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NOV 25 2013

November 19, 2013
Our File: 199-024Township of Puslinch
RR3, 7404 Wellington Road 34
Guelph, ON N1H 6H9

Township of Puslinch

Attention: Ms. Karen Landry
CAO/ClerkRe: Mini Lakes Wastewater Treatment
Plant Effluent Monitoring Report,
3rd Quarter (2013)

Dear Ms. Landry:

We have reviewed the "Mini Lakes Mobile Home Community Quarterly Monitoring Program – 3rd Quarter 2013" report, as submitted by Stantec Consulting Limited on October 30, 2013. We are pleased to provide our comments for your consideration.

The following table summarizes the average effluent quality for the third quarter (Q3) (column 2), the year to date (YTD) average (column 3), the 12-month rolling average (column 4), the previous YTD average (2012) (column 5) and the MOE Certificate of Approval (C of A) compliance limits (column 6).

1	2	3	4	5	6
Parameters (mg/L)	Q3 Avg., (Jul. 1 to Sep. 30, 2013)	YTD Avg., (Jan. 1 to Dec. 31, 2013)	Twelve-Month Rolling Avg., (Oct. 1, 2012 to Sep. 30, 2013) ^a	Previous YTD Avg. (Jan. 1 to Dec. 31, 2012)	Compliance Limit
CBOD ₅ ^b	14.3	11.6	12.1	11.5	20.0
TSS ^c	19.7	15.7	12.6	15.0	20.0
TP ^d	0.29	0.40	0.38	0.43	1.0
NO ₃ ^e	3.4	5.4	5.1	4.7	5.0

- Condition 3.1 of the MOE C of A, average is defined as "any twelve (12) consecutive calendar months"
- CBOD₅ = 5 day Carbonaceous Biological Oxygen Demand
- TSS = Total Suspended Solids
- TP = Total Phosphorous
- NO₃ = Nitrate

people engineering environments

Gamsby and Mannerow Limited · Guelph, Owen Sound, Listowel, Kitchener, Exeter

650 Woodlawn Rd W., Block C, Unit 2, Guelph, ON N1K 1B8 519-824-8150 fax 519-824-8089 www.gamsby.com

The MOE C of A requires that plant effluent be sampled and analyzed on a monthly basis for each of the parameters defined above. Plant effluent was sampled monthly for all parameters during this quarter and on six additional occasions for only nitrate/nitrite.

Effluent CBOD₅

The average CBOD₅ effluent concentration for this quarter was 14.3 mg/L. This is below the C of A compliance limit of 20.0 mg/L for this parameter. Effluent CBOD₅ concentrations were below the compliance limit on all three sampling occasions during this quarter. The twelve month rolling average for this parameter is in compliance at 12.1 mg/L, demonstrating that the plant is performing well with respect to CBOD₅.

Effluent TSS

The average TSS effluent concentration for this quarter was 19.7 mg/L. This is below the C of A compliance limit of 20.0 mg/L for this parameter. Effluent TSS concentrations were below the compliance limit on two of the three sampling occasions this quarter. The twelve month rolling average for this parameter remains below the compliance limit at 12.6 mg/L, demonstrating that the plant is performing acceptably with respect to TSS.

Effluent TP

The average TP effluent concentration for this quarter was 0.29 mg/L. This is below the C of A compliance limit of 1.0 mg/L for this parameter. Effluent TP concentrations were below the compliance limit on all three sampling occasions this quarter. The twelve month rolling average for this parameter is in compliance at 0.38 mg/L, demonstrating that the plant is performing well with respect to TP.

Effluent NO₃

The average effluent NO₃ concentration for this quarter was 3.4 mg/L which is below the C of A compliance limit of 5.0 mg/L for this parameter. Effluent NO₃ concentrations were below the compliance limit on seven of eight sampling occasions this quarter. The twelve month rolling average is 5.1 mg/L, which is slightly above the compliance limit. Historically it has proven difficult to achieve compliance with the C of A nitrate limit during the colder winter months, as reduced water temperature reduces the ability of the system to denitrify. The plant had difficulty achieving its effluent nitrate objective during first two quarters of 2013 resulting in this exceedance of the 12-month rolling average. In addition, dissolved oxygen (DO) levels, at an average of 5.9 mg/L this quarter, were above optimal values for reliable denitrification.

On December 6, 2012 Stantec applied on behalf of Mini Lakes for an amendment to the Environmental Compliance Approval (ECA) to undertake proposed plant improvements and re-rate the plant based to revise the nitrate limit upwards to 8.0 mg/L. It is acknowledged that the ECA amendment process can be quite lengthy. Stantec has indicated that approval and construction of the proposed upgrades is expected to occur no earlier than spring of 2014 due to delays in the ECA process. The owner should continue to provide updates on the approval process and anticipated schedule in quarterly monitoring reports as new information becomes available.



Average Sewage Flows

The average daily sewage flow rate to the plant ranged between 99.8 m³/d and 100.8 m³/d during this quarter. This is well below the plant's design capacity of 216 m³/d. The estimated number of occupied homes ranged between 255 and 265 this quarter, which represents 87 to 91% of units in the current Draft Plan of Subdivision application.

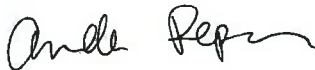
The estimated average daily flow per home ranged between 379 L/d and 391 L/d, below the design average daily flow per home of 540 L/d.

We trust this is sufficient for your requirements. If you have any questions please call.

Yours truly,

GAMSBY AND MANNEROW LIMITED

Per:



Amanda Pepping, P.Eng.

AP/ar

cc: Ms. Dianne Paron, Mini Lakes Residents Association
Ms. Lynnette Armour, Ministry of the Environment – Guelph District Office
Mr. Stan Denhoed, Harden Environmental Services Ltd.
Mr. Miles McCormick, Stantec Consulting Ltd.



6.106)



Stantec Consulting Ltd.
49 Frederick Street
Kitchener ON N2H 6M7
Tel: (519) 579-4410
Fax: (519) 579-6733

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OCT 31 2013

Township of Puslinch

October 30, 2013
File: 1611 07544/31

Attention: Ms. Karen Landry, CAO/Clerk
Township of Puslinch
R.R. #4
County Road 34 Aberfoyle
Guelph, ON N1H 6H9

Dear Ms. Landry,

**Reference: Mini Lakes Mobile Home Community
Quarterly Monitoring Program – 3rd Quarter 2013**

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- see attached

Please find enclosed the wastewater treatment plant effluent results for Mini Lakes Mobile Home Community, provided in Table 1 (attached). These results are provided in accordance with the Operation and Maintenance Agreement between the Mini Lakes Residents Association and The Township of Puslinch, and the Certificate of Approval (CofA) for the sewage system. This letter represents the third quarter reporting for 2013.

As shown on Table 1, plant effluent has been sampled and analyzed on nine (9) occasions for this quarter (three full sets and six nitrate/nitrite samples).

The average carbonaceous biochemical oxygen demand (CBOD₅) concentration for the quarter is 14.3 mg/L, which is well below the compliance limit of 20 mg/L. CBOD₅ values were below the compliance limit on all three sampling occasions this quarter. The 12-month rolling average for CBOD₅ is 12.1 mg/L. Overall, the plant is deemed to be performing very well with respect to CBOD₅.

The average TSS concentration for the quarter is 19.7 mg/L, which is only slightly below the compliance limit of 20 mg/L. TSS values were below the compliance limit on two of three sampling occasions this quarter. The 12-month rolling average for TSS is 12.6 mg/L. Overall, the plant is deemed to be performing well with respect to TSS.

The average total phosphorus (TP) concentration for the quarter is 0.3 mg/L, which is well below the compliance limit of 1.0 mg/L. TP values were below the compliance limit on all three sampling occasions this quarter. The 12-month rolling average for TP is 0.4 mg/L. Overall, the plant is deemed to be performing very well with respect to TP.

The average nitrate concentration for the quarter is 3.4 mg/L, which is below the compliance limit of 5.0 mg/L. Nitrate values were below the compliance limit on seven of eight sampling occasions this quarter. The 12-month rolling average for nitrate is 5.1 mg/L, which is now slightly above the compliance limit due to reduced performance in winter and spring of this year.



**Reference: Mini Lakes Mobile Home Community
Quarterly Monitoring Program – 3rd Quarter 2013**

Since it has been shown that consistent denitrification is difficult to achieve, operations staff need to continue close monitoring and maintenance of the denitrification process. General measures required to maintain denitrification and phosphorus removal include, but are not limited to:

- Recording of sludge depths on a weekly or more frequent basis, and prompt sludge removal (as necessary) in all clarifiers and the effluent pump chamber.
- Regular denitrification media maintenance cleanings and removal of floatable material from the denitrification chambers.
- Use of the RBC feed-forward valves to the maximum extent possible to improve soluble carbon availability and lower dissolved oxygen in the denitrification zone.
- Daily inspections and regular cleaning of all clarifier weirs.
- Balancing of chemical dosing flows; conceptual plans have been prepared and reviewed by AWC for new chemical dosing facilities in accordance with the existing CofA.

The recommended long term plan is to provide better sludge management by partitioning the existing primary clarifier into two chambers, one for primary clarification and sludge storage, and the second for primary effluent polishing. This will resolve issues with sludge carryover and washout, and allow much greater flexibility in recirculating sludge and effluent in order to optimize nitrogen removal. Current issues with sludge carryover are related to the buildup of sludge in the primary clarifier and washout during high flow events. Additionally, operations staff indicated that the return sludge is deposited at the discharge end, contributing to excessive buildup prior to the rotating biological contactor trains, and thus there is a higher potential for carryover. There is also no weir/baffle assembly in this clarifier to prevent sludge from entering the clarifier overflow. The proposed upgrades are as follows:

- Primary clarifier upgrades including:
 - a partition wall separating the chamber into two compartments, an inlet and sludge storage compartment having a working volume of 73 m³ and a primary effluent compartment having a working volume of 23 m³.
 - an inlet baffle plate.
 - an outlet weir box and baffle plate.
 - extension of all sludge recirculation piping to inlet chamber.
- Denitrification inlet modifications to allow crossover between trains for redundancy and option to run on one RBC train and two tertiary trains.
- One new effluent pump and piping for effluent recirculation to primary clarifier inlet.
- New chemical building as previously approved.

Implementation of these upgrades will be difficult and complex due to the need to bypass the clarifier during installation using an offline tank; however, these upgrades would improve the operational efficiency of the plant, resistance to upsets (e.g., denitrification media plugging), and provide savings related to reduced sludge haulage. These upgrades will require an amendment to the current approval. Stantec has



**Reference: Mini Lakes Mobile Home Community
Quarterly Monitoring Program – 3rd Quarter 2013**

applied on behalf of Mini Lakes for an amended Environmental Compliance Approval (ECA) as of December 6, 2012 and we expect approval and construction to begin no earlier than spring of 2014 due to delays in the ECA. With the approval amendment, we also propose to re-rate the wastewater treatment plant based on the current Draft Plan of Subdivision and subsequently revise the nitrate limit upwards to 8.0 mg/L based on lower long term projected nitrate loadings than originally designed.

It must be noted that these plans are ongoing and subject to approval and financial resources, though Mini Lakes already has approval and funding in place for the chemical building upgrades. MLRA is committed to resolving this situation, and additional monitoring of initial repairs to the denitrification media system will continue in the near term.

Results for dissolved oxygen (DO) this quarter are above optimal values at an average of 5.9 mg/L, where the objective is to be below 2 mg/L to ensure reliable denitrification. The effluent DO concentrations are lower than in the previous quarter, but higher than last fall when denitrification was working well and DO was as low as 3 mg/L. It is not clear why DO control was more challenging this quarter than previous summers. An assessment of historic nitrate data appears to show more of a correlation between seasonal temperature variation and nitrate reduction than DO concentration; however, low DO levels are generally necessary for efficient denitrification.

The remaining parameters shown on Table 1 have been sampled in accordance with the CofA; however, they do not have compliance limits. The results for these additional parameters are deemed to be acceptable and are reasonable for this type of wastewater treatment plant. Results for effluent *E.coli* this quarter show an average of 106,667 CFU/100 mL. Results for pH this quarter are consistent with expected values at an average of 7.2.

With respect to wastewater flows this quarter, the average flow per unit estimate is approximately 386 L/unit/day. This is slightly lower than the average per unit flow over the past three (3) years of approximately 400 L/unit/day; however, this is expected during the third quarter when infiltration and inflow is low. The design average is 540 L/unit/day and the maximum daily design flow is 800 L/unit/day. Estimated per unit flows have not exceeded the daily design basis this quarter. The average day flow was only 46.4% of the design average day flow of 216 m³/d this quarter, and the maximum day flow never exceeded the wastewater treatment plant maximum day design flow of 320 m³/d. Based on these trends and the fact that the development as a whole is approximately 65% built out based on original design (and 90% based on current Draft Plan of Subdivision application for 292 total units), it is our opinion that infiltration and inflow are not an issue at this time. The average daily flows for each month, and the corresponding estimated number of occupied homes, is given below.

Table 2: Sewage Flow Volumes

Month (2013)	Average Daily Flow (L/d)	Maximum Daily Flow (L/d)	Estimated Number of Occupied Homes	Estimated Flow per Unit (L/d)
July	100,420	136,820	265	379
August	100,753	131,800	260	388
September	99,762	183,320	255	391



October 30, 2013
Ms. Karen Landry, CAO/Clerk
Page 4 of 4

**Reference: Mini Lakes Mobile Home Community
Quarterly Monitoring Program – 3rd Quarter 2013**

In addition to the monitoring requirements for the wastewater treatment plant, surface water and groundwater have been monitored for the development. Please find attached the letter report from CH2M Hill Canada Limited outlining the subsurface and groundwater monitoring results.

We trust this meets with your requirements. Should you have any questions, please contact the undersigned.

Regards,

STANTEC CONSULTING LTD.

Miles MacCormack, P. Eng.
Project Manager, Water
Tel: (519) 585-7499
Fax: (519) 579-8806
miles.maccormack@stantec.com

Attachment

- c. Ms. Dianne Paron, Mini Lakes Residents Associated (letter only)
- Ms. Lynn Zettle, Region Business Banking Centre (letter only)
- Mr. Ed McGurk, CH2M Hill Canada Limited (letter only)
- Ms. Amanda Pepping, Gamsby and Mannerow Limited (attachment)
- Ms. Lynnette Armour, Ministry of the Environment - Guelph District Office (attachment)

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6.1(c)



THE CORPORATION OF THE TOWNSHIP OF PUSLINCH

NOTICE

REGARDING COUNCIL'S INTENTION TO PASS A BY-LAW TO REMOVE IN PART THE HOLDING SYMBOL

TAKE NOTICE that the Council Corporation of the Township of Puslinch, in accordance with the requirements of section 36 of the Planning Act, R.S.O., 1990, as amended, intends to pass a By-law to remove the holding zone provisions which apply to the lands below. The earliest date at which council will meet to pass the proposed amending By-law is Wednesday, January 8th, 2014 at the Regular Council Meeting.

THE LAND SUBJECT to the proposed amendment is Part of Lot 21, Concession 8, on the south side of Wellington Road 34 east of the hamlet of Aberfoyle as illustrated on the map below. The Subject property is known as the Mini Lakes Country Club and is owned by the Mini Lakes Residents Association. A file number P6/2013 has been opened for this proposed Zoning By-law Amendment application.

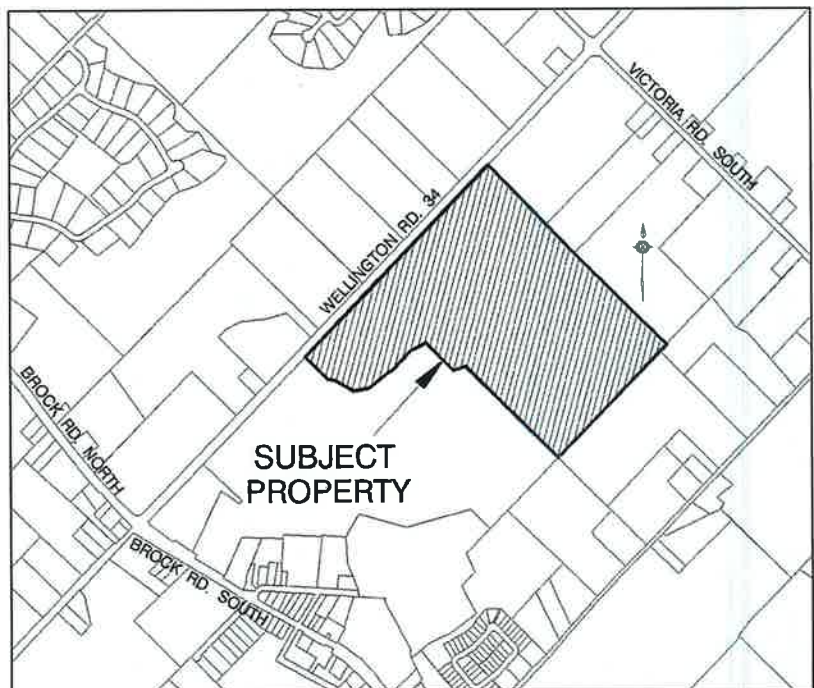
THE PURPOSE AND EFFECT of the proposed amendment is to remove the current holding provisions, which apply to part of the subject property. The zoning of the subject land is Mini lakes (ML 'h-1') Holding zone and was established by the Ontario municipal board on March 28th, 2000 to ensure the orderly conversion of the Mini lakes property from a seasonal and recreational/residential park to a permanent residential adult life style community. Once the 'h-1' symbol has been removed from a specific dwelling site, it may be used for a year- round residential occupancy subject to the Township's building standards and the applicable regulations of the Mini Lakes (ML) Zone.

ADDITIONAL INFORMATION regarding this application is available for review during regular business hours at the Township office located at 7404 Wellington Road 34, Aberfoyle, Ontario.

Dated at the Township of Puslinch
This 6th day of December, 2013.

Ms. Karen Landry,
C.A.O/ Clerk
Township of Puslinch
R.R. 3 (Aberfoyle)
Guelph, Ontario
N1H 6H9

Phone: (519) 763-1226
Fax: (519) 763-5846



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NOV 28 2013

Township of Puslinch

File:3224
By: Email & Mail

November 25, 2013

Township of Puslinch
7404 Wellington Rd. 34
R.R. # 3
Guelph, Ontario
N1H 6H9

Attention: Mrs. Karen Landry
CAO/ Clerk

Dear: Mrs. Landry

CLERK'S DEPARTMENT	
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Re: Biological Monitoring at the Tikal Pit

As requested, I have reviewed the 2013 Biological Monitoring Report for the Tikal Pit prepared by Dance Environmental Inc. Typical wetland plants continue to occupy the pond and surrounding wetland. Only common species of birds, fish, reptiles and amphibians were observed using this area for breeding purposes. In general, the results of biological monitoring were similar to those reported in previous years. I have no concerns with the information provided in this report.

Yours truly,

GWS Ecological & Forestry Services Inc.

Greg W. Scheifele, M. A., R.P.F.
Principal Ecologist/Forester

6.2(b)

YEAR 2013 BIOLOGICAL MONITORING REPORT

TIKAL PIT
Lot 21, Concession 9, Puslinch Township,
County of Wellington
Aggregate Licence Number 48576

CLERK'S DEPARTMENT	
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Prepared for:
 CMB Aggregates
 55 Industrial St.
 Toronto, ON M4G 3W9
 Attn: Colin Evans

Prepared by:
 Dance Environmental Inc.
 807566 Oxford Rd. 29
 R.R. 1 Drumbo, ON N0J 1G0
 519-463-6156



DE-371B
 August 30, 2013.

1.0 INTRODUCTION

Biological monitoring in the wetland/pond located north of the proposed Tikal Pit was proposed as a component of a comprehensive environmental monitoring program, which includes hydrogeological and biological parameters (Waterloo Geoscience Consultants Ltd. 2003). The pond/wetland monitoring is part of the licence conditions for this pit.

Biological monitoring of the pond/wetland located to the north of the proposed pit will serve several purposes:

- (a) provide data in 2013, documenting conditions which have followed the extraction;
- (b) will provide a means of identifying any changes in significant wetland and fish habitat features and functions;
- (c) will provide information to be used in future refinement of target threshold water levels for the wetland and lake pit areas; and
- (d) will provide an ecological measure of whether the mitigative measures employed to maintain water level targets in the northern pond/wetland area have been effective.

In short, this biological monitoring will provide evidence that the pit operation and mitigation has not caused impacts on wetland features and functions - assuming that pit operation and mitigation measures have been effective in preventing off site impacts.

2.0 MONITORING METHODS

Site visits during 2013, occurred on: April 11 and 15, May 2 and 6, June 24, July 20 and August 21. Late snow and ice melt occurred in 2013, hence the first site visits were conducted in April.

Appendix I contains an example data form and field map. Conditions in and around both the Tikal Pond and the Whittle Channel were documented.

Weather was recorded at the time of the site visit, as were ice thickness and snow depth. Air temperature was determined using a hand-held mercury thermometer. Water depth and temperature were determined in both the Tikal Pond and the Whittle Channel. The extent of standing water in the Tikal Pond was recorded during each visit.

A steel T-bar was installed in the deepest portion of the Tikal Pond in 2003, see Figure 1 and Photo 5, in Appendix 2. Water depths were measured at the T-bar later in the year when it could be reached. Earlier in the year, deep water prevented access to the T-bar. Water depths in much of the Tikal Pond basin were recorded. Water depths were measured at the same location along the shore of the Whittle Channel, see Figure 1.

Bird occurrences for water, wetland and terrestrial species were recorded.

Species, numbers and activity of reptiles and amphibians were recorded. Spring season visits were made at or after dark so that frog choruses would be inventoried. Searches for egg masses, tadpoles and adult amphibians were made.

Dominant vegetation species were recorded and the photographs which were taken during daylight visits document vegetation distribution.

Other noteworthy information was also recorded. The number and orientation of the photographs taken, were recorded on the data sheets.

3.0 RESULTS

3.1 Water Temperature

During the first visit, April 11, 2013 there was no ice on half of the Tikal Basin and water temperature in the Tikal Pond was 5.0 °C. The warmest recorded water temperature was 29.5 °C on August 21, 2013 in the Tikal Pond and 27.0 °C on July 20, 2013 in the Whittle Channel.

3.2 Water Depth

Standing water was present in the Tikal Pond on all site visits in 2013. Water present in the Tikal Pond was in the ≥ 50 cm depth range between April 11 and July 20, 2013. Water depth at the T-bar was 33cm on August 21, 2013.

The Whittle Channel water depths were 1.0 m or more through August 2013. A mud ring was observed along the Whittle Channel on August 21, 2013. On previous visits there was no mud ring.

3.3 Extent of Standing Water

In the Whittle Channel there was little lateral change in the extent of standing water during the 2013 site visits.

Within the Tikal Pond basin, the entire basin was flooded in early April and on May 6, 2013.

Water levels in Tikal Pond remained high through June and July. On August 21, 2013 nearly 30% of the Tikal Pond basin still had some water present.

3.4 Birds

A variety of water and land birds were observed or heard in and around the study area in 2013. None of the species observed are uncommon. Water or wading birds recorded included: Canada Goose and Mallard. These species were observed infrequently and in small numbers.

Wetland bird species that probably bred in or near the study area in 2013 include: Red-winged Blackbird, Yellow Warbler, Common Grackle, Mallard, Spotted Sandpiper, Canada Goose, and Swamp Sparrow.

Other bird species which may be breeding or were migrants in the study area in 2013 include: Killdeer, Black-capped Chickadee, Song Sparrow, American Robin, Red-tailed Hawk (overhead), Northern Cardinal, American Crow, American Goldfinch, Gray Catbird, Eastern Kingbird, Blue Jay, European Starling, Baltimore Oriole, Eastern Phoebe, Belted Kingfisher, Warbling Vireo, Cedar Waxwing, Barn Swallow (overhead), Mourning Dove, Ruby-throated Hummingbird, Cuckoo species, Downy Woodpecker, Northern Flicker, Golden-crowned Kinglet, House Sparrow and Dark-eyed Junco.

3.5 Reptiles and Amphibians

No Midland Painted Turtles were observed in 2013.

Two Common Gartersnakes were present on the shore of Tikal Pond on April 15, 2013.

On April 11, 2013 at mid-day no frogs were heard calling from either the Tikal Pond or Whittle Channel.

On the late afternoon of April 15, 2013 at Tikal Pond 3 or 4 Northern Leopard Frogs were calling. One or 2 Spring Peepers were calling in the area of the Whittle Channel.

At night on April 15, 2013 Spring Peepers too numerous to count and 5 or 6 Wood Frogs were calling in the Tikal Pond.

During the early afternoon of May 2, 2013 American Toads too numerous to count and a few Northern Leopard Frogs were calling in the Tikal Pond and possibly the Whittle Channel. After dark on May 6, 2013 in the Tikal Pond Spring Peepers, Gray Tree Frogs and American Toads were all too numerous to count.

On July 20, 2013, Green Frogs were calling from the Tikal Pond. One Bullfrog was calling from the Whittle Channel. On the walk from County Road 34 to the Tikal Pond 3 Northern Leopard Frogs and 1 Green Frog were seen in the old field.

On August 21, 2013, hundreds to thousands of this year's young of Northern Leopard Frog were present in the Tikal Pond basin. At the Whittle Channel hundreds of this year's young Northern Leopard Frogs and 3 adult Green Frogs were observed on land and/or in shallow water along the shore.

In summary, 7 frog/toad species were observed in the study area and several are presumed to have successfully bred in the Whittle Channel where water remained. We observed that Northern Leopard Frogs emerged from the Tikal Pond, and other amphibian species are also expected to have emerged successfully from the Tikal

Pond, as water remained throughout the summer. These 7 frog/toad species were also found during certain previous years.

3.6 Fish

Due to high water levels in Spring and early Summer of 2013 observing fish was more difficult than during many other years of observation.

On July 20, 2013, young-of-the-year (Y-O-Y) fish were seen in two locations in Tikal Pond. In the Whittle Channel on that date thousands of Y-O-Y fish were seen near shore.

On August 21, 2013, hundreds of minnow Y-O-Y were seen in the Tikal Pond, while dozens of minnow Y-O-Y and dozens of adult minnows were seen in the Whittle Channel.

No dead fish were observed during the site visits.

3.7 Vegetation

Wetland and terrestrial vegetation in the study area was thriving during 2013. Photos in Appendix II document the seasonal patterns in vegetation growth.

Although the Tikal Pond did not have any aquatic plant species present during 2003, the seasonal deep water present from 2004 to 2011 provided habitat for Water Smartweed, Chara/Nitella, Floating-leaved Pondweed, Softstem Rush and Water Horsetail. The drying out of the Tikal Pond in May 2012 resulted in dominance of the basin by Reed Canary Grass. In 2013 Water Smartweed, Reed Canary Grass and Softstem Rush were prominent.

Plants noted in or along the Whittle Channel during 2013 included: Variable-leaved Pondweed, Wild Celery, Eleocharis, Sago Pondweed, Water Smartweed, Chara/Nitella, Bullhead Lily, Narrow-leaved Cattail and Common Bladderwort. Glossy Buckthorn and other shrubs were becoming very dense on the bank between the Tikal Pond and Whittle Channel.

3.8 Other Observations

On April 11, 2013 there was no water in the northwest ditch. On April 15, 2013, there were 22cm of water in the northwest ditch. On May 2 and 6, 2013 the water depths in the NW ditch were 13 and 4cm, respectively.

There was no water in the northwest ditch during the June, July or August site visits.

4.0 INTERPRETATION

No extraction occurred in the Tikal Pit in 2013.

There was near normal snow cover during the Winter of 2012-2013 and near normal rain occurred in March and April 2013. Good quantities of rain in May, June and July kept water levels up in both the Tikal Pond and Whittle Channel.

The observation of transformed Northern Leopard Frogs indicates successful completion of some frog life cycles in 2013.

Many young-of-the-year fish were observed in the Tikal Pond in and Whittle Channel in 2013.

Whittle Channel provides warmwater fish habitat, with young-of-the-year fish being observed in 2013.

The plant communities currently living in the Tikal Pond basin and along the Whittle Channel are adapted to the magnitude of changes in water depths which were observed during the 2003 to 2013 study period.

A variety of common wetland and terrestrial bird species continue to rely on the study area for breeding habitat.

No unexplained significant differences between 2013 and previous years were evident.

The 2013 data provides good monitoring results for future comparison.

The biological monitoring indicates no significant, unexplained change, in the parameters monitored, from previous years.

Original field data sheets and maps have been archived for future reference.

5.0 BIBLIOGRAPHY

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Dance Environmental Inc. 2004. Year 2004 Biological Monitoring Report, Prepared for St. Marys Cement, Cambridge.

Dance Environmental Inc. 2005. Year 2005 Biological Monitoring Report, Prepared for St. Marys Cement, Cambridge.

Dance Environmental Inc. 2006. Year 2006 Biological Monitoring Report, Tikal Pit Lot 21, Concession 9, Puslinch Township, County of Wellington, Licence Number 48576.

Dance Environmental Inc. 2007. Year 2007 Biological Monitoring Report, Tikal Pit Lot 21, Concession 9, Puslinch Township, County of Wellington, Licence Number 48576.

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Dance Environmental Inc. 2012. Year 2012 Biological Monitoring Report, Tikal Pit Lot 21, Concession 9, Puslinch Township, County of Wellington, Licence Number 48576.

Waterloo Geoscience Consultants Ltd. 2003. Revised Comprehensive Monitoring Program Proposed Gravel Pit, Part Lot 21, Concession 9, Township of Puslinch. June 4, 2003. Including Appendix 1, Biological Monitoring Proposal by Dance Environmental Inc.

Prepared by:

A handwritten signature in black ink that reads "K.W. Dance". The signature is written in a cursive, flowing style.

K.W. Dance, M.Sc.
President
Dance Environmental Inc.

APPENDIX 1

Blank Field Data Sheet

STAFF:

DE-371

**TIKAL PIT SITE
BIOLOGICAL MONITORING**

DATE: /13

TIME:

WEATHER:

Ice/Snow:

Wind:

Water depth & where:

Air Temp.: °C

Water Temp: °C

Bird Observations:

Reptiles/Amphibians:

Vegetation:

Other Observations:

Photos Taken:

Dance Environmental Inc.

APPENDIX 2

**Photographs of Tikal Pond
And
Whittle Channel
Study Area, 2013.**

Photo 1. Tikal Pond – looking southeasterly. May 2, 2013.



Photo 2. Tikal Pond – looking southeasterly. June 24, 2013.



Photo 3. Tikal Pond – looking southerly at top of T-bar. July 20, 2013.



Photo 4. Whittle Channel – looking westerly. July 20, 2013.



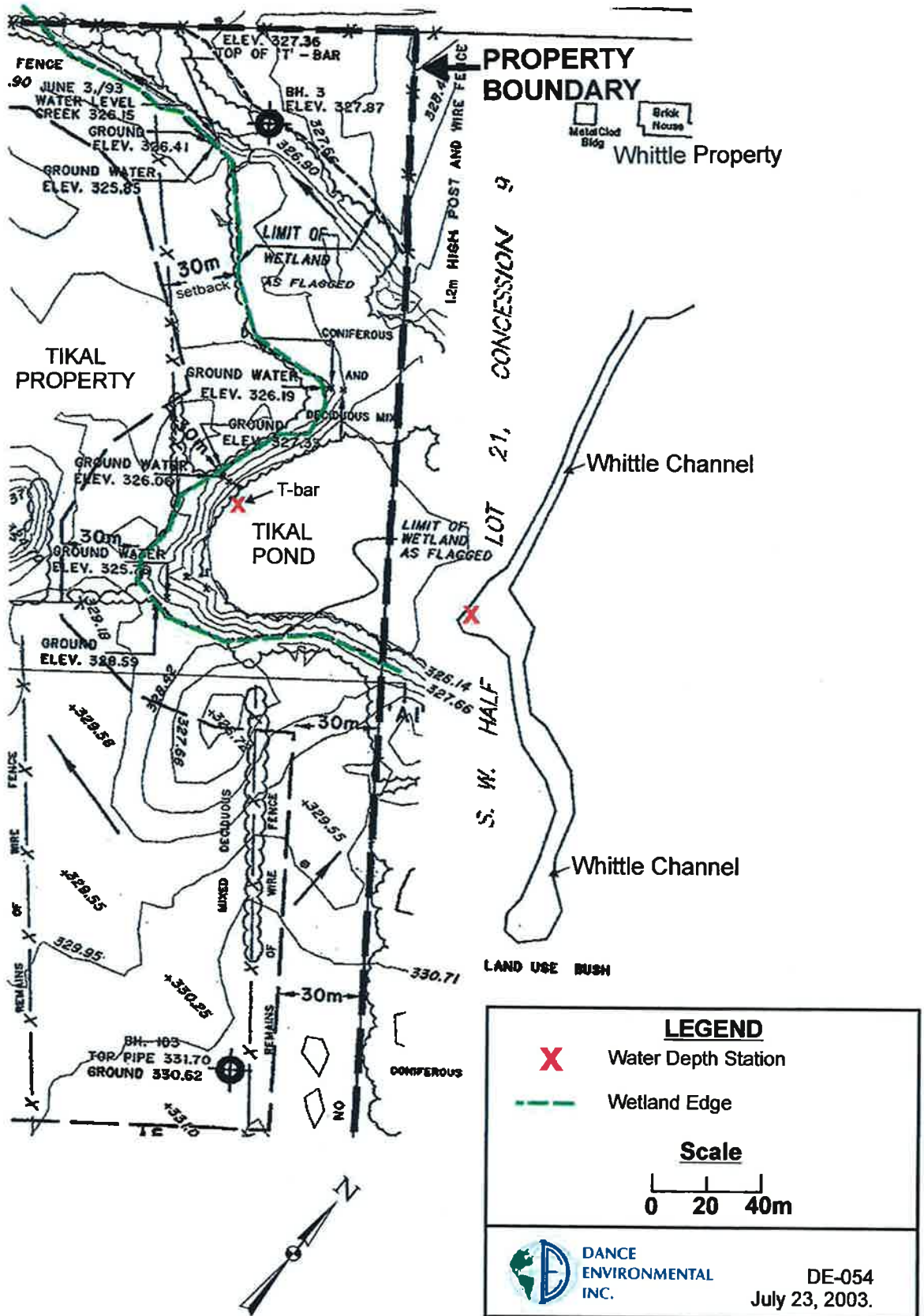
Photo 5. Tikal Pond – looking southerly at T-bar. August 21, 2013.



Photo 6. Whittle Channel – looking easterly. August 21, 2013.



Figure 1. STUDY AREA AND LOCATION WHERE WATER DEPTH IS RECORDED.



**Ministry of Agriculture
and Food**

**Ministère de l'Agriculture et de
l'Alimentation**

Ministry of Rural Affairs

Ministère des Affaires rurales

4th Floor
1 Stone Road West
Guelph, Ontario N1G 4Y2
Tel: 1-877-424-1300
Fax: 519 826-4336

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1 Stone Road West
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Télééc. : 519 826-4336



Rural Programs Branch

December 9, 2013

Our File: SRN-CTL-070

Mary Hasan, Director of Finance
Township of Puslinch
7404 Wellington Road 34,
Guelph, ON
N1H 6H9
mhasan@puslinch.ca

Re: Small, Rural and Northern Municipal Infrastructure Fund (SRNMIF) Capital Program

Dear Mary Hasan:

Thank you for your Expression of Interest (EOI) under the Small, Rural and Northern Municipal Infrastructure Fund (SRNMIF) Capital Program.

Unfortunately, your project proposal has not been selected to move forward to the application phase of the SRNMIF Capital Program.

Nearly 350 EOIs were received. Your EOI did not pass the pre-screen primarily because other applicants with highly critical projects had more challenging economic conditions (as measured by property assessments and incomes).

Should you have any questions, please do not hesitate to call the contact center at 1-877-424-1300 or email new-municipal-infrastructure@ontario.ca.

Thank you for your interest in the SRNMIF Capital Program.

Sincerely,

Jennifer Bousfield
Manager, Program Operations

