,309**	**1,689,700**	**1,689,700**	**0**
Net Surplus/(Deficit)	**(10,810)**	**0**	**103,606**	**0**	**0**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 6 - Conservation Services
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	645,561	672,900	252,289	672,900	672,900	
Administration Expenses	97,208	107,800	80,580	107,800	107,800	
Other Operating Expenses	16,000	56,800	10,244	56,800	56,800	
Total OPERATING Expenditures	**758,769**	**837,500**	**343,113**	**837,500**	**837,500**	
RWQP Grants	943,635	800,000	356,717	800,000	800,000	
Brant/Brantford Childrens Water Festival	24,514	26,000	17,963	26,000	26,000	
Haldimand Childrens Water Festival	23,188	20,000	17,051	20,000	20,000	
Species at Risk	70,751	60,000	40,283	60,000	60,000	
Great Lakes SHSM Event	13,265	0	14,202	0	0	
Great Lakes Agricultural Stewardship Initiative	79,576	77,000	50,890	77,000	77,000	
Total SPECIAL PROJECT Expenditures	**1,154,929**	**983,000**	**497,106**	**983,000**	**983,000**	
Total FUNDING to RESERVES	**17,000**	**0**	**0**	**0**	**0**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**1,930,698**	**1,820,500**	**840,219**	**1,820,500**	**1,820,500**	**0**
Funding						
Municipal						
General Municipal Levy (Operating)	666,700	689,500	229,833	689,500	689,500	
Municipal Other	943,636	800,000	1,039,723	800,000	800,000	
Government Grants						
Other Provincial	107,410	107,000	108,205	107,000	107,000	
Federal	70,751	60,000	167,370	60,000	60,000	
Self Generated						
Donations - Foundation	128,009	107,000	36,814	107,000	107,000	
Donations - Other	19,900	26,000	21,198	26,000	26,000	
Miscellaneous	873	0	873	0	0	
Funding From Reserves						
Cambridge Desiltation Pond	**1,089**	**1,000**	**0**	**1,000**	**1,000**	
Upper Grand Restoration	**0**	**30,000**	**0**	**30,000**	**30,000**	
TOTAL REVENUE	**1,938,368**	**1,820,500**	**1,604,016**	**1,820,500**	**1,820,500**	**0**
Net Surplus/(Deficit)	**7,670**	**0**	**763,797**	**0**	**0**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 7 - Communications
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	454,762	504,300	191,962	504,300	504,300	
Administration Expenses	63,979	74,000	66,217	74,000	74,000	
Other Operating Expenses	79,842	98,600	1,509	98,600	98,600	
Total OPERATING Expenditures	**598,583**	**676,900**	**259,688**	**676,900**	**676,900**	
Total FUNDING to RESERVES	**40,000**	**-**	**-**	**-**	**-**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**638,583**	**676,900**	**259,688**	**676,900**	**676,900**	**0**
Funding						
Municipal						
General Municipal Levy (Operating)	629,300	676,900	225,633	676,900	676,900	
Self Generated						
Donations - Foundation	40,000	0	0	0	0	
TOTAL REVENUE	**669,300**	**676,900**	**225,633**	**676,900**	**676,900**	**0**
Net Surplus/(Deficit)	**30,717**	**0**	**(34,055)**	**0**	**0**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 8 - Environmental Education
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	886,497	876,100	303,100	876,100	876,100	
Administration Expenses	76,459	72,800	74,858	72,800	72,800	
Insurance Expense	10,446	13,100	10,447	13,100	13,100	
Property Taxes	15,504	18,800	0	18,800	18,800	
Other Operating Expenses	235,477	265,000	113,213	265,000	265,000	
Total OPERATING Expenditures	**1,224,383**	**1,245,800**	**501,618**	**1,245,800**	**1,245,800**	
Major Repairs & Maintenance Projects	0	0	0	0	0	
Total CAPITAL Expenditures	**0**	**0**	**0**	**0**	**0**	
Apps' Mill Nature Centre Renovations	262,426	220,000	246,109	220,000	220,000	
Total SPECIAL PROJECT Expenditures	**262,426**	**220,000**	**246,109**	**220,000**	**220,000**	
Laurel Creek & Shades' Mills Nature Centre	**17,000**	**0**	**0**	**0**	**0**	
Total FUNDING to RESERVES	**17,000**	**0**	**0**	**0**	**0**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**1,503,809**	**1,465,800**	**747,727**	**1,465,800**	**1,465,800**	**0**
Funding						
Municipal						
General Municipal Levy (Operating)	303,900	319,300	106,433	319,300	319,300	
Government Grants						
Provincial	2,765	0	0	0	0	
Federal	88,574	53,000	22,463	53,000	53,000	
Self Generated						
Donations - Foundation	218,544	217,000	175	217,000	217,000	
Donations - Other	10,138	0	0	0	0	
Nature Centre Revenue - Schools	562,178	561,500	180,544	561,500	561,500	
Nature Centre Revenue - Community	26,347	33,000	17,272	33,000	33,000	
Nature Centre Revenue - Camps	288,272	282,000	29,167	282,000	282,000	
Merchandise Revenue	3,647	0	662	0	0	
TOTAL REVENUE	**1,504,365**	**1,465,800**	**356,716**	**1,465,800**	**1,465,800**	**0**
Net Surplus/(Deficit)	**556**	**0**	**(391,011)**	**0**	**0**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 9 - Corporate Services
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	1,883,139	1,834,900	793,037	1,834,900	1,834,900	
Administration Expenses	301,013	355,700	209,802	355,700	355,700	
Insurance	57,980	55,000	56,928	55,000	55,000	
Other Operating Expenses	704,059	1,069,105	273,087	1,069,105	1,069,105	
LESS: Recovery of Corporate Services Expenses	(63,721)	(70,000)	(20,728)	(70,000)	(70,000)	
Total OPERATING Expenditures	**2,882,470**	**3,244,705**	**1,312,126**	**3,244,705**	**3,244,705**	
Building	**220,000**	**0**	**0**	**0**	**0**	
Personnel	**35,000**	**0**	**0**	**0**	**0**	
Total FUNDING to RESERVES	**255,000**	**0**	**0**	**0**	**0**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**3,137,470**	**3,244,705**	**1,312,126**	**3,244,705**	**3,244,705**	**0**
Funding						
Municipal						
General Municipal Levy (Operating)	2,805,173	2,888,273	962,758	2,888,273	2,888,273	
Government Grants						
MNR Grants	70,000	70,000	0	70,000	70,000	
Funding From Reserves						
Personnel	0	15,000	0	15,000	15,000	
TOTAL REVENUE	**2,875,173**	**2,973,273**	**962,758**	**2,973,273**	**2,973,273**	**0**
Net Surplus/(Deficit)	**(262,297)**	**(271,432)**	**(349,368)**	**(271,432)**	**(271,432)**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 10 - Conservation Lands
FOR THE PERIOD ENDING May 31, 2017

How much does it cost, and who pays for it?

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
Expenditures and Funding to Reserves						
Compensation and Benefits	1,066,962	1,012,200	369,820	1,012,200	1,012,200	
Administration Expenses	90,519	153,400	87,827	153,400	153,400	
Insurance	157,658	167,600	148,276	167,600	167,600	
Other Operating Expenses	665,795	593,000	206,904	593,000	593,000	
Total OPERATING Expenditures	**1,980,934**	**1,926,200**	**812,827**	**1,926,200**	**1,926,200**	
Land Purchases/Land Sale Expenses	67,239	0	48,731	0	0	
Emerald Ash Borer	347,796	400,000	50,951	400,000	400,000	
Trees for Guelph	44,382	0	0	0	0	
Trails - Capital Maintenance	4,652	187,000	2,111	187,000	187,000	
Total SPECIAL PROJECT Expenditures	**464,069**	**587,000**	**101,793**	**587,000**	**587,000**	
Forestry	**70,000**	**0**	**0**	**0**	**0**	
Land Sale Proceeds	**408,750**	**0**	**0**	**0**	**0**	
Total FUNDING to RESERVES	**478,750**	**0**	**0**	**0**	**0**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**2,923,753**	**2,513,200**	**914,620**	**2,513,200**	**2,513,200**	**0**
Funding						
Municipal						
Municipal Other	7,510	0	0	0	0	
Government Grants						
Federal	4,200	93,500	2,240	93,500	93,500	
Self Generated						
Luther Misc Income	39,527	46,000	2,011	46,000	46,000	
Other Areas Income	19,564	25,000	1,954	25,000	25,000	
Timber Sales	69,560	15,000	2,219	15,000	15,000	
Land Sale Proceeds	408,750	0	0	0	0	
Donations - Foundation	88,661	143,500	1,218	143,500	143,500	
Donations - Other	44,382	15,000	0	15,000	15,000	
Miscellaneous Other	50,000	0	0	0	0	
Funding From Reserves						
Land	**67,239**	**400,000**	**0**	**400,000**	**400,000**	
Forestry (EAB)/Ice Storm/Legal	**185,000**	**0**	**0**	**0**	**0**	
Gravel	0	1,000	0	1,000	1,000	
TOTAL REVENUE	**984,393**	**739,000**	**9,642**	**739,000**	**739,000**	**0**
Net Surplus/(Deficit)	**(1,939,360)**	**(1,774,200)**	**(904,978)**	**(1,774,200)**	**(1,774,200)**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 11 - Property Rentals
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	524,518	602,500	200,142	602,500	602,500	
Administration Expenses	71,726	71,500	57,173	71,500	71,500	
Insurance Expense	15,788	11,300	15,481	11,300	11,300	
Property Taxes	141,710	98,000	-	98,000	98,000	
Other Operating Expenses	1,012,631	1,014,600	338,006	1,014,600	1,014,600	
Total OPERATING Expenditures	**1,766,373**	**1,797,900**	**610,802**	**1,797,900**	**1,797,900**	
Property Development	-	50,000	-	50,000	50,000	
Total SPECIAL PROJECT Expenditures	**0**	**50,000**	**0**	**50,000**	**50,000**	
Cottage Lot Program-Belwood	(40,000)	0	0	0	0	
Cottage Lot Program-Conestogo	80,000	0	0	0	0	
Demolitions	135,000	0	0	0	0	
Total FUNDING to RESERVES	**175,000**	**0**	**0**	**0**	**0**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**1,941,373**	**1,847,900**	**610,802**	**1,847,900**	**1,847,900**	**0**
Funding						
Self Generated						
Belwood	938,700	947,000	555,082	947,000	947,000	
Conestogo	1,122,310	1,140,000	651,577	1,140,000	1,140,000	
Agricultural	228,229	230,000	114,728	230,000	230,000	
Residential	436,815	300,000	154,222	300,000	300,000	
Miscellaneous	356,494	312,700	65,088	312,700	312,700	
Donations - Foundation	5,000	0	0	0	0	
Funding FROM Reserves						
Property Development	0	50,000	0	50,000	50,000	
Cottage Lot Program (Ice Storm)	0	0	0	0	0	
Wells/Septic/Demolitions	210,546	250,000	0	250,000	250,000	
TOTAL REVENUE	**3,298,094**	**3,229,700**	**1,540,697**	**3,229,700**	**3,229,700**	**0**
Net Surplus/(Deficit)	**1,356,721**	**1,381,800**	**929,895**	**1,381,800**	**1,381,800**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 12 - Hydro Production
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	53,103	41,300	20,704	41,300	41,300	
Administration Expenses	500	0	538	0	0	
Other Operating Expenses	157,621	23,700	133,608	23,700	23,700	
Total OPERATING Expenditures	**211,224**	**65,000**	**154,850**	**65,000**	**65,000**	
Parkhill Hydro Turbine Project	0	200,000	0	200,000	200,000	
Total SPECIAL PROJECT Expenditures	**0**	**200,000**	**0**	**200,000**	**200,000**	
Land Sale Proceeds	5,000	135,000	0	135,000	135,000	
Total FUNDING to RESERVES	**5,000**	**135,000**	**0**	**135,000**	**135,000**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**216,224**	**400,000**	**154,850**	**400,000**	**400,000**	**0**
Revenue						
Self Generated						
Hydro Production-Belwood	266,373	240,000	98,695	240,000	240,000	
Hydro Production-Conestogo	204,796	230,000	64,093	230,000	230,000	
Hydro Production-Guelph	15,864	0	0	0	0	
Funding from Reserves						
Land Sale Proceeds	0	200,000	0	200,000	200,000	
TOTAL REVENUE	**487,033**	**670,000**	**162,788**	**670,000**	**670,000**	**0**
Net Surplus/(Deficit)	**270,809**	**270,000**	**7,938**	**270,000**	**270,000**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 13 - Conservation Areas
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	3,707,577	3,763,800	857,699	3,763,800	3,763,800	
Administration Expenses	166,003	169,500	131,840	169,500	169,500	
Property Tax	53,986	58,700	0	58,700	58,700	
Other Operating Expenses	2,744,367	2,558,000	970,177	2,558,000	2,558,000	
Total OPERATING Expenditures	**6,671,933**	**6,550,000**	**1,959,716**	**6,550,000**	**6,550,000**	
Total CAPITAL Expenditures	**771,510**	**683,000**	**249,034**	**683,000**	**683,000**	
Pools & Water Treatment Equipment, Stabilization	1,184,000	150,000	0	150,000	150,000	
Total FUNDING to RESERVES	**1,184,000**	**150,000**	**0**	**150,000**	**150,000**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**8,627,443**	**7,383,000**	**2,208,750**	**7,383,000**	**7,383,000**	**0**
Funding						
Government Grants						
Provincial	3,626	0	0	0	0	
Federal	0	83,000	6,493	83,000	83,000	
Self Generated						
Brant	1,001,617	900,000	456,691	900,000	900,000	
Byng Island	1,079,719	1,000,000	410,540	1,000,000	1,000,000	
Belwood Lake	331,586	320,000	101,451	320,000	320,000	
Conestogo Lake	479,875	480,000	173,223	480,000	480,000	
Elora Gorge	1,933,280	1,450,000	295,866	1,450,000	1,450,000	
Elora Quarry	307,289	150,000	0	150,000	150,000	
Guelph Lake	942,280	870,000	205,754	870,000	870,000	
Laurel Creek	420,028	350,000	164,219	350,000	350,000	
Pinehurst Lake	831,550	700,000	288,005	700,000	700,000	
Rockwood	1,000,260	900,000	178,513	900,000	900,000	
Shade's Mills	205,585	180,000	71,874	180,000	180,000	
Total Fee Revenue	8,533,069	7,300,000	2,346,136	7,300,000	7,300,000	
Donations-Foundation	91,203	0	15,362	0	0	
TOTAL REVENUE	**8,627,898**	**7,383,000**	**2,367,991**	**7,383,000**	**7,383,000**	**0**
Net Surplus/(Deficit)	**455**	**0**	**159,241**	**0**	**0**	**0**

GRAND RIVER CONSERVATION AUTHORITY
Schedule 14 - Miscellaneous
FOR THE PERIOD ENDING May 31, 2017

How much does it cost, and who pays for it?

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
Expenditures and Funding to Reserves						
Other Miscellaneous	45,814	70,000	33,275	70,000	70,000	
Total OPERATING Expenditures	**45,814**	**70,000**	**33,275**	**70,000**	**70,000**	
Total CAPITAL Expenditures						
Mill Creek Rangers	29,824	35,000	788	35,000	35,000	
Total SPECIAL PROJECT Expenditures	**29,824**	**35,000**	**788**	**35,000**	**35,000**	
Interest Income	379,790	350,000	0	350,000	350,000	
PST Refund/Insurance Proceeds	0	0	0	0	0	
Total FUNDING to RESERVES	**379,790**	**350,000**	**0**	**350,000**	**350,000**	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	**455,428**	**455,000**	**34,063**	**455,000**	**455,000**	
Funding						
Government Grants						
Provincial	0	0	13,106	0	0	
Federal	(615)	0	0	0	0	
Self Generated						
Interest Income-Operating	0	100,000	0	100,000	100,000	
Interest Income-Reserves	443,137	350,000	66,732	350,000	350,000	
Commodity Tax Refunds	0	0	0	0	0	
Miscellaneous	4,460	48,000	70	48,000	48,000	
Grand River Conservation Foundation	36,376	35,000	4,888	35,000	35,000	
TOTAL REVENUE	**483,358**	**533,000**	**84,796**	**533,000**	**533,000**	
Net Surplus/(Deficit)	**27,930**	**78,000**	**50,733**	**78,000**	**78,000**	

GRAND RIVER CONSERVATION AUTHORITY
Schedule 15 - Source Protection Program
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures						
Compensation and Benefits	440,593	459,000	166,012	538,000	538,000	
Administration Expenses	47,351	56,000	18,712	54,000	54,000	
Other Operating Expenses	158,232	320,000	36,114	141,000	141,000	
Water Budget - Technical Studies	393,783	0	405,452	1,023,000	1,023,000	
Water Quality - Technical Studies	119,487	0	73,636	214,000	214,000	
TOTAL EXPENDITURES	**1,159,446**	**835,000**	**699,926**	**1,970,000**	**1,970,000**	
Funding						
Government Grants						
Provincial	1,159,446	835,000	699,926	1,970,000	1,970,000	
TOTAL FUNDING	**1,159,446**	**835,000**	**699,926**	**1,970,000**	**1,970,000**	
Net Surplus/(Deficit)	**0**	**0**	**0**	**0**	**0**	

GRAND RIVER CONSERVATION AUTHORITY
Schedule 16 - Information Systems and Motor Pool
FOR THE PERIOD ENDING May 31, 2017

	Actual 2016	Budget 2017	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures						
Information Systems						
Compensation and Benefits	857,577	883,500	342,921	883,500	883,500	
Administrative Expenses	27,699	24,500	13,509	24,500	24,500	
Software and Hardware Maintenance	134,555	147,000	122,010	147,000	147,000	
Supplies and Services	51,207	50,000	24,037	50,000	50,000	
Total OPERATING Expenditures	**1,071,038**	**1,105,000**	**502,477**	**1,105,000**	**1,105,000**	
Capital Expenses	**178,349**	**250,000**	**105,522**	**250,000**	**250,000**	
LESS Internal Charges	**(1,206,665)**	**(1,189,000)**	**(1,210,432)**	**(1,189,000)**	**(1,189,000)**	
NET Unallocated Expenses	**42,722**	**166,000**	**(602,433)**	**166,000**	**166,000**	
Motor Pool						
Compensation and Benefits	274,324	283,300	96,369	283,300	283,300	
Administrative Expenses	30,996	25,000	16,839	25,000	25,000	
Insurance	36,821	43,800	37,114	43,800	43,800	
Motor Pool Building and Grounds Maintenance	7,157	10,000	13,356	10,000	10,000	
Equipment, Repairs and Supplies	273,854	272,300	92,187	272,300	272,300	
Fuel	179,722	254,000	39,734	254,000	254,000	
Total OPERATING Expenditures	**802,874**	**888,400**	**295,599**	**888,400**	**888,400**	
Capital Expenses	**348,660**	**300,000**	**17,915**	**300,000**	**300,000**	
LESS Internal Charges	**(1,146,149)**	**(1,174,000)**	**(1,008,056)**	**(1,174,000)**	**(1,174,000)**	
NET Unallocated Expenses	**5,385**	**14,400**	**(694,542)**	**14,400**	**14,400**	
TOTAL EXPENDITURES	**48,107**	**180,400**	**(1,296,975)**	**180,400**	**180,400**	
Funding						
Government Grants						
Provincial	40,000	0	0	0	0	
Federal	0	0	20,000	0	0	
TOTAL REVENUE	**40,000**	**0**	**20,000**	**0**	**0**	
Gross Surplus (Deficit)	(8,107)	(180,400)	1,316,975	(180,400)	(180,400)	
Funding From Reserves	2,360,921	2,543,400		2,543,400	2,543,400	
Funding to Reserves	(2,352,814)	(2,363,000)		(2,363,000)	(2,363,000)	
Net Surplus/(Deficit)	**0**	**0**	**1,316,975**	**0**	**0**	

Grand River Conservation Authority

Report number: GM-06-17-68

Date: June 23, 2017

To: Members of the Grand River Conservation Authority

Subject: Designation of Provincial Offences Officers

Recommendation:

THAT the Grand River Conservation Authority designate Matt Cudmore and Colby Kowalchuk as Provincial Offences Officers.

Summary:

Not applicable.

Report:

The Conservation Authorities Act, s. 29 authorizes the Grand River Conservation Authority (GRCA) to make regulations applicable to lands owned by the GRCA. The Provincial Offenses Act R.S.O. 1990 c.P.33, s.1(3) permits a minister of the Crown to designate in writing an person, or class of person, as a Provincial Offenses Officer for the purposes of enforcing an offense or class of offenses. R.R.O. 1990 Regulation 106 s.14, made under the Conservation Authorities Act, authorizes the GRCA to appoint staff members as Provincial Offences Officers to enforce the regulations.

Watershed urbanization has resulted in increased pressure on GRCA properties. Conservation Areas provide recreational day use opportunities and camping options, while passive lands offer use of GRCA's natural habitat. A greater number of users results in an increased number of enforcement challenges such as alcohol use, vandalism, off-leash dogs and trespassing.

Various park staff are designated as POA Officers and are tasked to enforce Regulations under the Conservation Authorities Act and the Trespass to Property Act. Matt Cudmore and Colby Kowalchuk are members of the GRCA parks team and both have the required experience and training to receive their Provincial Offenses Officer designation.

Matt Cudmore started his career with the GRCA in 2012 as a Security Guard at the Elora Gorge Conservation Area. He has held the Senior Security role at Elora Gorge CA for the past 4 seasons. This role has recently evolved to provide security support for both the Elora Gorge CA and the Elora Quarry CA as part of a larger management strategy to regulate park capacity, monitor trespassing, diminish impact on the natural environment and improve the overall GRCA customer experience. Mr. Cudmore studied Police Foundations at Fanshawe College and has been an Auxiliary Constable with the Waterloo

Regional Police Service for 7 years. He has completed the Provincial Offences Officer Core Competency course.

Colby Kowalchuk began his career with the GRCA as a maintenance student at the Elora Gorge Conservation Area in 2012. In 2015 he was promoted to the Lead Hand position and is currently the Acting Parks Operations Technician at the Elora Quarry CA. Mr. Kowalchuk attended the University of Guelph graduating with a Bachelor of Arts degree in Sociology. He has completed the Provincial Offences Officer Core Competency course.

Financial implications:

Training costs were under $1,000 and were covered by the GRCA.

Other department considerations:

Not applicable.

Prepared by:
Dave Bennett
Director of Operations

Approved by:
Joe Farwell
Chief Administrative Officer

Grand River Conservation Authority

Report number: GM-06-17-64

Date: June 23, 2017

To: Members of the Grand River Conservation Authority

Subject: Upper Cedar Creek Scoped Subwatershed Study

Recommendation:

THAT report GM-06-17-64 Upper Cedar Creek Scoped Subwatershed Study be received as information.

Summary:

This report informs the General Membership of the start of the Upper Cedar Creek Scoped Subwatershed Study.

Report:

Background

As part of final approval of the Regional Municipality of Waterloo's Regional Official Plan (ROP) (as approved with modification, by the Ontario Municipal Board on June 18, 2015), the Region committed to undertaking the Upper Cedar Creek Scoped Subwatershed Study by the end of 2018, to inform the next municipal comprehensive review.

The objective of the Subwatershed Study is to develop a plan to maintain, restore, or enhance the health of the Cedar Creek subwatershed, with a focus on lands north of Cedar Creek Road and west of Dumfries Road in the City of Kitchener and Township of North Dumfries (the Detailed Study Area (DSA)) (Figure 1). A further objective of the study is to help guide and coordinate decision-making by the Region, area municipalities, the Grand River Conservation Authority, and others involved in development planning, stewardship, and restoration within Cedar Creek subwatershed.

The DSA includes 234 hectares of land designated as the Southwest Kitchener Policy Area (SKPA) in the ROP, located north of New Dundee Road, and generally between Trussler Road and Reidel Drive. Within the SKPA, the final extent of the Regional Recharge Area (RRA) designation has yet to be determined. The RRA is a ROP designation to protect areas providing groundwater recharge to drinking water source aquifers. The Subwatershed Study will help inform the boundary of the RRA designation, which will be finalized through the next municipal comprehensive review process anticipated in 2019.

Scoped Subwatershed Study

Subwatershed Studies are technical reports which provide comprehensive background on how surface water, groundwater, terrestrial and aquatic ecosystems function in a subwatershed. The studies recommend how and where proposed changes, such as urbanization, can take place in a sustainable manner. ROP and area municipal official plan policies set out minimum requirements for the scope of work of subwatershed studies.

Detailed Terms of Reference were jointly developed for the study by the Region and GRCA, and a consulting team led by Matrix Solutions Inc. was selected by through a competitive Request for Proposal process. The Scoped Subwatershed Study will include the following:

- Phase 1: Subwatershed Characterization
  - Phase 1 work will characterize subwatershed resources (e.g., surface water and groundwater quality and quantity, terrestrial and aquatic ecology) using background information, monitoring data collected by the Grand River Conservation Authority in partnership with the Region of Waterloo, and field work undertaken by the consulting team.
  - This work establishes the form, function and linkages of natural systems; establishes baseline conditions; identifies sensitive features; and establishes management objectives and criteria. The characterization will be undertaken at a general level for the entire subwatershed, with a more intense level of study, including integrated surface water – groundwater modelling, in the DSA. "Scoped" refers to the focus of more intensive work in the DSA.

- Phase 2: Environmental Impact Assessment and Scoped Subwatershed Study
  - Phase 2 work will identify and assess potential impacts associated with possible future development scenarios in the DSA, and develop a recommended set of management strategies to achieve the objectives and guide future land use planning policies. A Natural Heritage Strategy will be developed with refined Greenlands Network mapping; a Master Drainage Plan will include stormwater management criteria and refined floodplain mapping.
  - Opportunities to protect, maintain, enhance or restore the natural heritage system, linkages among features, and the buffers around them, will be recommended.

- Implementation and Monitoring
  - An implementation plan will be developed, summarizing policies, conditions of development approval, criteria, and other recommendations.
  - An integrated monitoring plan for pre-, during- and post-construction monitoring will be proposed to address the impact of potential development on the natural environment and determine if objectives and targets are being met.

GRCA Regulated Areas

Through the completion of the study, modifications to the extent of regulated areas, such as floodplains, wetlands and watercourses are likely. It is intended that the public meetings planned for this project will also serve as the necessary public consultation process for revisions to GRCA mapping under Ontario Regulation 150/06 of the Conservation Authorities Act. The first public meeting is anticipated in spring of 2018.

Financial implications:

The Subwatershed Study will be funded and administered by the Region of Waterloo. GRCA staff are providing in-kind contributions including project management (technical lead), technical review, and creation of detailed base mapping (digital elevation models).

GRCA has undertaken water quality, quantity, and biological (fish and benthic macroinvertebrate communities) monitoring in Cedar Creek since 2015, in anticipation of the subwatershed study. Monitoring is cost-shared 50% by the Region of Waterloo and 50% by GRCA. Monitoring will continue in 2017. These monitoring costs are included in the 2017 budget.

Other department considerations:

Staff from the Engineering, Resource Management, and Information Systems Divisions will be involved in this project.

Prepared by:	Approved by:
Janet Ivey Subwatershed Planning Coordinator	Dwight Boyd, P. Eng. Director of Engineering

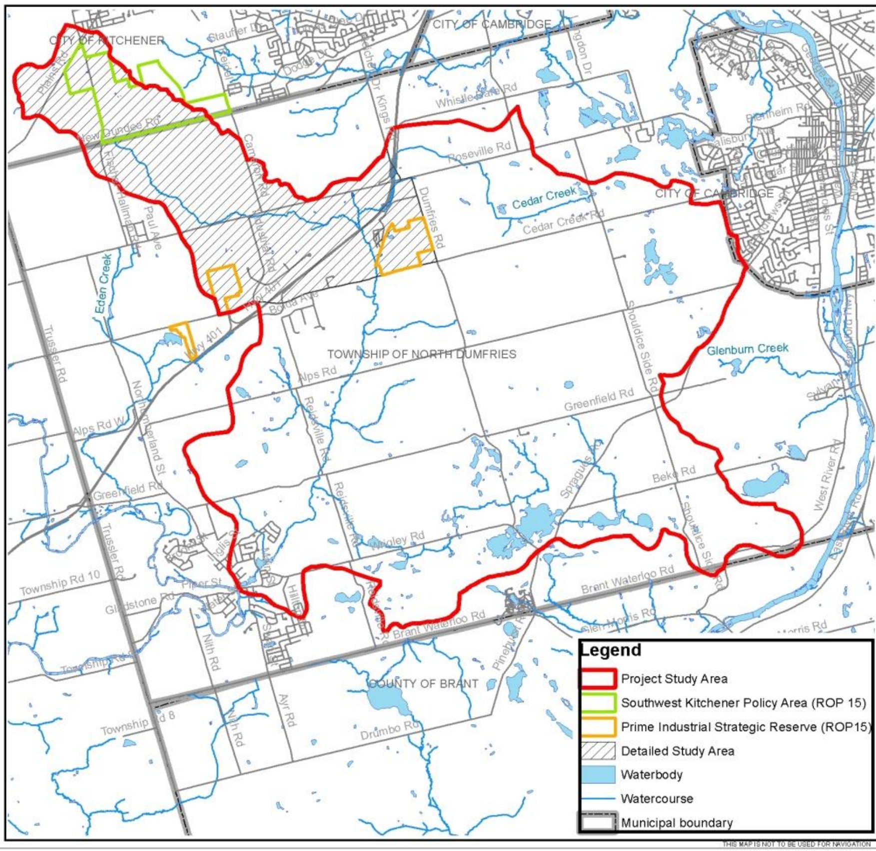


Figure 1: Study Area

Grand River Conservation Authority

Report number: GM-06-17-65

Date: June 23, 2017

To: Members of the Grand River Conservation Authority

Subject: Haldimand County Lake Erie Shoreline Hazard Mapping Study

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Recommendation:

THAT report GM-06-17-65 Haldimand County Lake Erie Shoreline Hazard Mapping Study be received as information.

Summary:

This report informs the General Membership that the Grand River Conservation Authority will lead the Haldimand County Lake Erie Shoreline Hazard Mapping Study on behalf of Haldimand County, Long Point Region Conservation Authority, and Niagara Peninsula Conservation Authority.

Report:

Background

In September 2016, the Long Point Region Conservation Authority (LPRCA) submitted an application to the National Disaster Mitigation Program (NDMP) to update Lake Erie shoreline hazard mapping for the County of Haldimand, in partnership with the County, Grand River Conservation Authority (GRCA) and Niagara Peninsula Conservation Authority (NPCA). The application was approved for funding by Public Safety Canada in May 2017.

The purpose of the study is to update flood, erosion and dynamic beach hazard mapping for the Lake Erie shoreline within Haldimand County, including parts of GRCA, LPRCA, and NPCA jurisdictions. This mapping is needed to support municipal and conservation authority flood and erosion-related emergency response and mitigation planning, as well as land use planning and permitting decisions in at-risk communities (e.g., Dunnville, Port Maitland) and shoreline resort areas. Current and consistent hazard mapping across conservation authority jurisdictions within Haldimand County will assist the municipality in future development and implementation of shoreline-related land use planning policies.

Currently, GRCA, LPRCA, and NPCA have separate Shoreline Management Plans covering the Lake Erie shoreline in their respective watersheds. Updated hazard mapping is one input to a potential future update of GRCA's 1994 Shoreline Management Plan. The Shoreline Hazard Mapping Study will incorporate new sources of topographic and bathymetric data, update flood levels and erosion rates, and address current provincial technical guidelines (2001) for shoreline hazards.

Shoreline Hazard Study

The study was originally proposed and intended to be managed by LPRCA; however, a staffing situation has arisen precluding this approach. Through discussion with LPRCA, GRCA has agreed to lead the study. The study will be 2 years in duration, beginning after August 1, 2017, and following execution of a Bilateral Contribution Agreement between Public Safety Canada and the Ministry of Municipal Affairs, and a Transfer Payment Agreement between GRCA and the Province. The total study budget is $240,000, and will be cost shared among Public Safety Canada (NDMP) (50%), Haldimand County (37.5%), GRCA (6.25%), and LPRCA (6.25%).

Key deliverables of the study will include:

- Updated topographic and bathymetric mapping for the shoreline area;
- Updated 100-year Lake Erie flood levels, 100-year erosion rates, and wave uprush assessment;
- Updated Lake Erie shoreline flood, erosion, and dynamic beach hazard mapping within Haldimand County;
- Identification of structures and municipal infrastructure within hazard areas, and associated damage potential;
- Recommendations for flood-proofing elevations, flood-proofing and protection works, emergency access/egress, and response during flood events;
- Discussion of the sensitivity to, and implications of, climate change, including more frequent and/or severe storm events and reduction in ice cover;
- Updated NDMP Risk Assessment for Haldimand County, including potential impacts on people and society, environment, economy, and infrastructure; and
- Public consultation on updated hazard and regulated areas mapping.

GRCA Regulated Areas

Through the completion of the study, modifications to the extent of regulated areas are likely. It is intended that the public meetings planned for this project will also serve as the necessary public consultation process for revisions to GRCA mapping under Ontario Regulation 150/06 of the Conservation Authorities Act.

Financial implications:

The Shoreline Hazard Study will be cost shared 50% by Public Safety Canada (NDMP) ($120,000 cash), 37.5% by Haldimand County ($90,000 cash), 6.25% by LPRCA ($7,200 cash, 7,800 in-kind), and 6.25% by GRCA ($7,200 cash, 7,800 in-kind). GRCA's in-kind contributions will include project management, technical review, and potentially creation of detailed base mapping (digital elevation models). GRCA's cash contribution of $7,200 will be drawn from land sale reserves.

Other department considerations:

Staff from the Engineering Division will lead project management and technical review. Staff from Resource Management, Information Systems, and Communications also will be involved in this study.

Prepared by:

Janet Ivey
Subwatershed Planning Coordinator

Approved by:

Dwight Boyd, P. Eng.
Director of Engineering

Grand River Conservation Authority

Report number: GM-06-17-69

Date: June 23, 2017

To: Members of Grand River Conservation Authority

Subject: Floodplain Mapping Program Five-Year Forecast – 2017-2022

Recommendation:

THAT Report number GM-06-17-69 – Floodplain Mapping Program Five-Year Forecast – 2017-2022 be received as information.

Summary:

This report provides an overview of Grand River Conservation Authority's (GRCA) proposed floodplain mapping program for the period of 2017-2022. This report will highlight the current "state-of-the-industry" conditions and rationale supporting a proposed significant investment in updated mapping over the forecast period. Letters of support from the Board and our member Municipalities for the program proposed herein will be required to support an application to access funding from the *National Damage Mitigation Program*.

Report:

Objective #1 of the GRCA's Strategic Plan is to protect life and minimize property damage from flooding and erosion. The GRCA's approach to satisfying this objective reflects direction provided by the Province, and involves three main program components:

1. Prevention, by land use planning and regulation of development
2. Protection, by applying structural and non-structural measures and acquisition; and
3. Emergency response, by flood forecasting / warning

A solid technical understanding of the hydrologic and hydraulic characteristics of the watershed supports all of these programs components. The graphical representation of flood prone areas provides the most concise, comprehensive means of conveying information to watershed stakeholders. Recognizing the importance of maintaining an up-to-date floodplain mapping program to the GRCA's operational mandate, the development of a five-year forecast to update floodplain maps has been identified as a strategic priority.

While routine prioritization reviews represent good practice for any on-going program, the completion of an assessment of existing and forecast conditions is especially timely for the GRCA's floodplain mapping program at present owing to numerous economic, technological, and core competency considerations, such as:

- The last major national funding program related to flooding, the *Flood Damage Reduction Program* (FDRP), was initiated in 1975 and ran for 20 years. The GRCA capitalized on the FDRP and was able to substantially advance the understanding and management of floodplains in the watershed, the results of which are still evident today, 30-40 years later. The *National Damage Mitigation Program* (NDMP), which commenced in 2014, represents the current major federal initiative geared at defining, understanding, and minimizing the risks associated with flooding. Phase 1 of the NDMP had an initial allocation of $200 million earmarked for distribution over 5 years. Though not yet specifically announced, it is expected that the program will be extended through additional phases beyond 2019, and likely expanded beyond its current focus on flooding to include other types of disasters affecting Canada such as wildfires, ice storms, tornadoes / hurricanes, earthquakes, etc. The NDMP program will contribute up to 50% of an approved project's funding, providing an important opportunity to share the cost of floodplain mapping.
- As part of an unrelated undertaking, but significant to the GRCA's work, the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) is currently in the process of obtaining detailed topographic information across the Lake Erie watersheds using Light Detection And Ranging (LiDAR) technology. This base data, which will be made freely available to users including the GRCA, can be used to generate precise, engineering-grade three-dimensional models of the floodplain landscape. This will provide the digital base for new floodplain mapping that will allow identification of both the extent and depth of flooding.
- While OMAFRA's data will cover all areas beyond the banks of the watercourse, recent advancements in the ability to obtain detailed bathymetric information through remote sensing technologies (LiDAR) for those areas the "between the banks" (above and below water) have been considerable. This technology now allows for the cost effective mass collection of survey data that was previously obtainable only through costly, detailed in-person field efforts. The combination of OMAFRA's above-the-bank information and the between-the-banks information will provide much of the information needed to update hydraulic models used to estimate flood elevations.
- With funding provided through Provincial (OMNRF) transfer payments, the GRCA is currently working with the US Army Corps of Engineers (USACE) to enhance its hydrologic modeling platform, replacing the current Guelph All-Weather Sequential Event Runoff (GAWSER) model. The updated model will be used to estimate flood flows and real-time flood forecasts. It is well-supported and easier to maintain.
- A floodplain mapping update program will build and transfer knowledge to intermediate staff, improving their knowledge and skills.
- Most of the existing floodplain mapping is hardcopy, Mylar mapping. An outcome of updated floodplain mapping program is a digital product that will be easier to update and/or permitting further analysis opportunities not easily accomplished from the existing, hardcopy base mapping.
- Updating the hydrology model and the creation of digital floodplain mapping will create the opportunity to retire current flood forecasting software in favour of the US Army Corps HEC-RTS flood forecasting framework.
- Current floodplain mapping defines the regulatory flood line used to regulate development. New, updated floodplain mapping will also confirm the extent and depth of the more frequent flood events, providing base information for municipal emergency response plans for flood emergencies and allow for more detailed analysis and assessment of risk for planning purposes.

Prioritization Rationale

A number of considerations were evaluated in reviewing the GRCA's existing floodplain mapping inventory and assessing priority for updates, including:

- Relative Hazard Level - Areas known to represent high risk flood hazard zones, and for which modeling / mapping have not been recently updated, warrant prioritization. Last formalized within the GRCA's *Water Management Plan* (2014), a number of flood damage centres (FDC's) have been identified as priorities for additional analysis and mapping updates. While detailed work has been completed in some FDC's (e.g., Ayr, New Hamburg, Drayton), a number remain outstanding as priorities for updating.
- Relative Risk Level - Flood prone areas that represent higher risks include those with more people, buildings / structures, critical infrastructure such as roads and pumping stations, power utility infrastructure, and those with more critical land uses or vulnerable populations such as low-level residential, hospitals, long-term care facilities, emergency services, etc., as compared to industrial land uses, for example.
- Age of Existing Modeling / Mapping – Most floodplain mapping related elements change over time, increasing the likelihood that maps become more inaccurate as they age. Examples include improvements in modeling / mapping technologies, changes in base information, modeling and/or mapping standards, and/or the availability of higher resolution, more accurate, and more up-to-date physical landscape data. Generally speaking, the older the mapping in a given area, the more benefit can be gained with an updated assessment.
- Type of Floodplain Mapping Available – Where Regulatory floodplains have been defined within the watershed, they are characterized as one of three 'types', largely defined by the comprehensiveness and/or trustworthiness of their derivation. The three types, in descending order of preference include 'engineered', 'approximate', or 'estimated'. All other things being equal, prioritization preference should be given to updating those classified as estimated or approximated over those that already have engineered floodlines. That said, this prioritization parameter is of relatively low importance as compared to others such as the age of existing maps.
- Opportunity for Multi-Functional Benefits – The improved understanding of watershed hydrology and hydraulics gained through floodplain mapping updates has the potential to translate into many other areas of related study. Examples include:
    - Extreme low-flow / drought conditions
    - Environmental flows / habitat assessments
    - Source water protection Intake Protection Zones (IPZs)
    - Grand River Simulation Model water quality model updates
    - A range of inundation flows (e.g., 2-100 yr. return period flows or area-specific Flood Warning levels
    - Ice jam potential and associated flood-related impacts
    - Regulatory flood flow events (e.g., 1:100-yr or Regional) for the purposes of flood plain regulation
    - Extreme flow events such as probable maximum flood / dam-break conditions

    Those systems for which multi-functional benefits could be realized warrant prioritization.
- Economic Development Potential / Development Pressure - Areas of elevated development pressure, either new or infill re-development, typically warrant higher prioritization consideration than their counterparts in rural areas, for reasons related to the Regulatory aspects of floodplain management.
- Scale and Associated Cost-Benefit Realizations - The unit costs of almost any process within a floodplain mapping update project can often be reduced through the leverage of scale, with

prioritization then given to large, individual systems (i.e., the major rivers as opposed to creeks) or the definition of larger study reaches.

Prioritization Results and Proposed Implementation

The prioritization exercise included an evaluation of the approximately 126 individual reaches / studies / models in the amalgamated index of floodplain mapping currently available in the watershed, with a semi-quantitative assessment of relative priority for updating based upon the criteria outlined in the previous section, narrowing the list to those that could at least potentially be expected to be completed in a 5-year timeframe.

Using the criteria above, the top of the prioritization list included the primary watershed river systems of the:

- **Grand River (Dundalk to Lake Erie),**
- **Speed River (Guelph Dam to confluence with Grand River), and**
- **Conestogo River (Conestogo Dam to confluence with Grand River)**

Prioritization of floodplain mapping updates for these three systems captures the main urban areas in the watershed and, by association, approximately 60% of the flood-prone structures, 17 of the 32 municipal flood damage centres (FDCs), and all 19 of the seasonal FDCs (i.e., trailer parks). Focusing on these systems also targets much of the oldest mapping in the watershed, as well as offering the opportunity to transfer the improved hydrologic and hydraulic knowledge gained through these updates to other related studies. Finally, improved cost-benefit ratios should be realized through the capture of the largest of the watershed's river systems, on a near-watershed scale.

In recognition of the intended pursuit and reliance upon significant funding support through the *National Damage Mitigation Program* (NDMP), schedule and budget assessments for the 5-year project period have adopted a two-phase approach, reflecting the federal program's timelines.

Phase 1 - The current NDMP funding program is intended to cover projects within the 5-year fiscal period ending April 1, 2020, a date which then logically serves as the end of Phase 1 for the implementation of GRCA priority projects from a scheduling and budgeting perspective.

As a means of mitigating the risks associated with advancing into the many uncertainties that remain with brand-new technology and approaches, it is proposed that Phase 1 be considered a "pilot project", capturing only a small portion of the much larger updates contained within the full 5-year plan. Specifically, it is proposed that Phase 1 efforts be confined to the upper watershed, creating / updating floodline mapping for the **reach of the Grand River between Dundalk and the inflow to Belwood Lake (10th Line).** Consideration of this reach as a pilot study offers a number of benefits:

- The catchment area is small, permitting relatively easy data management and troubleshooting efforts on modeling / mapping tasks as necessary
- The shallower flow characteristics of the Grand River and its tributaries at this location in the watershed should provide ideal conditions for bathymetric LiDAR technology trials
- Updating floodplain mapping throughout this reach captures two of the flood damage centres in the watershed specifically identified in the *Water Management Plan* (WMP), namely Grand Valley and Waldemar
- Updating floodplain mapping throughout this reach will also create 'engineered' floodlines where 'estimated' delineations currently exist, upstream of Black Creek

- Updating hydrology for watershed headwater areas provides valuable information to flood managers related to inflows to our watershed's largest dam/reservoir at Belwood
- Given that the entirety of the prioritized projects span a significant portion of the watershed, initiating the update process at the headwater represents a natural building block upon which to expand efforts within Phase 2.
- Provincial growth plan forecasting growth pressure in the upper Grand watershed.

In summary, Phase 1 efforts will achieve valuable updates at flood-prone communities while concurrently establishing capabilities, technologies, and those methodologies which will then be applied to the much larger scale efforts of the Phase 2 projects. Though the absolute scale of projects to be undertaken in Phase 1 and 2 are vastly different, it is expected that the knowledge gains achieved throughout Phase 1 will enable the completion of Phase 2 efforts in a much more efficient manner, with results achieved at a much reduced unit cost (i.e., $\$/km^2$ of floodplain map updates).

Phase 2- Projects to be completed under Phase 2 represent those in the second half of the GRCA's 5-year program, spanning the period from April 2020 through April 2023. Projects will include the completion of an updated HEC-HMS model for the entire watershed and hydraulics / floodplain mapping for the major systems of the Grand, Conestogo, and Speed Rivers from the outlets of their reservoirs (Shand, Conestogo, and Guelph Lake, respectively) to their confluences and/or Lake Erie.

Tables 1 and 2 provide schedule and budget estimate summaries of the five year forecast for the floodplain mapping program.

Financial Implications:

The combined cost of the Phase 1 and Phase 2 projects, including consideration of external funding already in-hand (i.e., HEC-HMS updates funded by OMNRF) and projects currently being completed by external agencies with direct benefit to the GRCA floodplain mapping updates (i.e., OMAFRA topographic LiDAR), is $1,806,000. The value assigned to the two external projects mentioned above (OMAFRA and MNRF) is $657,800. The remaining $1,148,200 will be cost-shared at 50% each between GRCA and NDMP sources over 5 years, though year-to-year spending is highly variable.

It is proposed to draw $575,000 from the land sale reserve to match the NDMP program funding over the 2018 to 2022 project period. The land sale reserve permits funding floodplain mapping studies.

Of the GRCA's contribution to the program, approximately $335,000 is attributed to staff salary. Staff dedication to these projects is expected to necessitate the creation and filling of new Water Resources Engineer position, as additional workload requires. The remaining project expenses will be applied towards the costs of retaining external consultants for field survey and third-party peer review services.

Moving forward through the 2018-2022 planning cycle, a key underlying assumption to the implementation of the proposed 5-year floodplain mapping program is that the federal NDMP program is renewed following its initial phase which concludes in 2020, and that the GRCA's applications to the program are successful. A further key assumption is that Phase 1 funding will be available and ready for use for Phase 1 projects by March 31, 2018. Should the September 2017 NDMP application prove unsuccessful and/or the assumptions related to timing or financial support prove to be invalid, the proposed project list, schedule, and/or budget will require re-evaluation and/or revision.

Further, the technical ability to complete the entirety of the prioritized project list within 5 years will be determined in large part by the success and findings of Phase 1. In short, any proposed scoping,

scheduling, and budget planning elements described herein should be considered flexible, at least until the underlying assumptions are proven correct or otherwise based on experience gained from Phase 1.

The capital forecast will be updated as details related to external funding sources and/or the costs for external services are refined.

Other department considerations:

Staff from the Engineering and Information Systems Divisions will be involved in this project.

Prepared by:

Scott Robertson, P.Eng.
Senior Water Resources Engineer

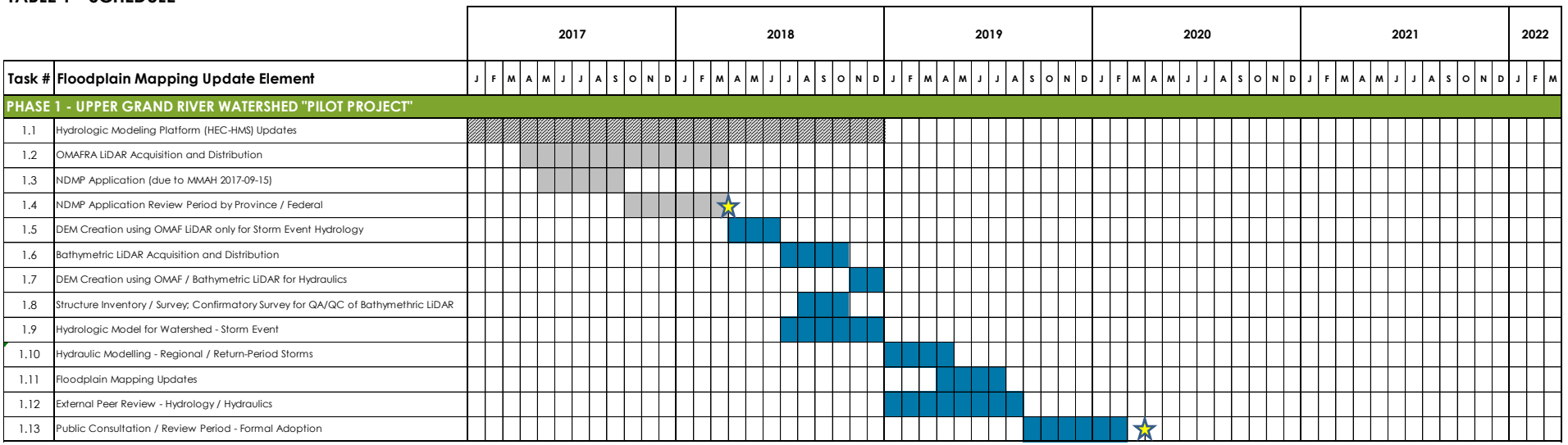
Approved by:

Dwight Boyd, P.Eng.
Director of Engineering

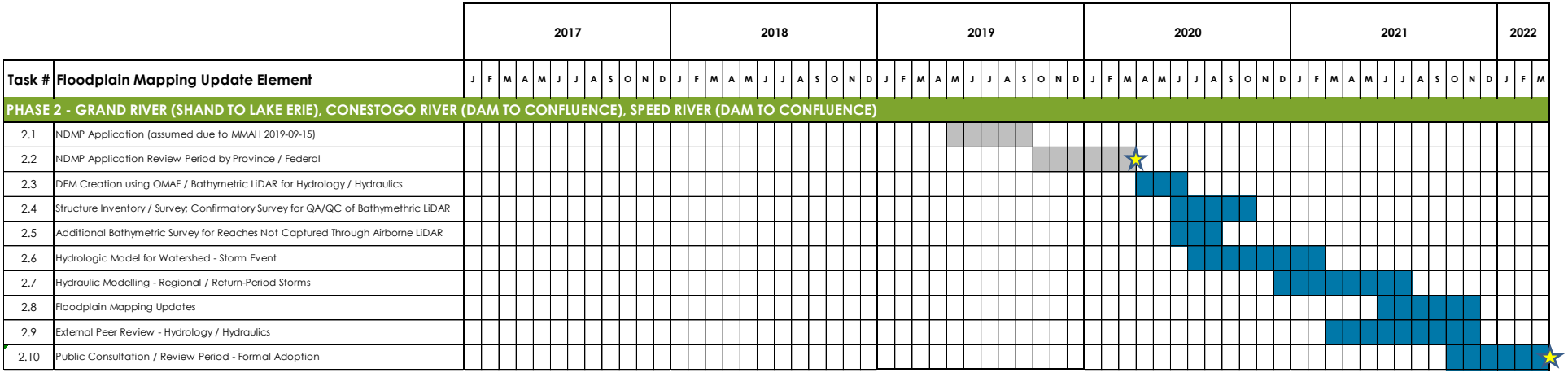
Joe Farwell, P.Eng.
Chief Administrative Officer

FLOODPLAIN MAPPING UPDATE - FIVE-YEAR PROGRAM

TABLE 1 - SCHEDULE



Task #	Floodplain Mapping Update Element
PHASE 1 - UPPER GRAND RIVER WATERSHED "PILOT PROJECT"	
1.1	Hydrologic Modeling Platform (HEC-HMS) Updates
1.2	OMAFRA LiDAR Acquisition and Distribution
1.3	NDMP Application (due to MMAH 2017-09-15)
1.4	NDMP Application Review Period by Province / Federal
1.5	DEM Creation using OMAF LiDAR only for Storm Event Hydrology
1.6	Bathymetric LiDAR Acquisition and Distribution
1.7	DEM Creation using OMAF / Bathymetric LiDAR for Hydraulics
1.8	Structure Inventory / Survey; Confirmatory Survey for QA/QC of Bathymethric LiDAR
1.9	Hydrologic Model for Watershed - Storm Event
1.10	Hydraulic Modelling - Regional / Return-Period Storms
1.11	Floodplain Mapping Updates
1.12	External Peer Review - Hydrology / Hydraulics
1.13	Public Consultation / Review Period - Formal Adoption



Task #	Floodplain Mapping Update Element
PHASE 2 - GRAND RIVER (SHAND TO LAKE ERIE), CONESTOGO RIVER (DAM TO CONFLUENCE), SPEED RIVER (DAM TO CONFLUENCE)	
2.1	NDMP Application (assumed due to MMAH 2019-09-15)
2.2	NDMP Application Review Period by Province / Federal
2.3	DEM Creation using OMAF / Bathymetric LiDAR for Hydrology / Hydraulics
2.4	Structure Inventory / Survey; Confirmatory Survey for QA/QC of Bathymethric LiDAR
2.5	Additional Bathymetric Survey for Reaches Not Captured Through Airborne LiDAR
2.6	Hydrologic Model for Watershed - Storm Event
2.7	Hydraulic Modelling - Regional / Return-Period Storms
2.8	Floodplain Mapping Updates
2.9	External Peer Review - Hydrology / Hydraulics
2.10	Public Consultation / Review Period - Formal Adoption

General Notes

End date of Phase 1 set according to S.3.4 of NDMP Guidelines which states of multi-year projects: "The maximum length of time that a contribution shall be approved for the same project shall not exceed 24 months (i.e. 2 fiscal years, starting April 1 and ending March 31), and not exceed the 2019-2020 fiscal year." End of Phase 2 set at 2 years from assumed award of NDMP agreement Mar. 31, 2020.

Grey cells are scheduled activities, but not NDMP funded

Blue cells are NDMP-funded activities

Stars indicate start and end date of NDMP funding periods.

Element Specific Notes / Assumptions (Numbers Correlate to Elements in Table)

1.1 USACE currently updating subroutines within HEC-HMS; OMNRF funding in support of these intiatives is confirmed through 2018

1.2 Assumes OMAFRA LiDAR data will be available and suitable for use as basis for hydrologic model updates by end of Q1 2018, and that 90% of effort/cost is spent in 2017. Total cost estimate based on $60/km^2 quote provided by Ross Kelly (OMAFRA, pers.comm. Robertson 2017-05-

1.4 / 2.2 Assumes 6 month review/approval period by PS and MMAH - perhaps optimistic given current experience with LPRCA Intake 3 project (application in Sept. 2016, notification of award May 2017, await bilateral agreement prior to start-up (August 2017?)

1.6 Bathymetric LiDAR Acquisition scheduled for late summer / early fall 2018, looking to optimize balance between low-flow periods (i.e,. shallow depths) and, ideally, minimal vegetation on banks and in River. Assigning all costs to Phase 1, even though data will encompass broader watershed area (i.e., support Phase 2 and future studies)

1.8 / 2.4 Structure Inventory / Survey and Field Verification / QA/QC of Bathymetric LiDAR scheduled for summer / early fall, coinciding with the lowest flow periods

1.9 Hydrologic modeling start date assumes USACE has completed on-going HEC-HMS updates (Muskingum-Cunge routing) and software is available for use; note: no requirement to await further updates re: snowmelt routines prior to completion of return-period and

2.5 Additional bathymetric survey for reaches not captured through airborne LiDAR assumed to apply upstream of Caledonia Dam to limits of turbid reaches, downstream of Cayuga to the Lake. Scheduled for summer, coinciding with low-flow periods.

FLOODPLAIN MAPPING UPDATE - FIVE-YEAR PROGRAM

TABLE 2 - BUDGET SUMMARY

Year	Project Budget	Contribution from Reserves	External Contribution	External Agency and Status of Contribution
2017	$ 492,200	$ -	$ 125,000	MNRF - Committed
			$ 367,200	OMAFRA - Committed
			$ 492,200	
2018	$ 849,007	$ 341,604	$ 125,000	MNRF - Committed
			$ 40,800	OMAFRA - Committed
			$ 341,604	NDMP - Assumed
			$ 507,404	
2019	$ 73,333	$ 36,667	$ 36,667	NDMP - Assumed
			$ 36,667	
2020	$ 240,269	$ 120,135	$ 120,135	NDMP - Assumed
			$ 120,135	
2021	$ 142,543	$ 71,272	$ 71,272	NDMP - Assumed
			$ 71,272	
2022	$ 8,720	$ 4,360	$ 4,360	NDMP - Assumed
			$ 4,360	
Total	**$ 1,806,072**	**$ 574,036**	**$ 1,232,036**	

Grand River Conservation Authority

Report number: GM-06-17-62

Date: June 23, 2017

To: Members of the Grand River Conservation Authority

Subject: Beach Management in GRCA Conservation Areas

Recommendation:

THAT Report GM-06-17-62 – Beach Management in GRCA Conservation Areas be received as information.

Summary:

n/a

Report:

This report provides further information to Report GM-05-15-59, presented to the General Membership on May 26, 2017, on the management of the beaches at GRCA Conservation Areas.

The GRCA operates nine beaches at eight Conservation Areas. These parks are in three public health regions – Wellington-Dufferin-Guelph, Region of Waterloo and Brant County Public Health Units (PHUs). It has been the practice of the GRCA and the PHUs to work together to collect weekly samples at GRCA beaches according to the Ministry of Health and Long-Term Care's *Ontario Public Health Standards (OPHS)* and *Recreational Water Protocols*. These provincial documents provide guidelines to manage public beaches in Ontario and provide the framework to inform the public of risks associated with swimming in a natural water body.

The PHUs reviewed their participation in the management of GRCA conservation area beaches with GRCA staff, and in May, they advised the GRCA of their intention to stop sampling the beaches for Escherichia coli (E. coli) – an indicator of fecal contamination, as the current approach does not provide timely, relevant public health information to GRCA beach users. GRCA staff agreed with PHU staff's rationale for not supporting the current notification approach based on untimely data, as it can potentially provide a false sense of safety to swimmers and beach goers. As a result, the PHUs staff and GRCA have been working together to review the beach management program, and determine appropriate next steps.

The basis for the review and change was based on three key considerations:

1. Water quality can change very quickly, even within hours of a sample having been taken. Heavy rain, strong winds, waves, the number of people in a given area, and the presence of wildlife such as geese and gulls, are some of the environmental factors that have a negative impact on the quality of natural water bodies. These and many other influences make it very difficult to know specific water quality conditions at any given time.

2. Due to laboratory culturing of the water samples taken, results are received 24 to 48 hours from the sampling time, meaning that the analysis of results to determine risk level may not reflect the actual quality of the water at the time the information is received by the public. For example, a beach can be 'posted' with levels in excess of the provincial guideline, when in reality the conditions have improved. Or at greater risk, a beach is not 'posted' when in fact the water quality has worsened since the sample was taken, thus providing park patrons with inaccurate information and a false sense of safety.
3. Upon the PHUs' review of the *OPHS Recreational Water Protocol*, it was clarified that a public beach is defined as a public bathing area owned and operated by a municipality to which the general public has access. GRCA beaches do not constitute a municipal public beach as defined by the OPHS protocols.

Rivers and reservoirs in the Grand River watershed are natural water bodies that are exposed to contamination from various sources. Although a great deal of effort is placed on reducing contamination in the watershed, swimming in natural water bodies is not risk-free. In fact, there is always a level of risk when swimming in a natural water body, whether it's on the shores of Lake Erie, jumping off a dock at a cottage or going to a GRCA or municipal beach.

The local PHUs are the lead agencies and experts in public health matters. As such, the GRCA has been working with its local PHUs to review its current beach sampling program in order to determine the best ways to identify risks, mitigate risks where possible, and provide park patrons with timely, relevant information that will enable them to make an informed decision about visiting and swimming at a GRCA Conservation Area beach.

To determine common practices by Conservation Authority (CA) staff, GRCA staff reached out to other CAs to gather information on their beach management programs. Appendix 1 summarizes the approach used by those CAs who responded to this request.

As part of the review of the current beach management program, the GRCA and the PHUs have identified the following risks:

1. **Corporate Risk & Liability**

   This issue has been discussed with the GRCA's insurance provider, who recognizes the potential risks associated with making decisions based on data that is out-of-date. There is always a risk that a person could claim that they relied on a 'posting'/lack of a 'posting' as a true indicator of current conditions, and then subsequently became ill.

   To-date, GRCA staff are unaware of any incidents of patrons becoming ill from E. coli while swimming at a GRCA beach.

2. **Public Health Risk**

   E. coli in surface waters is used as an indicator of fecal contamination. E. coli is found within the intestinal tract of humans and warm-blooded animals. Health Canada and other agencies have summarized the epidemiological evidence that relates E. coli concentrations in recreational freshwaters to the incidence of swimming-associated gastrointestinal illness. This evidence is used to set guidelines to help manage risk for swimmers. There are currently two guidelines being used in Ontario to inform the risk associated with potentially getting ill because of swimming in natural water bodies:

- Ontario guideline (1992): 100 colony forming units / 100 ml estimates that < 1.0 percent of people may become ill when swimming in water with these levels (or less than 10 people per 1000 swimmers);
- Federal Health Canada guideline (2012): 200 colony forming units / 100 ml estimates that 1-2 percent of people may become ill when swimming in water with these levels (or about 10-20 people per 1000 swimmers).

In Ontario, Health Canada's guideline provides the most recent guidance on managing recreational waters.

3. Risks to Water Quality

Human-sourced fecal contamination is the most significant source of E.coli that can impact public health. Therefore, it is important to know the upstream watershed characteristics and potential sources.

a. Each GRCA beach is unique with its own potential sources of contamination. Those beaches that are self-contained, with small drainage areas, for example in an old quarry (e.g. Elora, Belwood) or a lake (Pinehurst) generally have low to very low E. coli levels.

b. Those beaches that are located on on-line reservoirs (Rockwood, Shades, Laurel, Conestogo, Guelph (2) tend to have more frequent occurrences of elevated E. coli levels.

Appendix 2 describes each GRCA beach, associated Public Health Unit , known hazards and best practices. Appendix 3 describes the percentage of beach samples collected between 2003 and 2016 that meet or are below the Provincial and Federal guidelines.

In consultation with the PHUs, GRCA staff recommend the following initial actions to address the above identified risks:

1. Proactive Beach Management

a. Continue with and formalize the daily beach inspections already conducted by Parks staff. Document findings through a daily survey of physical conditions that include the cloudiness of the water, weather conditions, rain within the last 24-48 hours, etc. and include this approach in the Parks risk management framework.

b. Continue with the geese relocation program at Laurel Creek, Shade's Mills, Guelph Lake and Rockwood. Since 2014, about 100 – 250 birds are relocated to Woolwich Reservoir and Damascus conservation area. In addition, GRCA obtains a Damage / Danger Permit under the Migratory Birds Regulation issued by the Canadian Wildlife Services, Environment and Climate Change Canada for Laurel Creek, Shade's Mills, Guelph Lake, Rockwood, Belwood and Conestoga to also assist with managing the number of geese at these parks.

c. Engineering staff will complete annual beach assessments that include the identification of potential sources of fecal contamination and mitigation strategies to reduce these sources. Reports for each beach area will be completed prior to park opening each year starting in 2018.

d. GRCA continues to work with local landowners in the watershed to implement Best Management Practices including livestock fencing, manure and milkhouse waste storage, nutrient management planning, manure storage decommissions and clean water diversions. These best practices can assist with reducing E. coli levels in runoff.

e. The GRCA has a notification process in place with the Ministry of the Environment and Climate Change's Spills Action Centre when there is a spill in the watershed. The GRCA's Bypass/Spill Notification procedure will include an additional cross-check to ensure the bypass or spill is not upstream of a GRCA beach. A spill or wastewater treatment plant bypass that is located above a GRCA park will be immediately brought to the attention of the Senior Operator, appropriate Park Superintendent, and Public Health Unit to jointly determine the most appropriate action.

f. The GRCA will continue to sample GRCA beaches for the purpose of monitoring long-term water quality trends. GRCA beaches will be sampled every second week starting when water temperatures are consistently above 20°C or the first week of July,whichever comes first, and will conclude sampling until the last week of August. While this data will not be used to notify the public of the risks associated with swimming in a natural water body, it will be made available on the GRCA's website. Furthermore, GRCA staff will continue to keep abreast of new technologies should real-time monitoring for E. coli become an option in the future.

g. Due to sporadic E. coli levels observed at Rockwood Park beach over the past 10 years, a special study is recommended to evaluate the sources of fecal contamination. New tools that are available can possibly source-track E.coli. This information can provide insight into the actions or measures that may be required upstream of the on-line reservoir to reduce the variability of E. coli levels. GRCA will pursue partnerships with local universities to undertake this study.

2. **Comprehensive and collaborative public education and awareness strategy, in collaboration with the local PHUs.**

   The PHUs and the GRCA will implement a comprehensive and collaborative public education strategy intended to provide park visitors with timely and relevant information, so that they may make an informed decision about visiting and swimming at GRCA beaches. Along with its online and printed vehicles of communication, the GRCA will work to identify opportunities within existing programs and initiatives to promote public awareness. For example, information may be included as part of the curriculum in GRCA nature centre programs, and informational brochures can be developed and provided to students and campers to share with their families. The strategy will also include signage at Grand River parks beaches to alert and assist patrons with identifying hazards and risks, while building knowledge and awareness.

   Please see Appendix 4 for draft messages and information to be provided to the public.

   Please see Appendix 5 for an example of park signage, shared with the permission of the Niagara Public Health Unit.

Financial implications:

Public health units have indicated that their laboratory can still analyze samples collected at GRCA Conservation Areas so there will be no costs incurred due to laboratory analysis. Costs associated with staff time for monitoring beaches will not change according to the above stated Beach Management Plan; however, engineering staff time will be required to ensure the assessment reports are completed annually and as such, this effort will be redirected from other water quality program areas.

Operational changes are expected at the conservation areas, which will include increased surveillance and house-keeping associated with the beaches. New signage will need to be erected at each of the beaches and the cost is estimated at less than $5,000.

Other department considerations:

Engineering, Operations and Communications Staff are involved in implementing the updated Beach Management Program.

Prepared by:	Approved by:
Sandra Cooke	***Dwight Boyd***
Senior Water Quality Supervisor	***Director, Engineering***

Appendix 1: Summary of other Conservation Authority practices for monitoring beaches in conservation areas. Summary from an informal survey sent to all Conservation Authorities.

CA	Number of Conservation Authority Beaches	Operating Procedure/ Approach
Kettle Creek	We monitor two beaches at **Lake Whittaker CA** using the attached 2014 Beach Management Guidance Document as a guideline. We also work closely with the Middlesex London Health Unit over the course of the sampling season.	CA collects samples; PHU
UTRCA	**FANSHAWE CA - Middlesex-London Health Unit** Fanshawe does not have a designated swimming are for visitors and therefore samples are not collected specifically for swimming in that respect. We do however have rowing lanes in which the Rowing Club use for practices and regatta's and we do sample from those lane areas approximately 14x from May - September. UTRCA staff (conservation area) are 100% responsible for collection and dropping off the samples to the HU. HU provides bottles and paperwork. **PITTOCK CA - Oxford County Health Unit** Pittock does work directly with the Oxford County Health Unit with respect to collecting beach samples. UTRCA staff (conservation area) take the Health Unit representative out in our boat to collect the samples as needed. Again, the HU provides the bottles and paperwork as well as direction if the beach is required to be closed. **WILDWOOD CA - Perth District Health Unit** WCA staff complete the sampling weekly May-Sept. PDHU administers the program by providing paperwork and sampling bottles. WCA staff deliver completed samples to the health unit. Health unit provides sampling reports from the lab and advises on closures.	Each CA area collects samples and sends them to the HU. We have three large conservation areas here at the UTRCA and because they are located throughout the watershed, each park has established their own relationship and sampling regime with the local HU.
Essex	Our Public Health Unit is responsible for beach sampling for E.coli and it is their call whether beaches get closed.	PHU sample
Grey Sauble	We don't sample our own areas anymore. We were trying to work something out with the local health unit but discussions suddenly ended. Also, the health unit has greatly reduced its sampling of the local beaches. To our knowledge, only Sauble Beach is sampled and may be occur at reduced frequency.	don' t sample any more
Lakehead CA	The LRCA monitors the bathing beach at our Hazelwood Lake Conservation Area. We conduct the sampling in partnership with the Thunder Bay District Health Unit. LRCA staff collect the samples, the Ministry of Health Laboratory analyzes the samples and sends the results to the Health Unit, who then forwards the results to the LRCA. I've attached our 2016 Bathing Beach Report for reference.	CA samples
Niagara	The Hamilton and Niagara Public handles all the beach monitoring in their respective jurisdictions. We have no beaches in Haldimand	PHU sample

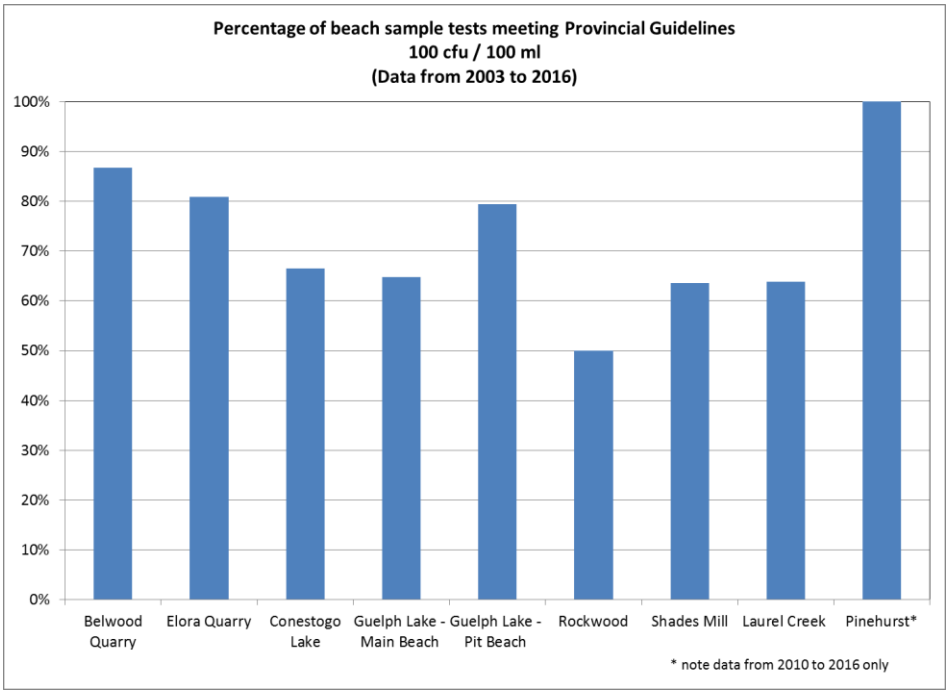
Appendix 2: GRCA Beach Characterization

Park Beach	Public Health Unit	Waterbody	Known Hazards	Existing best practices
Shades	Region of Waterloo	On-line reservoir; Mill Creek subwatershed	People; Geese; Wildlife; Septic systems in upstream subwatershed; some livestock production, urban stormwater	Daily beach inspections including maintenance and clean up, Rural water quality program to assist landowners to implement best practices; Mill Creek restoration program
Laurel Creek	Region of Waterloo	On-line reservoir Laurel Creek subwatershed	People; Geese; Wildlife; Septic systems; Livestock (limited) production, urban stormwater	Daily beach inspections including maintenance and clean up; Rural water quality program to assist landowners to implement best practices
Rockwood	Wellington-Dufferin-Guelph	On-line reservoir Eramosa river subwatershed	People; Geese; Wildlife; Septic systems in upstream watershed ; some (limited) livestock production, urban stormwater	Daily beach inspections including maintenance and clean up, GRCA inspects its own septic systems in the park and ensures routine maintenance; New forcemain diverts sewage from Park to Rockwood/Guelph; Sewage pump station in Rockwood; Rural water quality program to assist landowners to implement best practices
Guelph Lake	Wellington-Dufferin-Guelph	On-line reservoir Speed River subwatershed	People; Geese; Wildlife; Septic systems; some (limited) livestock production	Daily beach inspections including maintenance and clean up, Rural water quality program to assist landowners to implement best practices

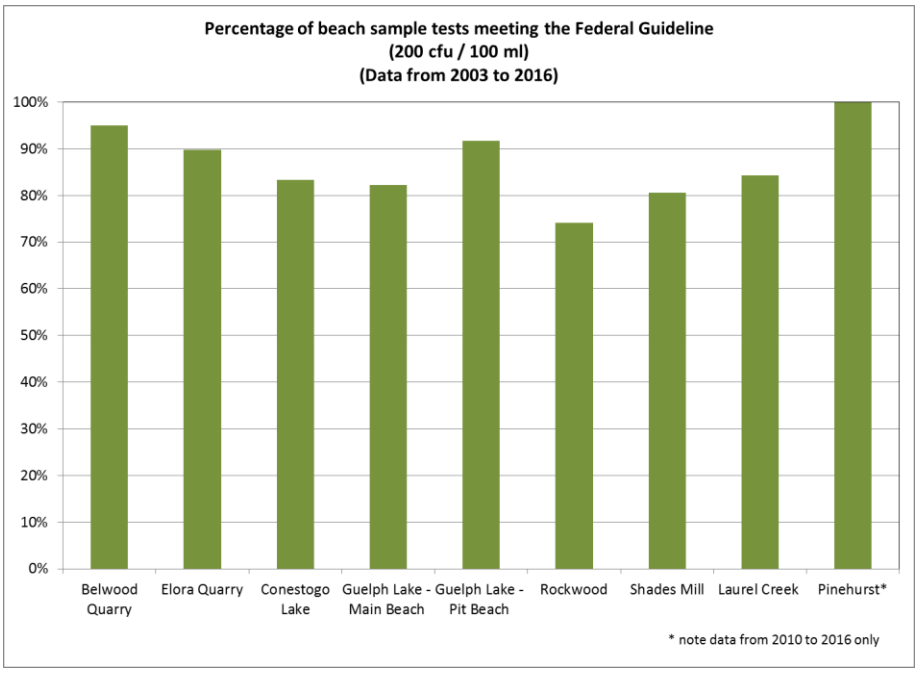
Park Beach	Public Health Unit	Waterbody	Hazards	Existing best practices
Guelph Pit	Wellington-Dufferin-Guelph	On-line reservoir Speed River subwatershed	People; Geese; Wildlife; Septic systems; some (limited) livestock production	Daily beach inspections including maintenance and clean up, Rural water quality program working with rural landowners to implement best practices
Elora Quarry	Wellington-Dufferin-Guelph	Unique water body in old quarry, very limited drainage area with no visible surface water inlets	People; Geese; Wildlife;	Daily beach inspections including maintenance and clean up,
Belwood Quarry	Wellington-Dufferin-Guelph	Unique water body in old quarry, very limited drainage area with no visible surface water inlets	People, wildlife	Daily beach inspections including maintenance and clean up,
Conestogo Lake	Wellington-Dufferin-Guelph	On-line reservoir on the Conestogo river;	People, geese, gulls, wildlife, 2 Municipal wastewater treatment systems and 1 industry that only discharge in the spring and fall; livestock production in upstream subwatershed, septic systems, urban stormwater; Septic systems around reservoir and upstream	Daily beach inspections including maintenance and clean up, Rural water quality program working with rural landowners to implement best practices
Pinehurst	Brant County	Unique water body – Kettle Lake, very limited drainage area with no visible surface water inlets	People, wildlife; Septic system	Daily beach inspections including maintenance and clean up, GRCA inspects septic systems and ensures routine maintenance

Appendix 3: Sampling data compared to guidelines

Percentage of beach samples collected between 2003 and 2016 that meet or are below the Provincial Guideline of 100 cfu / 100 ml. Note: Health Canada indicates that < 1 person may become ill for every 100 swimmers at this concentration.



Percentage of beach samples collected between 2003 and 2016 that meet or are below the Federal Guideline (200 cfu / 100 ml). Note: Health Canada estimates that about 1-2 people may become ill for every 100 swimmers at this concentration.



Appendix 4: [Draft information and education messages to be provided to the public and GRCA park patrons through a variety of communications vehicles in both print and electronic form.]

Swimming in Natural Bodies of Water

Rivers and reservoirs in the Grand River watershed are natural water bodies that are exposed to contamination from various sources. Although a great deal of effort is placed on reducing contamination in the watershed, swimming in natural water bodies is not risk-free. In fact, there is always a level of risk when swimming in a natural water body, whether it's on the shores of Lake Erie, jumping off a dock at a cottage or going to a GRCA or municipal beach.

Caution must always be taken when swimming in any natural water body. Contamination can come from:

- Feces from wildlife - geese gulls and other waterfowl
- Winds, currents and waves that stir up bottom sediment of lakes and streams (turbidity)
- Other swimmers, particularly those with infections and when bather load is high.
- Runoff from manure piles and livestock areas or livestock that have direct access to streams
- Faulty private septic systems
- Municipal sewage treatment plants that bypass treatment processes
- Municipal storm water outfalls or runoff

People who swim in natural bodies of water may be at greater risk of getting sick as a result, than people who swim in chlorinated swimming pools.

Swallowing water is the main way you can get sick while swimming in any recreational water environment, including a natural water body.

Bacteria may also cause infection through broken skin or through the eyes, ears and nose.

The most common illnesses that result are gastrointestinal such as diarrhea, as well as minor skin, eye, ear, nose and throat infections.

How can you prevent illnesses when swimming in surface waters?

Consider these precautions:

1. Be your own monitor. Water that is safe one minute may be unsafe the next.
2. Do not swim following periods of heavy rainfall or large waves.
3. If the water is not clear or has an odour, do not go swimming.
4. Avoid swimming in areas close to livestock, storm culverts, field tile drains, or industrial runoff.
5. Do not swim if you have an infection or open wounds.
6. Avoid putting your head under water if you are susceptible to eye, ear, nose or throat infections.
7. If you are taking your infant swimming, consider using a splash pad or chlorinated swimming pool instead of surface waters.
8. Avoid warm, shallow pools of water that are not replenished by a flow of fresh water. Such pools are good breeding grounds for bacteria.

9. Use your best judgment when swimming in natural waters

Weather, environmental, animal or human factors can contaminate water shortly after routine water tests show the beach to be safe.

Appendix 5: Example signage used by the Niagara Region Public Health

Grand River Conservation Authority

Report number: GM-6-17-63

Date: June 23, 2017

To: Members of the Grand River Conservation Authority

Subject: Current Watershed Conditions as of June 14, 2017

Recommendation:

That Report No. GM-6-17-63 – Current Watershed Conditions as of June 14, 2017 be received as information.

Report:

Precipitation

Precipitation in the first 14 days of June has been fairly low with all climate stations reporting well under normal precipitation for the first half of June.

In comparison, May was an extremely wet month across the watershed. Many of the watershed climate stations reported over twice the normal amount of rainfall for the month. At Shand Dam it was the highest recorded May rainfall since 1942 and at Guelph it was the highest since 1953. Two heavy periods of rain occurred in May. The first was May 3 -5, when a slow moving weather system delivered 60 to 75mm of rain to most of Southern Ontario. The second period was during the last week and a half of the month when another 60 to 75mm fell across the watershed.

Monthly precipitation at the Shand Dam and Brantford Airport climate stations from 2012 to 2017 are shown in Figures 1 and 2. Table 1 includes monthly and recent precipitation trends for watershed climate stations.

Table 1: Precipitation Averages at Watershed Climate Stations

Reservoir	Monthly Precipitation		Percentage of Long Term Average					
	14-Jun (mm)	Long Term Average (mm)	Current Half Month	Last Full Month	Last Three Full Months	Last Six Full Months	Last Twelve Full Months	Last Fifteen Full Months
Shand	10.4	84.8	25%	180%	150%	162%	119%	119%
Conestogo	7.3	83.4	18%	203%	163%	151%	111%	112%
Guelph	10.2	75.8	27%	239%	191%	177%	127%	127%
Luther	18.0	80.6	45%	216%	167%	156%	112%	114%
Woolwich	6.2	75.8	16%	193%	174%	152%	115%	116%
Laurel	7.0	78.2	18%	201%	171%	158%	120%	120%
Shades	8.0	76.7	21%	182%	164%	158%	129%	124%
Brantford	10.7	72.8	29%	144%	149%	134%	103%	103%

Air Temperatures

Temperatures in June to date have been slightly above the long term average. The average air temperature in the first two weeks of June was 16.9 degrees at the Shand Dam climate station, which is about 0.44 degrees warmer than normal for this time of year. Shand Dam recorded its first day at 30 degrees on June 11th and Environment Canada issued a heat warning for the second weekend of the month.

May temperatures were cooler than normal with an average temperature of 11.0 degrees, which is over a degree cooler than the long term average. May is the first month with below average temperatures since April of 2016. Although the later part of May was warm with daytime highs above 20 degrees, there were many cool days early in the month and frost recorded on May 9th.

Figure 3 presents recent mean monthly air temperature departures from normal recorded at Shand Dam.

Lake Erie Conditions

The level of Lake Erie continues to be well above the long term average with the high rainfall in the Lake Erie basin in May contributing to the continued rise in water levels. The average lake level for the first half of June was 174.83m, which is the highest average lake level since 1998. It is currently below the highest average monthly lake level of 175.04m which was recorded in June 1986.

Forecast water levels for Lake Erie show that the lake level is likely to start falling over the next few months, but water levels will remain above the long term average. Lake Erie levels are not expected to break records under the current forecast.

Figure 4 presents current and forecast Lake Erie level from the Canadian Hydrographic Service.

Reservoir Conditions

Water levels in the four large reservoirs are at the upper end of their normal operating ranges and are now being used to augment flows to the river system. Since the start of June, flow augmentation has steadily increased. As of June 14th, augmentation accounted for approximately 65% of the flow through Kitchener, 20% of the flow through Brantford and 20% of the flow on the Speed River below Guelph. Flows in downstream reaches were maintained at or above flow targets throughout June to date.

Reservoir levels for 2017 are shown in Figures 5 and 6 for Shand Dam, Conestogo Dam, Guelph Dam, and Luther Dam.

Long Range Outlook

Environment Canada's seasonal forecast is predicting near normal temperatures for southern Ontario for the next 3 months including June. Precipitation is also forecast to be near normal for the June to August period for Southern Ontario.

Flood Preparedness

Conditions are being monitored closely. Staff continue to hold weekly Senior Operator meetings as part of overall succession planning initiatives and flood emergency preparedness.

Spring inspections of the largest GRCA owned water control structures were completed in May. Inspections of the remaining water control structures are continuing over the next few weeks.

On June 13th the GRCA hosted a meeting for conservation authorities bordering Lake Erie and Lake Huron to discuss flood and erosion concerns with the high lake levels. The meeting was put on by the Ministry of Natural Resources and Forestry Surface Water Monitoring Centre and included participation by Environment and Climate Change Canada.

The Provincial Flood Forecasting and Warning workshop is scheduled for September 20th and 21st in the Brampton area. This workshop will include an emergency management stream related to flood emergency response. Municipal staff will be invited to attend this workshop.

Financial implications:

Not applicable

Other department considerations:

Not applicable

Prepared by:

Stephanie Shifflett
Water Resources Engineer

Approved by:

Dwight Boyd
Director of Engineering

Figure 1: Precipitation at Shand Dam 2012 to present

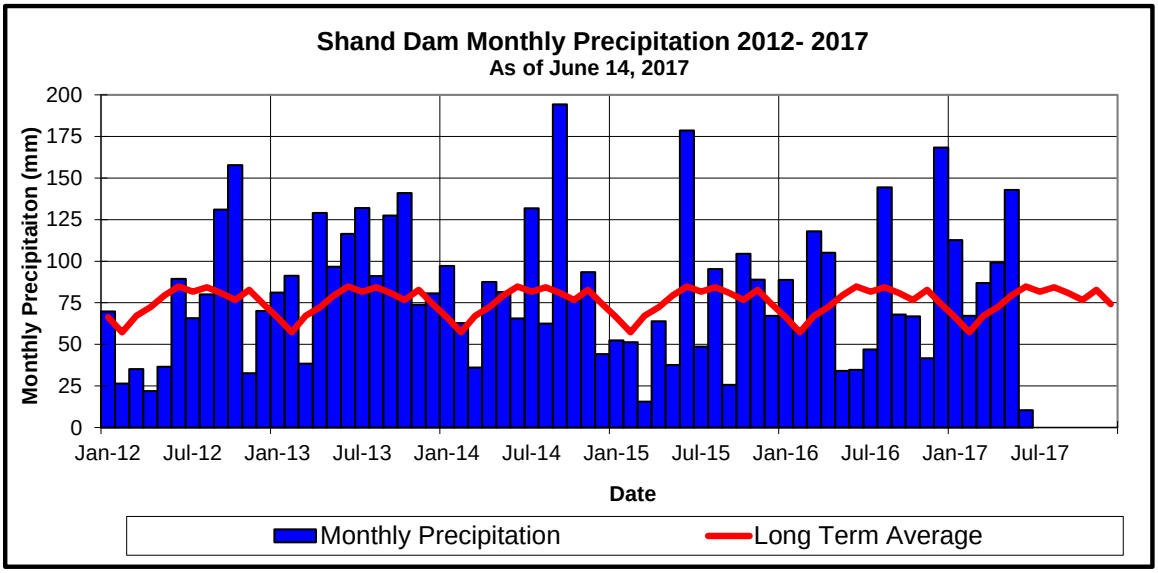


Figure 2: Precipitation at Brantford 2012 to present

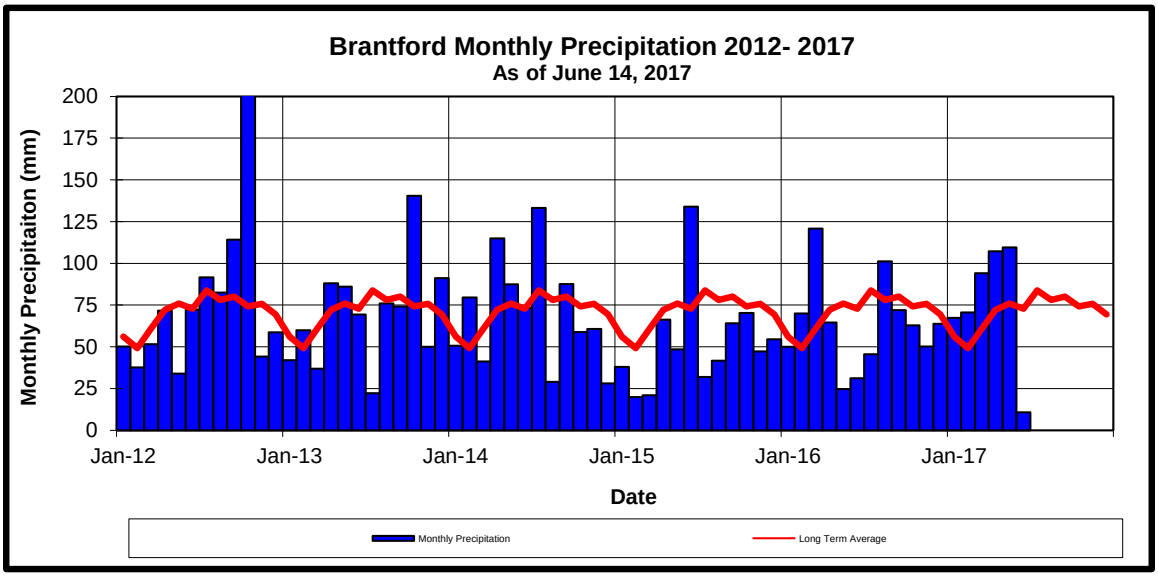


Figure 3: Departures from Average Air Temperatures

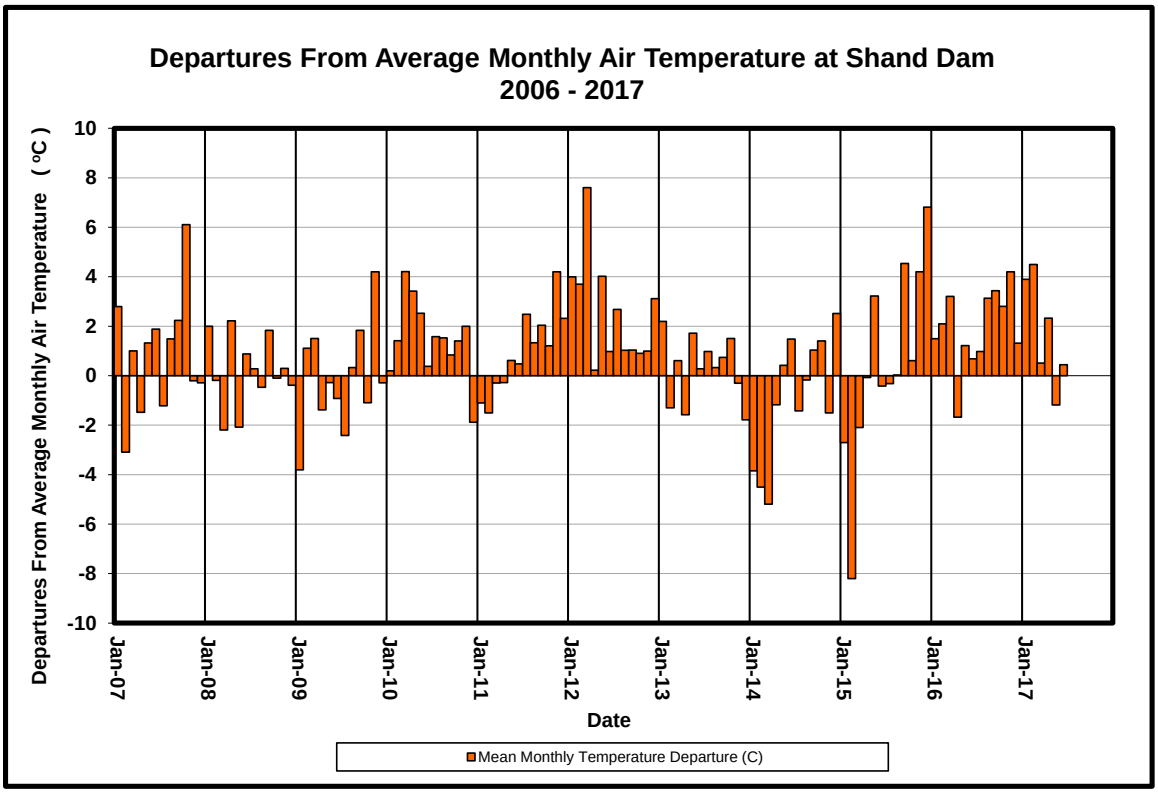


Figure 4: Forecasted Lake Erie Levels

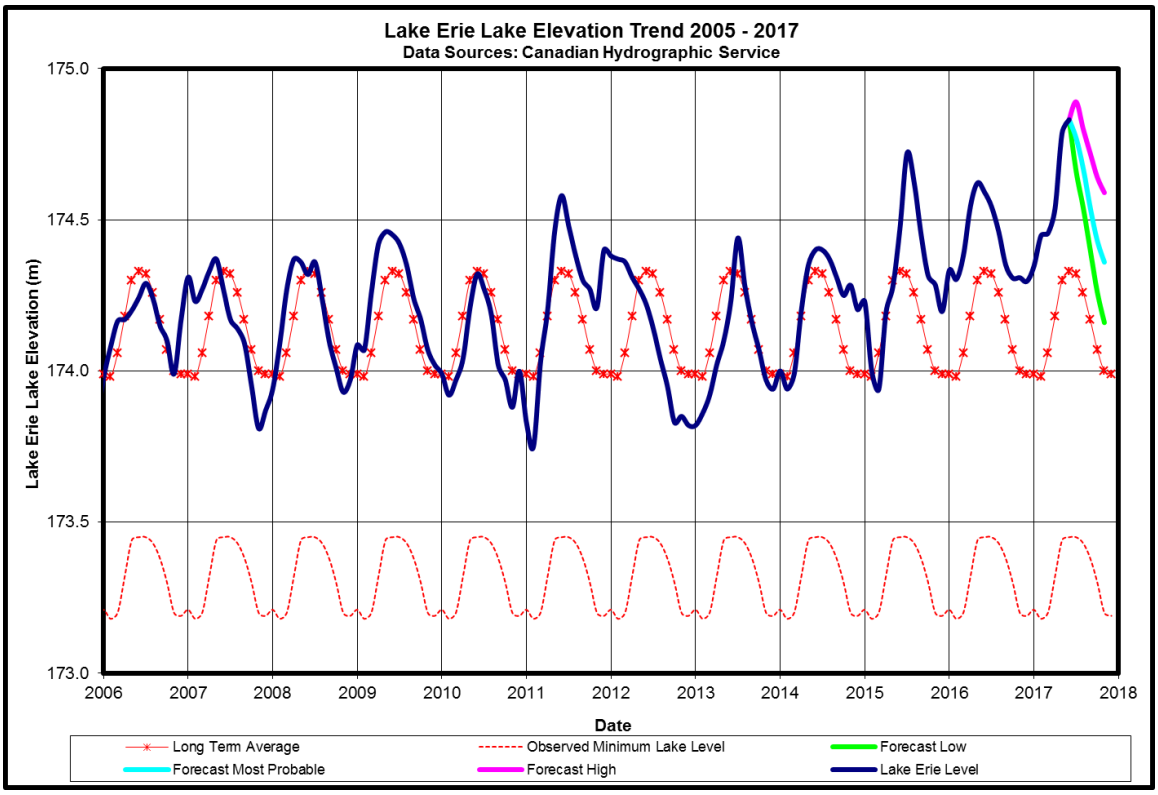
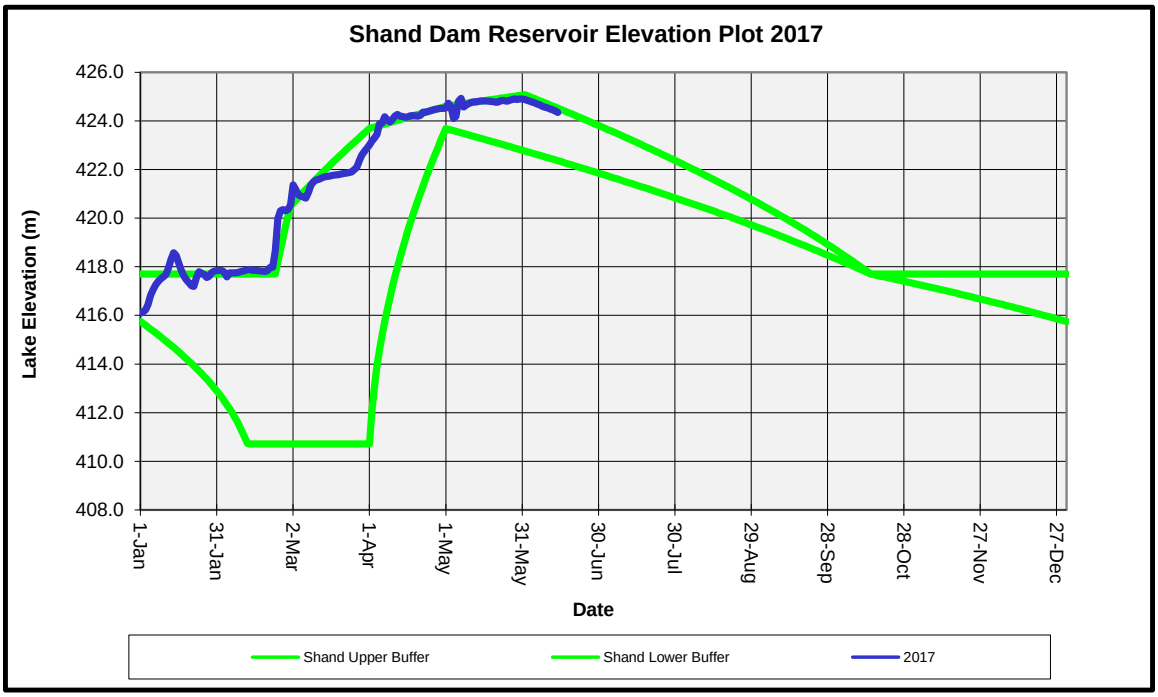


Figure 5: Shand and Conestogo Reservoir Elevation Plots



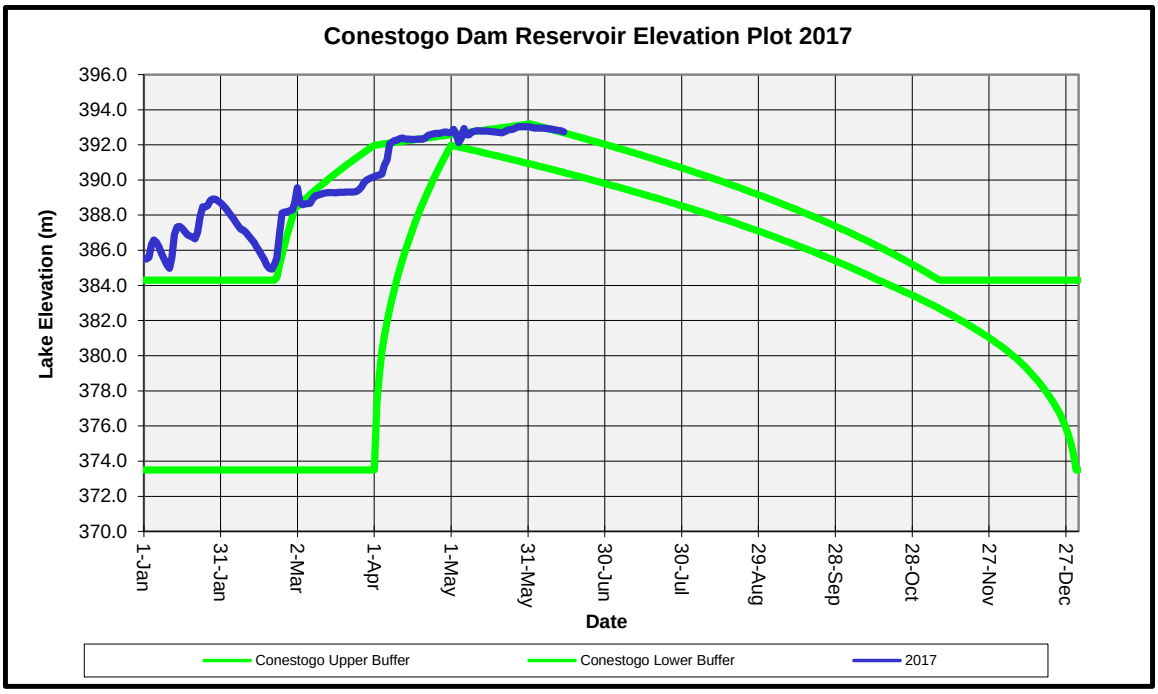
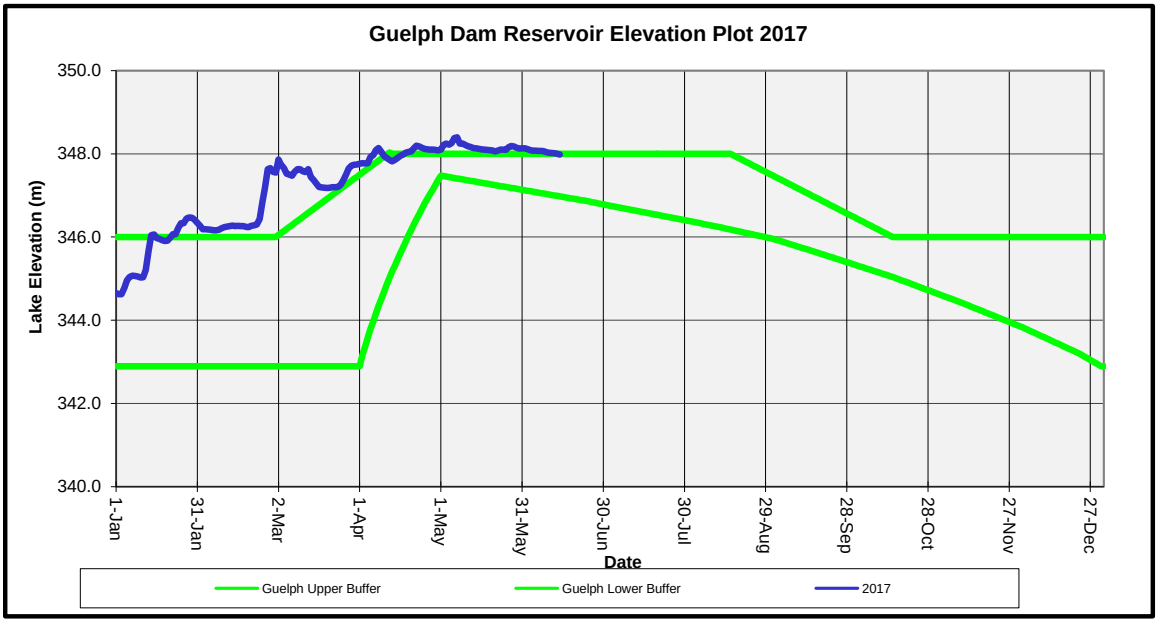
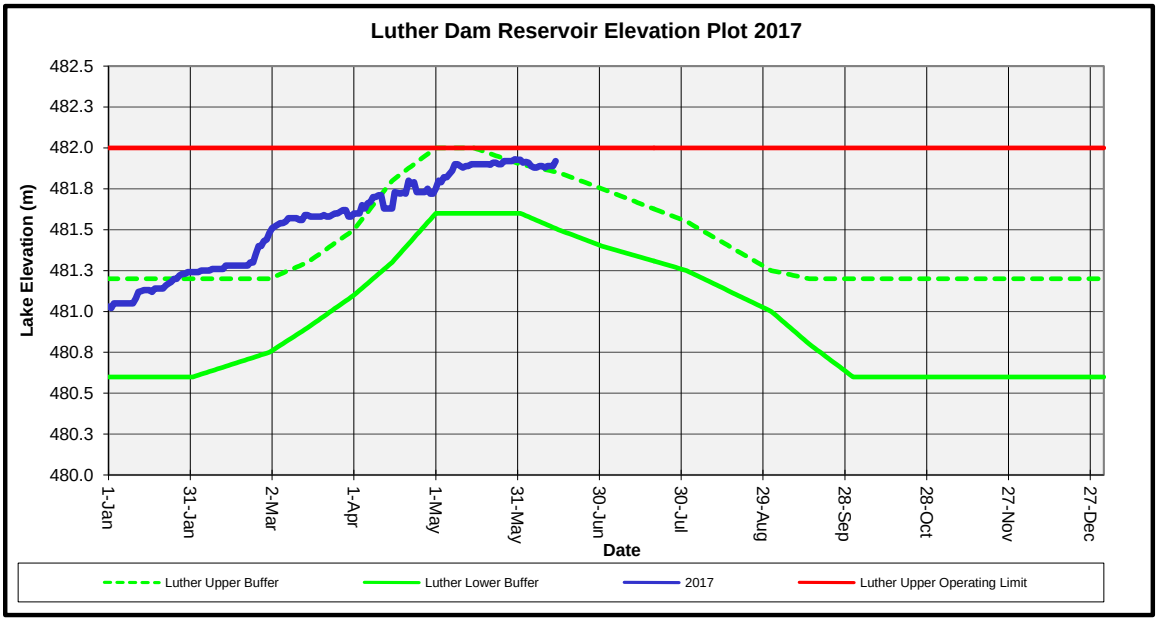

Conestogo Dam Reservoir Elevation Plot 2017
Lake Elevation (m)
396.0
394.0
392.0
390.0
388.0
386.0
384.0
382.0
380.0
378.0
376.0
374.0
372.0
370.0
1-Jan
31-Jan
2-Mar
1-Apr
1-May
31-May
30-Jun
30-Jul
29-Aug
28-Sep
28-Oct
27-Nov
27-Dec
Date
Conestogo Upper Buffer
Conestogo Lower Buffer
2017

Figure 6: Guelph and Luther Reservoir Elevation Plots





Luther Dam Operating Curves

Luther Dam primarily provides a flow augmentation function to the upper Grand River and to Shand Dam. While it does provide some benefits from a flood control perspective, these benefits are limited due to the small drainage area regulated by Luther Dam.

The buffers between March 1st and September 30th define the operating range to meet downstream low flow targets. The lower buffer defines the lowest operating range for flow augmentation before reducing downstream flow augmentation targets. The earlier winter (January 1st to March 1st) and late fall (October 1st to December 31st) upper buffer curve is defined from ecologic considerations from the Luther Marsh Master Plan. The upper operating limit defines the maximum operating level from a dam safety perspective.