



Department of
Environmental
Conservation

ROCHESTER EMBAYMENT AREA OF CONCERN

Beach Closings
Beneficial Use Impairment Removal Report

JULY 2019



Rochester Embayment Area of Concern
Beach Closings
Beneficial Use Impairment (BUI) Removal Report

July 2019

Prepared by:

New York State Department of Environmental Conservation

And

Monroe County Department of Public Health

This Beneficial Use Impairment (BUI) Removal Report was prepared by the New York State Department of Environmental Conservation (NYSDEC) and the Monroe County Department of Public Health (MCDPH) and was substantially funded by the United States Environmental Protection Agency (USEPA) through the Great Lakes Restoration Initiative (GLRI). The NYSDEC and MCDPH have engaged stakeholders and the public, including the Remedial Advisory Committee, through the BUI removal process. For more information please contact the Remedial Action Plan Coordinator at MCDPH or the AOC Coordinator at NYSDEC Division of Water.

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I. Introduction

This BUI Removal Report identifies the background, criteria, supporting data, and rationale to remove the “Beach Closings” BUI from the Rochester Embayment Area of Concern (AOC). The status of this BUI is currently listed as “impaired” for the Rochester Embayment portion of the AOC due to harmful filamentous algae propagating throughout the AOC and high turbidity contributing to the presence of coliform bacteria at Ontario and Durand Beaches.

To address the prevalence of beach closures at Ontario and Durand Beaches, the Rochester Embayment Remedial Advisory Committee (RAC), in partnership with the Monroe County Department of Public Health (MCDPH), New York State Department of Environmental Conservation (NYSDEC), United States Army Corps of Engineers (USACE), and United States Environmental Protection Agency (USEPA), have implemented several programs to address the root causes of the impairment. Chief among these programs are the Combined Sewer Overflow Abatement Program (CSOAP), the Algae Control System at Ontario Beach, and the Durand-Eastman Beach Water Quality Improvement Project. Concurrently with these initiatives, MCDPH has been collecting water quality data at public beaches within the AOC to assess the status of the Beach Closings BUI. Members of the Rochester Embayment RAC are listed in **Appendix A**.

Following an evaluation of the data and evidence gathered to address this impairment, the RAC and NYSDEC have determined that the conditions have been met for removal of the Beach Closings BUI from the AOC in accordance with the USEPA Delisting Guidance document, *Restoring United States Great Lakes Areas of Concern: Delisting Principles and Guidelines (USEPA, 2001)*. The RAC fully supports the recommendation that the Beach Closings BUI be removed from the list of impaired BUIs for the Rochester Embayment AOC.

II. Background

In the Great Lakes Basin, the International Joint Commission (IJC) has identified 43 Areas of Concern (AOC) under Annex 1 of the Great Lakes Water Quality Agreement (GLWQA) where pollution from past industrial production and waste disposal practices has created hazardous waste sites and contaminated sediments. Up to fourteen beneficial uses impairments (BUIs), or indicators of poor water quality, are used to evaluate the condition of an AOC.

The Rochester Embayment AOC encompasses the lower portion of the Genesee River from the mouth up to the Lower Falls in Rochester, NY and the portion of Lake Ontario within a straight line drawn from Bogus Point to Nine Mile Point (**Figure 1**). This was originally listed as an AOC due to the known or suspected presence of multiple BUIs, including Beach Closings, which is generally considered impaired when waters used for body contact recreation exceed standards, objectives, or guidelines for such use.

All AOCs develop a Remedial Action Plan (RAP) in three stages, which collectively identifies specific BUIs and their causes (Stage I), outlines the restoration work needed (Stage II), and documents completion of these restoration activities and the delisting of the AOC (Stage III). Currently, the Rochester Embayment RAP consists of the Stage I and Stage II RAP.

The Beach Closings BUI was originally listed as impaired in the Stage I and Stage II RAPs due to:

- Water quality problems related to storm water flow from streams which flow directly onto the beach;
- Excessive rainfall events;
- High bacteria levels in the Genesee River from combined sewer overflows;
- Accumulated masses of algae on the shoreline of the beaches; and
- Harbor dredging activities re-suspending sediments into the river.

A. BUI Removal Criteria

The removal criteria and monitoring methods for the Beach Closings BUI were reported in the 2002 Addendum to the Stage II RAP. These removal criteria were revisited in 2008 by the RAP Coordinator and the Oversight Committee. The Oversight Committee determined it was best to refine the BUI removal criteria to encompass conditions at Durand-Eastman Beach and to remove the model used to determine beach closures from the removal criteria and instead utilize actual bacteria levels in assessing the status of this BUI (E&E 2009).

As stated in the Rochester Embayment Area of Concern Beneficial Use Impairment Delisting Criteria Report (E&E 2009), the removal criteria for the Beach Closings BUI are as follows:

“During eighty percent of the swimming season, bathing beaches in the Rochester Embayment meet bacterial standards and water clarity standards.”

The above criteria are further clarified as follows (E&E 2009):

- Beaches consist of Ontario Beach and Durand Eastman Beach (**Figure 2**). The bacterial standards are 235 colony-forming units (cfu) or most probable number (mpn) *E. coli* per 100 milliliters (mL) for a single sample or 126 cfu or mpn *E. coli* per 100 mL for the geometric mean of at least five samples in a 30-day period for a Tier I beach. Beaches that meet the criteria of coastal recreation waters are identified and ranked as Tier I, II or III, (high, medium, or low risk) to identify the potential risk of disease to swimmers as well as protect public health. Characteristics used to identify the tier include but are not limited to: rainfall, potential pollution, bather usage, past water quality monitoring data, and public comment and/or perception. All beaches in Monroe County are Tier I according to the Monroe County Department of Public Health (MCDPH), which means they are high risk and are required to be sampled at least once per week during the swimming season.
- New York State Sanitary Code has a clarity standard of a Secchi depth of 4 feet (approximately 1.2 meters); however, Great Lakes and ocean beaches are exempt from this. Monroe County uses a clarity standard of less than 0.6 meters in a water depth of 1 meter to determine beach closings.

The above BUI removal criteria are consistent with the USEPA Delisting Guidance document (USPC, 2001) and the International Joint Commission (IJC) delisting guidelines (IJC, 1991).

The updated BUI removal criteria do not provide a specific time period for which this condition must be met. However, the previous removal criteria, as stated in the RAP 2002 Addendum, were based on meeting conditions on a 5-year rolling average. As such, the previous timeframe has been carried forward and results presented herein will show the 5-year average.

The endpoint to restore this BUI is achieved by satisfying the above criteria. As described below, beach monitoring data collected by the MCDPH demonstrate that this endpoint is achieved.

III. BUI Indicator Status Resolution – Management Actions

Several projects and programs support or contribute to the BUI removal, as summarized below.

A. Combined Sewer Overflow Abatement Program (CSOAP)

Historical water quality problems associated with effluent discharges in and around Ontario Beach resulted in the development of a comprehensive sewerage system for the City of Rochester in the early 1900's. Still, by the 1960's, most of the County's water resources were affected by pollution. This led to the creation of the Monroe County Pure Waters Agency in 1967. Through this agency, a comprehensive plan was developed and released to address the county's sewerage needs through the year 2020. The plan recommended the construction of a regional sewerage conveyance and treatment system to aid in the handling of effluent entering creeks and streams in Monroe County.

In addition to developing a master plan for the Rochester sewage system, in 1972 the extended staff of Pure Waters accepted responsibility for the care and maintenance of these systems. In conjunction with the Pure Waters plan, the development of the Combined Sewer Overflow Abatement Program (CSOAP) was created and began operation in 1993. Through a series of tunnels and holding basins, over 99% of the total volume of CSO's is captured and properly treated at the Frank E. VanLare Wastewater Treatment Facility. This program saves an average of 3.75 billion gallons per year of untreated overflow from entering local waterways.

B. Algae Control System

Excessive masses of stagnant algae, especially *Cladophora*, have traditionally accumulated in the nearshore area adjacent to the West Pier at Ontario Beach, and have been responsible for decreased water quality. In years past, the control of algal mats on the beach has required both manual and mechanical collection systems, which caused inconsistent water quality results. To address this problem, USACE and NYSDEC collaborated on the construction of an algae control system at Ontario Beach along the West Pier. The construction of this system was possible due to its grant funded purchase supplied by the USACE. The system consists of a combination of a portable pump, intake, piping and hoses, which collect the algae from the West side of the pier and redistribute to the East side of the pier (Genesee River). The algae are eventually carried out to the deeper lake waters via river flow. Ownership and maintenance is the responsibility of the Monroe County Department of Environmental Services while operation of the algae pump is overseen by the Department of Parks. After being operational for the full 2015 beach season, the system proved effective in the elimination of algal mats previously known to accumulate in this area. There have been no beach closures caused by excessive algae since the algae control system first became operational in 2015.

C. Durand Eastman Beach Water Quality Improvement Project

In 2013, the City of Rochester commenced implementation of a water quality improvement project to address the bacteria issues at Durand Eastman Beach. This project focused on the Sherry Swamp outfall, which was identified as a critical source of *E. coli* discharging to Lake Ontario approximately 300 feet to the east of the Durand Eastman Beach public swimming area. The water quality improvement project included the construction of a storm water detention basin

upstream from the main tributary to Sherry Swamp and the installation of an antimicrobial filtration system near the outfall. A diversion vault ensures that flows 4.8 cubic feet per second or less are pumped through the filtration system prior to discharging to Lake Ontario. The system has been operating part time while under assessment, with full time operation planned to begin in 2018. Sampling specific to the monitoring of this project has shown that the detention facility coupled with the filtration system works to significantly reduce *E. coli* counts entering the Lake in this location.

D. Stormwater Coalition

One of the greatest sources of pollution contributing to beach closures in the Rochester Embayment AOC and other local waterways is stormwater pollution accumulated from roadways, lawns, farms, and other anthropogenic sources. To address local stormwater pollution concerns, the Stormwater Coalition of Monroe County was formed in 2000 involving the collaboration of 29 county municipalities. The Stormwater Coalition serves as a cooperative organization where the permitted municipalities can work together towards a common cause of improving stormwater quality in Monroe County in a cost effective and efficient manner. In addition to the permitted municipalities the Stormwater Coalition partners with organizations such as the Monroe County Soil and Water Conservation District and the Water Education Collaborative (WEC) in order to utilize local expertise.

To achieve the goal of reducing stormwater pollution and improving local water quality the Stormwater Coalition acts through three taskforces that focus on education, construction, and illicit discharge/pollution prevention. One of the most successful projects carried out by the education taskforce and the WEC fostered increased public education and awareness through programming consistent with the Rochester Embayment Remedial Action Plan (RAP) and other water resource-focused community organizations. This partnership launched the “H2O Hero” campaign with the vision that any individual can have a positive impact on local water conditions through awareness and small lifestyle changes. Through the implementation of this campaign, the Stormwater Coalition has successfully raised public awareness of the contaminant sources that can lead to beach closure conditions and has increased public involvement in the management of local stormwater pollution.

IV. Monitoring Success of Management Actions

In addition to the projects and programs that directly address the root causes of this BUI, MCDPH conducts direct monitoring of conditions at bathing beaches within the Rochester Embayment AOC. This monitoring has helped to ensure the success of these efforts, and demonstrates the achievement of the BUI removal criteria.

A. Water Quality Monitoring at Ontario and Durand Eastman Beaches

MCDPH has compiled and reviewed bacteriological and other routinely collected water quality data to determine if the removal criteria for the Beach Closing BUI have been appropriately satisfied. This was accomplished using the results of routine water quality monitoring (water clarity and *E. coli* concentrations) at Ontario Beach and Durand Beach, both located in the Rochester Embayment AOC, as described below. Additionally, the predictive model that MCDPH uses, independent of these datasets to make beach closure decisions, is described.

i. Sample Collection

MCDPH staff are assigned to the beach sampling duties and are trained annually on the proper sample collection techniques and chain of custody documentation. Beginning on or about the third week in May, samples are collected twice weekly in approximately knee-deep water, at each beach. At Durand Beach, one sample is collected from the center of the swimming area. Two samples are currently collected from Ontario Beach, one from the eastern and one from the western ends of the beach. Through the 2014 beach season, an additional third sample was collected at the center of the Ontario Beach swimming area. This center sample was not collected from 2015 on, as the sampling procedures were changed in the MCDPH Beach Act grant workplan approved by NYSDOH, and the sample was no longer required.

Sampling at each beach begins approximately one month before the scheduled opening of the swimming season. If sampling results exceed the EPA standards for a designated beach area, as described below, more frequent sampling may be implemented. Upon the seasonal opening of Ontario Beach and Durand Beach, sampling is performed daily and continues until Labor Day, or until seasonal closing.

Water samples are submitted to the Monroe County Department of Environmental Services Environmental Laboratory (NYSDOH ELAP# 10373) for analysis for *E. coli* using the Colilert test (Standard Methods 18th edition # 9223). The laboratory conforms to the National Environmental Laboratory Accreditation Conference (NELAC) requirements for Quality Assurance and Quality Control, including analysis of reference materials, duplicate aliquots, and blank aliquots in bacteriological analysis.

ii. Bacterial Standards Used

The bacterial standards used for the BUI removal criteria [235 colony-forming units (cfu) or most probable number (mpn) *E. coli* per 100 milliliters (mL) for a single sample or 126 cfu or mpn *E. coli* per 100 mL for the geometric mean of at least five samples in a 30-day period] are consistent with Subpart 6-2 of the New York State Sanitary Code, and are used by MCDPH. Although the single sample threshold is useful for determining day-to-day closures to protect the health of the public, the long term geometric mean (equivalent to the arithmetic mean of the logarithms) is the more relevant value when taking a broader look at water quality issues. The standard of 126 mpn *E. coli* (geometric mean) originated from USEPA's Ambient Water Quality Criteria of 1986 and has been upheld through years of published standards and USEPA recommendations. The New York State Sanitary Code Subpart 6-2 (2011), and the Beaches Environmental Assessment and Coastal Health (BEACH) Act of 2000 each reference this standard. The Ambient Water Quality Criteria of 1986 states that the geometric mean indicator densities corresponding to the accepted gastrointestinal illness rates were calculated by equations developed by A. P. Dufour and V. J. Cabelli and that these geometric mean indicator densities are for steady state dry weather conditions. It further states in the "Recommendations on Bacterial Criteria Monitoring" section that samples "should be collected during dry weather periods to establish so-called 'steady state' conditions."

Therefore, upon compiling the historical beach sampling data for the Rochester Embayment beaches, only the samples taken during dry weather conditions were used in calculating the geometric mean over a rolling 30-day interval. In order to determine when wet weather conditions were occurring, the local rainfall data for the 24 hours prior was considered. If the 24-hr rainfall

was 0.10" or greater, the sample was not considered to be representative of dry weather conditions and the result was omitted from the rolling geometric mean calculation. If the 24-hr rainfall was 1.0" or greater, the conditions were considered wet for one extra day. If the 24-hr rainfall was 2.0" or greater, the conditions were considered wet for two extra days. The daily rainfall data are presented with the bacteria results and calculations in **Appendix B**. Samples that are highlighted were omitted from calculations. Omitting wet weather samples from these calculations allows for establishing a genuine look at the steady state conditions, as initially intended. Because MCDPH takes daily samples (weekly sampling is the minimum used by most beaches in New York) during the beach season, an accurate representation of the water quality can be observed. It should be noted that, although not included in the steady state geometric mean calculations used to assess the BUI status, the wet weather sample results are very important to calibrating the predictive model used by the MCDPH to determine beach closure days.

iii. Water Clarity Standards Used

Although the Great Lakes and ocean beaches are exempt from the New York State Sanitary Code requirements for water clarity, Monroe County has its own policy stated in its beach model used to determine daily beach closures. The MCDPH beach model states that a Secchi disk reading of below 0.6 meters in water with a depth of 1 meter will give the justification for closing the beach. This standard is also used for water clarity as it pertains to meeting the BUI removal criteria.

iv. Predictive Model

Due to the turnaround time in receiving daily *E. coli* sample results from the analytical laboratory, it isn't feasible to rely on these results to determine the status of bathing beaches. Therefore, MCDPH uses a predictive model to make daily beach closure decisions. This model is constructed based on previously recorded daily *E. coli* samples and observable data including rainfall, streamflow, algae presence, and Secchi disk readings collected by the MCDPH throughout the Rochester Embayment AOC. Each morning, the suite of observable data and past daily *E. coli* sample data are fed into the predictive model and, based on known water clarity data and predicted *E. coli* levels, a decision is made as to whether each beach is open or closed that day. The model containing the closure criteria is updated and reviewed continually to ensure maximum accuracy for safe beach openings/closures. Through employing this model, the MCDPH can efficiently and effectively predict beach conditions to allow for the best use of local beaches as a public resource.

v. Agency Roles

When considering and evaluating water quality data at the beaches, each involved agency may use the data in different ways. While NYSDOH and/or MCDPH regularly use this data to make public health decisions, the way it is used or interpreted within the AOC program may differ from that. In the process to develop the Remedial Action Plan, the RAC established the criteria to remove the BUI, as presented in section II.A. The RAC then reviewed the data and determined that the criteria had been achieved. Under the AOC program, the NYSDEC facilitates the process and assists in coordinating all activities within an AOC, including providing technical assistance with drafting the BUI removal reports. Ultimately, the removal of a BUI is finalized after being reviewed and approved by the USEPA Great Lakes National Program Office (GLNPO), who determines if the report properly documents and proves that the BUI removal criteria have been met, and that the RAC accepts that they have been met.

B. Water Quality Monitoring Results

As previously discussed, MCDPH uses a predictive model derived from multiple lines of environmental data to make final beach closure decisions. Bacterial and water clarity data for the swimming seasons of 2012-2018 have been compiled to calculate the percentage of the days which the water quality standards were met. From 2014-2018, Durand Eastman and Ontario beaches in the Rochester Embayment met both established bacterial and water clarity standards for 80% of the swimming season based on a 5-year rolling average. Therefore, the removal criteria for the Beach Closings BUI (“During eighty percent of the swimming season, bathing beaches in the Rochester Embayment meet bacterial standards and water clarity standards.”) have been satisfied. The results are summarized below:

% OF THE SWIMMING SEASON THAT BATHING BEACHES IN ROCHESTER EMBAYMENT MEET BACTERIAL AND/OR CLARITY STANDARDS			
YEAR	Bacterial Standards Met	Water Clarity Standards Met	Bacterial Standards AND Water Clarity Standards Met On Same Day
2012	71.2%	92.2%	65.4%
2013	89.7%	89.7%	81.5%
2014	82.0%	81.3%	69.8%
2015	70.6%	83.7%	61.4%
2016	97.4%	96.1%	94.1%
2017	100.0%	82.4%	82.4%
2018	100.0%	92.5%	92.5%
AVG 2012-2016	82.2%	88.6%	74.4%
AVG 2013-2017	87.9%	86.6%	77.9%
AVG 2014-2018	90.0%	87.2%	80.0%

Compiled bacterial and water clarity sampling data are provided in **Appendices B and C**, respectively. **Appendix B** shows the beach data compiled for the beach seasons 2012 through 2018. For each year, the data shows the individual daily *E. coli* results, the 30-day geometric mean calculated for each day, and a graphical representation of the 30-day geometric means trending throughout each beach season. **Appendix C** shows the Secchi disk readings for each beach season for the years 2012 through 2018. Separate beach closing data for both locations of Durand Eastman and Ontario are presented in **Appendix D**. Data for both beaches are organized to show number of days in each of four categories (Closed/Dirty, Open/Clean, Closed/Clean, Open/Dirty) for each season from 2010 through 2018. Additionally, **Appendix D**

presents the annual data for percent accuracy of closures as well as the annual percentage for each closure reason per season 2010 through 2018.

V. Public Outreach

NYSDEC and MCDPH hosted a public meeting on the status of Rochester Embayment Beneficial Use Impairments at 5:30 p.m. on March 15, 2018 at the Roger Robach Community Center, located 180 Beach Avenue on the shore of Lake Ontario. Notification of this meeting was distributed to local government officials, local media, and local environmental advocacy groups. Postcards were mailed to 600+ local resident addresses. Approximately 40 people attended. Pamphlets about the Rochester Embayment AOC and its BUIs were distributed and posters focusing on three specific BUIs targeted for removal (Beach Closings, Eutrophication or Undesirable Algae, and Restrictions on Dredging Activities) were displayed and staffed by State and County experts. This public outreach meeting served as an opportunity for NYSDEC and MCDPH to share with the public those achievements that have made on the path to implementing the Stage II RAP and removing those specific BUIs. Overall, the comments received were positive and the few questions that were formally posed were answered.

VI. Summary and Conclusion

A. Removal Statement

The Beach Closings BUI was originally listed as impaired due to water quality problems related to storm water runoff from streams that flow onto the beach, excessive rainfall events, high bacteria levels attributed to combined sewer overflows discharging into the Genesee River, decaying algae, and re-suspended sediments caused by harbor dredging. Through the RAP process, several measures were taken to improve water quality and reduce the occurrence of beach closures (as summarized above) and specific criteria were created to determine when the impairment can be considered removed. MCDPH and NYSDEC have determined that the beach monitoring data presented herein illustrate that the water quality of the bathing beaches in the Rochester Embayment AOC meet the criteria to remove the Beach Closings BUI (bathing beaches met bacterial standards and water clarity standards during eighty percent of the swimming season). In addition, the RAC fully supports the removal of this BUI.

B. BUI Removal Steps (To be completed as steps are taken)

	<i>Completed</i>	<i>Date</i>	<i>Step Taken</i>
1.	√	8/1993	BUI first documented as "Impaired" in the Stage I RAP (for the Rochester Embayment portion of the AOC).
2.	√	3/2009	BUI removal criteria revised with RAC consensus based on recommendations in E&E report.
3.	√	12/2017	RAP advisory committee agreed to proceed forward with BUI removal.
4.	√	3/15/2018	Public meeting advertised and held, information, outreach, and comment on removal

			recommendation conducted (included a 30-day public comment period) – see Appendix F.
5.	√	9/21/2018	Comments assembled, re-drafted BUI removal report prepared to include necessary changes.
6.	√	7/15/2019	NYSDEC (in consultation with USEPA R2/GLNPO) completes final modifications to the Beach Closings BUI removal document.
7.	√	TBD	Coordinate the formal transmittal of the BUI removal with USEPA GLNPO and communicate result with IJC.
8.	√	TBD	Communicate results to local RAP Coordination for appropriate recognition and follow-up.

C. Post Removal Responsibilities

Following removal of the Beach Closings BUI, the organizations listed below will continue ongoing environmental programs to ensure that the restored beneficial use is protected and continues to remain unimpaired. The environmental programs relating to this beneficial use are: continued CSO abatement, operation of the algae control system, monitoring at Ontario and Durand Eastman beaches, and coordination of the Rochester Embayment RAC.

1. New York State Department of Environmental Conservation

NYSDEC, through its Great Lakes Program staff, will continue to assist MCDPH in coordinating the Rochester Embayment RAP, facilitating RAC efforts, and providing technical assistance in meeting AOC-related program goals.

NYSDEC will continue to issue permits for future dredging projects within the lower Genesee River. Per the conditions established in the Rochester Embayment AOC, overflow dredging will continue to be prohibited in the Rochester Embayment. This will mitigate the risk of sediment resuspension into the lower Genesee. Future dredging projects will have to undergo all necessary NYSDEC permitting procedures.

NYSDEC's State Pollutant Discharge Elimination System (SPDES) program will ensure that surface wastewater and stormwater discharges are adequately controlled throughout the Rochester Embayment AOC.

2. United States Environmental Protection Agency

The USEPA will continue to provide funding for RAP/RAC Coordination and technical assistance to the extent that resources are available to support the removal of remaining BUIs and ultimately the Delisting of the AOC.

3. Monroe County Department of Public Health

With EPA/GLRI funding, MCDPH currently provides a Coordinator for the AOC RAP, facilitation with RAC efforts, and technical assistance for AOC documentation and project design. With

ongoing funding support, MCDPH will continue in these roles to assist the RAC and USEPA in achieving the long-term goal of delisting the Rochester Embayment AOC.

MCDPH will continue to conduct routine water quality monitoring at Durand Eastman and Ontario beaches throughout the swimming season. The Monroe County Department of Environmental Services will continue to provide oversight and maintenance for the algae control system at Ontario Beach, with the Monroe County Department of Parks operating the algae control system.

CSO abatement will continue under the leadership of Monroe County through both the CSOAP program as well as the Monroe County Stormwater Coalition.

D. Future Improvements

Although the removal of this BUI is warranted because the criteria for removal have been met under the AOC program, continued work and future improvements can and should be made at the beaches in the Rochester Embayment AOC. Ontario Beach and Durand Eastman Beach have a documented history of water quality being influenced by discharges from the Genesee River and nearby storm sewer outlets. Although outside of the AOC program, it is important to recognize that future funding sources should be pursued by stakeholders when they become available to study and address these issues. One example of this is the current NYSDEC grant for Non-Agricultural Nonpoint Source Planning.

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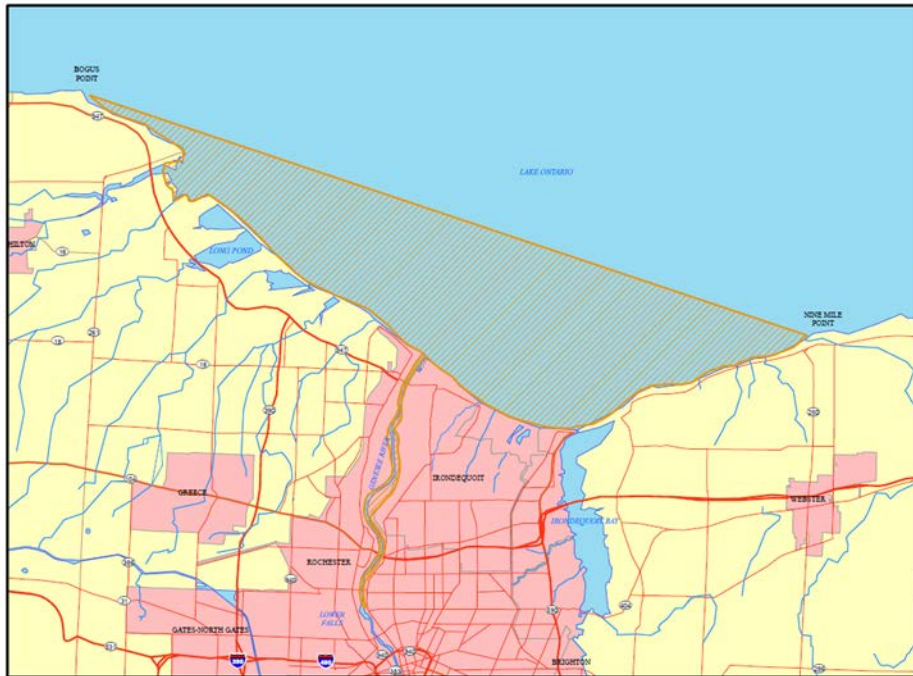
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Figure 1

Map of the Rochester Embayment AOC



LEGEND

-  MAJOR ROADS
-  SURFACE WATER
-  URBAN AREAS
-  EXTENT OF AREA OF CONCERN
(ROCHESTER EMBAYMENT
REMEDIAL ACTION PLAN
STAGE I, JUNE 1993)

NOTE: AREA OF CONCERN BOUNDARY
AS APPROVED BY THE NEW YORK
STATE DEPARTMENT OF ENVIRONMENTAL
CONSERVATION ON JULY 27, 2005.

SOURCE: MAPS PROVIDED BY THE NEW YORK
STATE DEPARTMENT OF ENVIRONMENTAL
CONSERVATION (1998 AND 1999, 2005).

0 4,000 8,000
Feet

**ROCHESTER EMBAYMENT, NEW YORK
AREA OF CONCERN**

Great
Lakes
National
Program
Office



Figure 2

Ontario and Durand Eastman Beach Location Map



ONTARIO BEACH

LAKE ONTARIO

DURAND EASTMAN BEACH



Appendix A

List of Remedial Advisory Committee members

Appendix A

List of Remedial Advisory Committee Members

Wade Silkworth
 Rochester Embayment Area of Concern Remedial Action Plan Coordinator
 wadesilkworth@monroecounty.gov
 585-753-5470

Monroe Co. Department of Public Health
 111 Westfall Road - Room 938
 Rochester, NY 14620

Name	Organization	E-mail
Charlie Knauf	General Public (MCDPH retiree)	anniebl@frontiernet.net
Jayne Breschard	GFLRPC	jbreschard@gflrpc.org
Louis J DiVincenti	URMC	Louis_Divincenti@URMC.Rochester.edu
Dorraine C. Kirkmire	City of Rochester	Kirkmired@CityofRochester.Gov
Michael G. Parker	Charlotte Comm. Assoc.	manyhats2u@gmail.com
Wayne D. Howard	Solara Concepts	whoward@solaraconcepts.com
Jeff Wyatt	URMC	Jeff_Wyatt@URMC.Rochester.edu
Chris Fredette	Roch. Comm. for Scientific Info.	cfredette@rochester.rr.com
Charles Valeska	General Public	CHAZVAL46@YAHOO.COM
David Klein	The Nature Conservancy	dklein@tnc.org
George Thomas	CEI	gthomas@ceinfo.org
John Waud	RIT	jmwscl@rit.edu
Mark Gregor	City of Rochester	mgregor@cityofrochester.gov
Paul Flansburg	Great Lakes Comm., Sierra Club	pflansburg@hotmail.com
Paul Sawyko	Stormwater Coalition	psawyko@monroecounty.gov
Stevie Adams	The Nature Conservancy	sadams@tnc.org
June Summers	Gen. Valley Audubon Society	summers@frontiernet.net
Staff		
Wade Silkworth	MCDPH	WadeSilkworth@monroecounty.gov
Peter Rightmyer	MCDPH	prightmyer@monroecounty.gov
Jennifer Dunn	NYSDEC	jennifer.dunn@dec.ny.gov
Joan Kennedy	NYSDEC	joan.kennedy@dec.ny.gov
Michael Kuzia-Carmel	NYSDEC	michael.kuzia-carmel@dec.ny.gov

APPENDIX B
Beach Monitoring Data

Source: Monroe County Department of Public Health

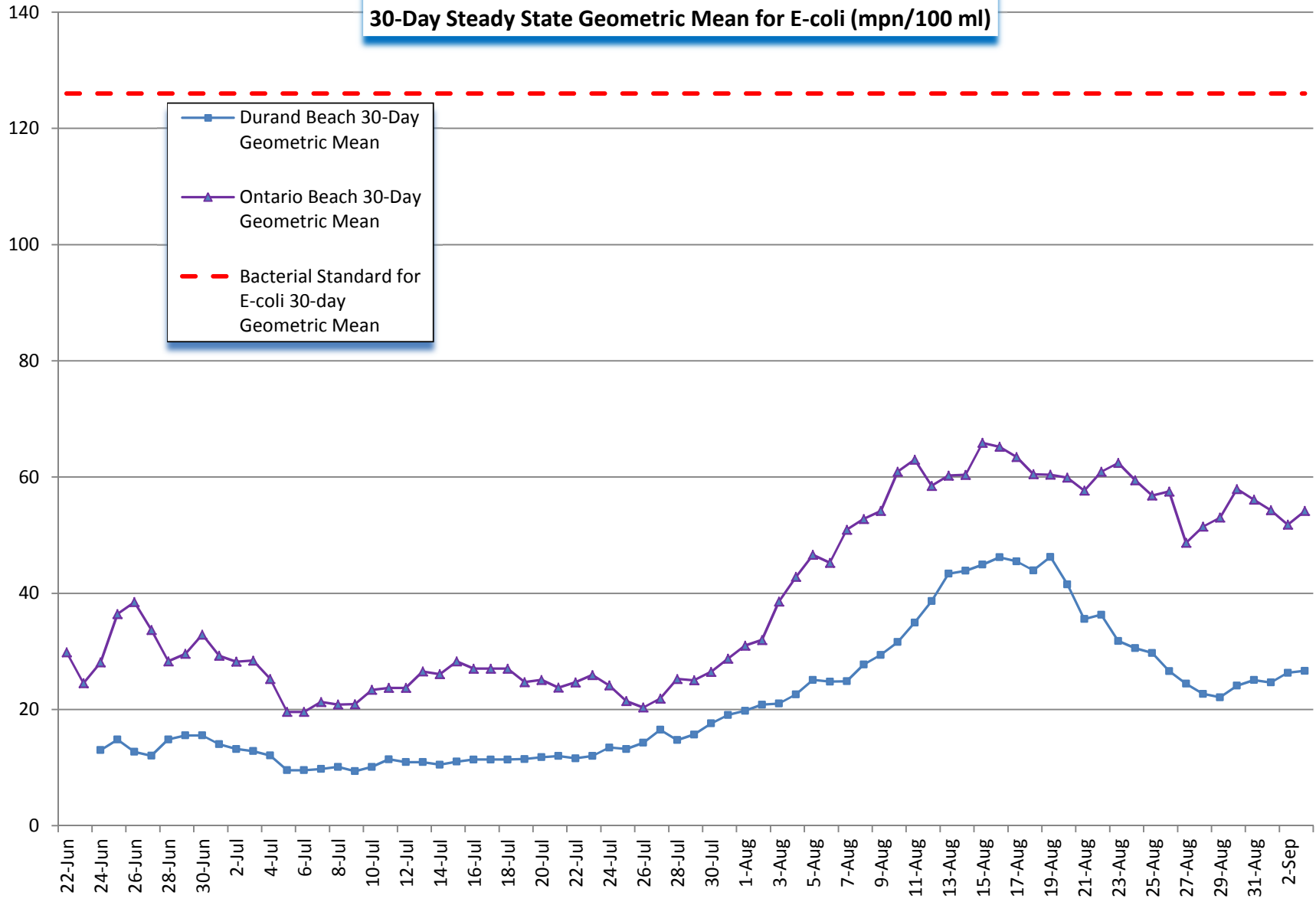
2018 BEACH DATA							
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN							
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml						
ONTARIO				DURAND			
	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	
		PRE-SEASON			PRE-SEASON		
	24-May	22-Jun	29.8				
	25-May	23-Jun	24.5				
	26-May	24-Jun	28.1	26-May	24-Jun	13.0	
	27-May	25-Jun	36.4	27-May	25-Jun	14.8	
	28-May	26-Jun	38.5	28-May	26-Jun	12.7	
	29-May	27-Jun	33.7	29-May	27-Jun	12.0	
	30-May	28-Jun	28.3	30-May	28-Jun	14.8	
	31-May	29-Jun	29.6	31-May	29-Jun	15.5	
	1-Jun	30-Jun	32.9	1-Jun	30-Jun	15.5	
	2-Jun	1-Jul	29.2	2-Jun	1-Jul	14.0	
	3-Jun	2-Jul	28.2	3-Jun	2-Jul	13.2	
	4-Jun	3-Jul	28.4	4-Jun	3-Jul	12.8	
	5-Jun	4-Jul	25.3	5-Jun	4-Jul	12.1	
	6-Jun	5-Jul	19.6	6-Jun	5-Jul	9.5	
	7-Jun	6-Jul	19.6	7-Jun	6-Jul	9.5	
	8-Jun	7-Jul	21.3	8-Jun	7-Jul	9.8	
	9-Jun	8-Jul	20.9	9-Jun	8-Jul	10.1	
	10-Jun	9-Jul	20.9	10-Jun	9-Jul	9.4	
	11-Jun	10-Jul	23.4	11-Jun	10-Jul	10.1	
	12-Jun	11-Jul	23.7	12-Jun	11-Jul	11.4	
	13-Jun	12-Jul	23.7	13-Jun	12-Jul	10.9	
	14-Jun	13-Jul	26.5	14-Jun	13-Jul	10.9	
	15-Jun	14-Jul	26.1	15-Jun	14-Jul	10.5	

2018 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	FROM	TO		FROM	TO	
	16-Jun	15-Jul	28.3	16-Jun	15-Jul	11.0
	17-Jun	16-Jul	27.0	17-Jun	16-Jul	11.4
	18-Jun	17-Jul	27.0	18-Jun	17-Jul	11.4
	19-Jun	18-Jul	27.0	19-Jun	18-Jul	11.4
	20-Jun	19-Jul	24.7	20-Jun	19-Jul	11.5
	21-Jun	20-Jul	25.1	21-Jun	20-Jul	11.8
	22-Jun	21-Jul	23.8	22-Jun	21-Jul	12.0
	23-Jun	22-Jul	24.7	23-Jun	22-Jul	11.6
	24-Jun	23-Jul	25.9	24-Jun	23-Jul	12.0
	25-Jun	24-Jul	24.1	25-Jun	24-Jul	13.4
	26-Jun	25-Jul	21.4	26-Jun	25-Jul	13.2
	27-Jun	26-Jul	20.4	27-Jun	26-Jul	14.3
	28-Jun	27-Jul	21.9	28-Jun	27-Jul	16.5
	29-Jun	28-Jul	25.2	29-Jun	28-Jul	14.7
	30-Jun	29-Jul	25.0	30-Jun	29-Jul	15.7
	1-Jul	30-Jul	26.5	1-Jul	30-Jul	17.6
	2-Jul	31-Jul	28.8	2-Jul	31-Jul	19.1
	3-Jul	1-Aug	31.0	3-Jul	1-Aug	19.8
	4-Jul	2-Aug	32.0	4-Jul	2-Aug	20.8
	5-Jul	3-Aug	38.6	5-Jul	3-Aug	21.0
	6-Jul	4-Aug	42.8	6-Jul	4-Aug	22.6
	7-Jul	5-Aug	46.6	7-Jul	5-Aug	25.1
	8-Jul	6-Aug	45.2	8-Jul	6-Aug	24.8
	9-Jul	7-Aug	50.9	9-Jul	7-Aug	24.8
	10-Jul	8-Aug	52.8	10-Jul	8-Aug	27.7
	11-Jul	9-Aug	54.2	11-Jul	9-Aug	29.4
	12-Jul	10-Aug	60.9	12-Jul	10-Aug	31.6
	13-Jul	11-Aug	63.0	13-Jul	11-Aug	35.0
	14-Jul	12-Aug	58.5	14-Jul	12-Aug	38.6
	15-Jul	13-Aug	60.3	15-Jul	13-Aug	43.4
	16-Jul	14-Aug	60.4	16-Jul	14-Aug	43.9
	17-Jul	15-Aug	65.9	17-Jul	15-Aug	44.9
	18-Jul	16-Aug	65.2	18-Jul	16-Aug	46.2

2018 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	FROM	TO		FROM	TO	
	19-Jul	17-Aug	63.5	19-Jul	17-Aug	45.5
	20-Jul	18-Aug	60.5	20-Jul	18-Aug	43.9
	21-Jul	19-Aug	60.4	21-Jul	19-Aug	46.2
	22-Jul	20-Aug	59.9	22-Jul	20-Aug	41.5
	23-Jul	21-Aug	57.7	23-Jul	21-Aug	35.6
	24-Jul	22-Aug	60.9	24-Jul	22-Aug	36.3
	25-Jul	23-Aug	62.4	25-Jul	23-Aug	31.8
	26-Jul	24-Aug	59.4	26-Jul	24-Aug	30.6
	27-Jul	25-Aug	56.8	27-Jul	25-Aug	29.7
	28-Jul	26-Aug	57.5	28-Jul	26-Aug	26.6
	29-Jul	27-Aug	48.7	29-Jul	27-Aug	24.4
	30-Jul	28-Aug	51.4	30-Jul	28-Aug	22.7
	31-Jul	29-Aug	53.0	31-Jul	29-Aug	22.1
	1-Aug	30-Aug	57.9	1-Aug	30-Aug	24.1
	2-Aug	31-Aug	56.1	2-Aug	31-Aug	25.1
	3-Aug	1-Sep	54.3	3-Aug	1-Sep	24.7
	4-Aug	2-Sep	51.8	4-Aug	2-Sep	26.3
	5-Aug	3-Sep	54.2	5-Aug	3-Sep	26.6
	ONTARIO BEACH 2018			DURAND BEACH 2018		
	# BEACH DAYS =		74	# BEACH DAYS =		72
	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		0	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		0
	% OF THE 2017 SWIMMING SEASON THAT BATHING BEACHES IN ROCHESTER EMBAYMENT MEET BACTERIAL STANDARDS =					100.0%

2018 Rochester Embayment Beach Data

30-Day Steady State Geometric Mean for E-coli (mpn/100 ml)



2017 BEACH DATA					
SAMPLE RESULTS					
= PRE-SEASON, BEACH NOT OPEN					
= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS					
		ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	17-May	68	124	92	11
	19-May	101	64	80	116
	22-May	22	154	58	55
	24-May	4	2	3	13
	30-May	8	14	11	41
	1-Jun	4	15	8	11
	5-Jun	7	53	19	20
	9-Jun	11	12	11	
	16-Jun	1	2	1	
	22-Jun	32	20	25	DURAND BEACH CLOSED FOR SEASON DUE TO HIGH LAKE LEVEL
	23-Jun	36	27	31	
	24-Jun	517	62	179	
	25-Jun	34	20	26	
	26-Jun	78	28	47	
	27-Jun	28	23	25	
	28-Jun	67	25	41	
	29-Jun	46	13	24	
	30-Jun	30	36	33	
	1-Jul	22	17	19	
	2-Jul	74	11	29	
	3-Jul	345	46	126	
	4-Jul	6	28	13	
	5-Jul	10	4	6	
	6-Jul	10	14	12	
	7-Jul	51	6	17	
	8-Jul	166	225	193	
	9-Jul	34	80	52	
	10-Jul	8	13	10	
	11-Jul	24	11	16	
	12-Jul	7	4	5	
	13-Jul	86	79	82	
	14-Jul	11	16	13	
	15-Jul	62	40	50	

2017 BEACH DATA					
SAMPLE RESULTS					
= PRE-SEASON, BEACH NOT OPEN					
= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS					
		ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	16-Jul	56	31	42	
	17-Jul	1306	2053	1637	
	18-Jul	86	86	86	
	19-Jul	108	127	117	
	20-Jul	70	52	60	
	21-Jul	71	69	70	
	22-Jul	19	58	33	
	23-Jul	119	11	36	
	24-Jul	213	244	228	
	25-Jul	159	150	154	
	26-Jul	28	21	24	
	27-Jul	60	37	47	
	28-Jul	80	60	69	
	29-Jul	49	38	43	
	30-Jul	130	32	64	
	31-Jul	74	15	33	
	1-Aug	219	43	97	DURAND BEACH CLOSED FOR SEASON DUE TO HIGH LAKE LEVEL
	2-Aug	146	152	149	
	3-Aug	64	68	66	
	4-Aug	250	411	321	
	5-Aug	345	101	187	
	6-Aug	130	70	95	
	7-Aug	16	43	26	
	8-Aug	96	153	121	
	9-Aug	96	49	69	
	10-Aug	68	25	41	
	11-Aug	53	40	46	
	12-Aug	272	138	194	
	13-Aug	248	461	338	
	14-Aug	48	27	36	
	15-Aug	47	76	60	
	16-Aug	2420	649	1253	
	17-Aug	58	59	58	

2017 BEACH DATA								
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN								
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml							
	ONTARIO			DURAND				
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)		
	FROM	TO		FROM	TO			
		PRE-SEASON			PRE-SEASON			
						24-May	22-Jun	
						25-May	23-Jun	DURAND BEACH CLOSED FOR SEASON DUE TO HIGH LAKE LEVEL
	26-May	24-Jun	10.1	26-May	24-Jun			
	27-May	25-Jun	11.5	27-May	25-Jun			
	28-May	26-Jun	13.8	28-May	26-Jun			
	29-May	27-Jun	15.3	29-May	27-Jun			
	30-May	28-Jun	17.1	30-May	28-Jun			
	31-May	29-Jun	17.7	31-May	29-Jun			
	1-Jun	30-Jun	18.8	1-Jun	30-Jun			
	2-Jun	1-Jul	20.5	2-Jun	1-Jul			
	3-Jun	2-Jul	21.8	3-Jun	2-Jul			
	4-Jun	3-Jul	24.2	4-Jun	3-Jul			
	5-Jun	4-Jul	22.9	5-Jun	4-Jul			
	6-Jun	5-Jul	20.8	6-Jun	5-Jul			
	7-Jun	6-Jul	20.0	7-Jun	6-Jul			
	8-Jun	7-Jul	19.8	8-Jun	7-Jul			
	9-Jun	8-Jul	22.8	9-Jun	8-Jul			
	10-Jun	9-Jul	25.1	10-Jun	9-Jul			
	11-Jun	10-Jul	23.8	11-Jun	10-Jul			
	12-Jun	11-Jul	23.8	12-Jun	11-Jul			
	13-Jun	12-Jul	21.9	13-Jun	12-Jul			
	14-Jun	13-Jul	21.9	14-Jun	13-Jul			
	15-Jun	14-Jul	21.9	15-Jun	14-Jul			
	16-Jun	15-Jul	22.8	16-Jun	15-Jul			

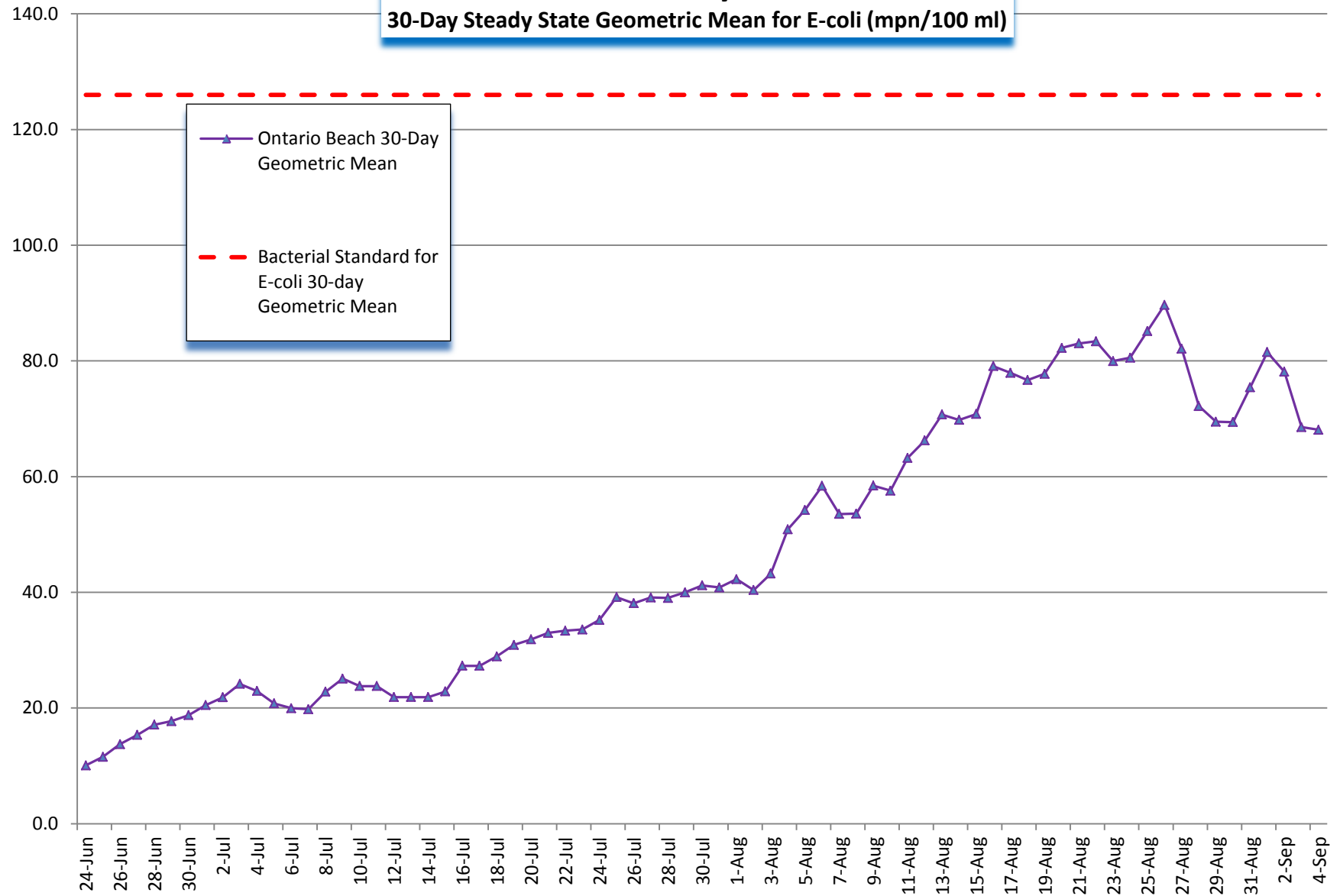
2017 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	17-Jun	16-Jul	27.3	17-Jun	16-Jul	
	18-Jun	17-Jul	27.3	18-Jun	17-Jul	
	19-Jun	18-Jul	28.9	19-Jun	18-Jul	
	20-Jun	19-Jul	30.9	20-Jun	19-Jul	
	21-Jun	20-Jul	31.9	21-Jun	20-Jul	
	22-Jun	21-Jul	33.0	22-Jun	21-Jul	
	23-Jun	22-Jul	33.4	23-Jun	22-Jul	
	24-Jun	23-Jul	33.6	24-Jun	23-Jul	
	25-Jun	24-Jul	35.2	25-Jun	24-Jul	
	26-Jun	25-Jul	39.2	26-Jun	25-Jul	
	27-Jun	26-Jul	38.1	27-Jun	26-Jul	
	28-Jun	27-Jul	39.1	28-Jun	27-Jul	
	29-Jun	28-Jul	39.0	29-Jun	28-Jul	
	30-Jun	29-Jul	40.0	30-Jun	29-Jul	
	1-Jul	30-Jul	41.2	1-Jul	30-Jul	
	2-Jul	31-Jul	40.8	2-Jul	31-Jul	
	3-Jul	1-Aug	42.3	3-Jul	1-Aug	
	4-Jul	2-Aug	40.4	4-Jul	2-Aug	
	5-Jul	3-Aug	43.2	5-Jul	3-Aug	
	6-Jul	4-Aug	50.9	6-Jul	4-Aug	
	7-Jul	5-Aug	54.2	7-Jul	5-Aug	
	8-Jul	6-Aug	58.4	8-Jul	6-Aug	
	9-Jul	7-Aug	53.5	9-Jul	7-Aug	
	10-Jul	8-Aug	53.6	10-Jul	8-Aug	
	11-Jul	9-Aug	58.4	11-Jul	9-Aug	
	12-Jul	10-Aug	57.6	12-Jul	10-Aug	
	13-Jul	11-Aug	63.2	13-Jul	11-Aug	
	14-Jul	12-Aug	66.3	14-Jul	12-Aug	
	15-Jul	13-Aug	70.7	15-Jul	13-Aug	
	16-Jul	14-Aug	69.8	16-Jul	14-Aug	
	17-Jul	15-Aug	70.8	17-Jul	15-Aug	
	18-Jul	16-Aug	79.1	18-Jul	16-Aug	
	19-Jul	17-Aug	77.9	19-Jul	17-Aug	

DURAND BEACH CLOSED
FOR SEASON DUE TO HIGH
LAKE LEVEL

2017 BEACH DATA							
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN							
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml						
ONTARIO				DURAND			
	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	
	20-Jul	18-Aug	76.7	20-Jul	18-Aug	DURAND BEACH CLOSED FOR SEASON DUE TO HIGH LAKE LEVEL	
	21-Jul	19-Aug	77.8	21-Jul	19-Aug		
	22-Jul	20-Aug	82.2	22-Jul	20-Aug		
	23-Jul	21-Aug	83.0	23-Jul	21-Aug		
	24-Jul	22-Aug	83.4	24-Jul	22-Aug		
	25-Jul	23-Aug	80.0	25-Jul	23-Aug		
	26-Jul	24-Aug	80.5	26-Jul	24-Aug		
	27-Jul	25-Aug	85.1	27-Jul	25-Aug		
	28-Jul	26-Aug	89.7	28-Jul	26-Aug		
	29-Jul	27-Aug	82.1	29-Jul	27-Aug		
	30-Jul	28-Aug	72.2	30-Jul	28-Aug		
	31-Jul	29-Aug	69.5	31-Jul	29-Aug		
	1-Aug	30-Aug	69.4	1-Aug	30-Aug		
	2-Aug	31-Aug	75.4	2-Aug	31-Aug		
	3-Aug	1-Sep	81.5	3-Aug	1-Sep		
	4-Aug	2-Sep	78.1	4-Aug	2-Sep		
	5-Aug	3-Sep	68.6	5-Aug	3-Sep		
	6-Aug	4-Sep	68.1	6-Aug	4-Sep		
	ONTARIO BEACH 2016			DURAND BEACH 2016			
	# BEACH DAYS =		74	# BEACH DAYS =			0
	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		0	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		0	
	% OF THE 2017 SWIMMING SEASON THAT BATHING BEACHES IN ROCHESTER EMBAYMENT MEET BACTERIAL STANDARDS =					100.0%	

2017 Rochester Embayment Beach Data

30-Day Steady State Geometric Mean for E-coli (mpn/100 ml)



2016 BEACH DATA					
SAMPLE RESULTS					
= PRE-SEASON, BEACH NOT OPEN					
= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS					
		ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	17-May	6	1	2	6
	19-May	3	1	2	1
	24-May	2	2	2	6
	25-May	5	5	5	3
	31-May	131	387	225	1553
	1-Jun	17	16	16	261
	7-Jun	6	127	28	140
	9-Jun	37	86	56	27
	13-Jun	74	78	76	155
	16-Jun	21	7	12	11
	18-Jun				3
	19-Jun				8
	20-Jun				2
	21-Jun	248	2420	775	2420
	22-Jun	93	2420		770
	23-Jun	96	613	243	61
	24-Jun	36	135	70	9
	25-Jun	44	93	64	8
	26-Jun	15	33	22	26
	27-Jun	25	10	16	11
	28-Jun	95	2897	525	2420
	29-Jun	41	770	178	133
	30-Jun	37	52	44	53
	1-Jul	13	3	6	5
	2-Jul	37	758	167	157
	3-Jul	25	34	29	23
	4-Jul	19	14	16	36
	5-Jul	1	24	5	29
	6-Jul	114	36	64	5
	7-Jul	38	37	37	7
	8-Jul	75	1046	280	33
	9-Jul	96	55	73	166
	10-Jul	9932	4604	6762	687

2016 BEACH DATA					
SAMPLE RESULTS					
	= PRE-SEASON, BEACH NOT OPEN				
	= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS				
		ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	11-Jul	88	18	40	33
	12-Jul	12	13	12	62
	13-Jul	79	29	48	12
	14-Jul	1986	155	555	54
	15-Jul	435	866	614	86
	16-Jul	387	1961	871	345
	17-Jul	148	167	157	21
	18-Jul	45	96	66	64
	19-Jul	187	1007	434	101
	20-Jul	73	23	41	20
	21-Jul	35	6	14	68
	22-Jul	69	157	104	36
	23-Jul	120	77	96	112
	24-Jul	150	155	152	49
	25-Jul	36	18	25	12
	26-Jul	4082	734	1731	411
	27-Jul	22	84	43	36
	28-Jul	387	59	151	4
	29-Jul	365	1203	663	148
	30-Jul	46	64	54	69
	31-Jul	69	33	48	29
	1-Aug	1	4	2	81
	2-Aug	56	40	47	16
	3-Aug	83	45	61	16
	4-Aug	18	16	17	3
	5-Aug	42	40	41	16
	6-Aug	548	866	689	2420
	7-Aug	1300	579	868	435
	8-Aug	40	16	25	248
	9-Aug	83	5	20	17
	10-Aug	135	66	94	127
	11-Aug	123	201	157	10
	12-Aug	210	96	142	4

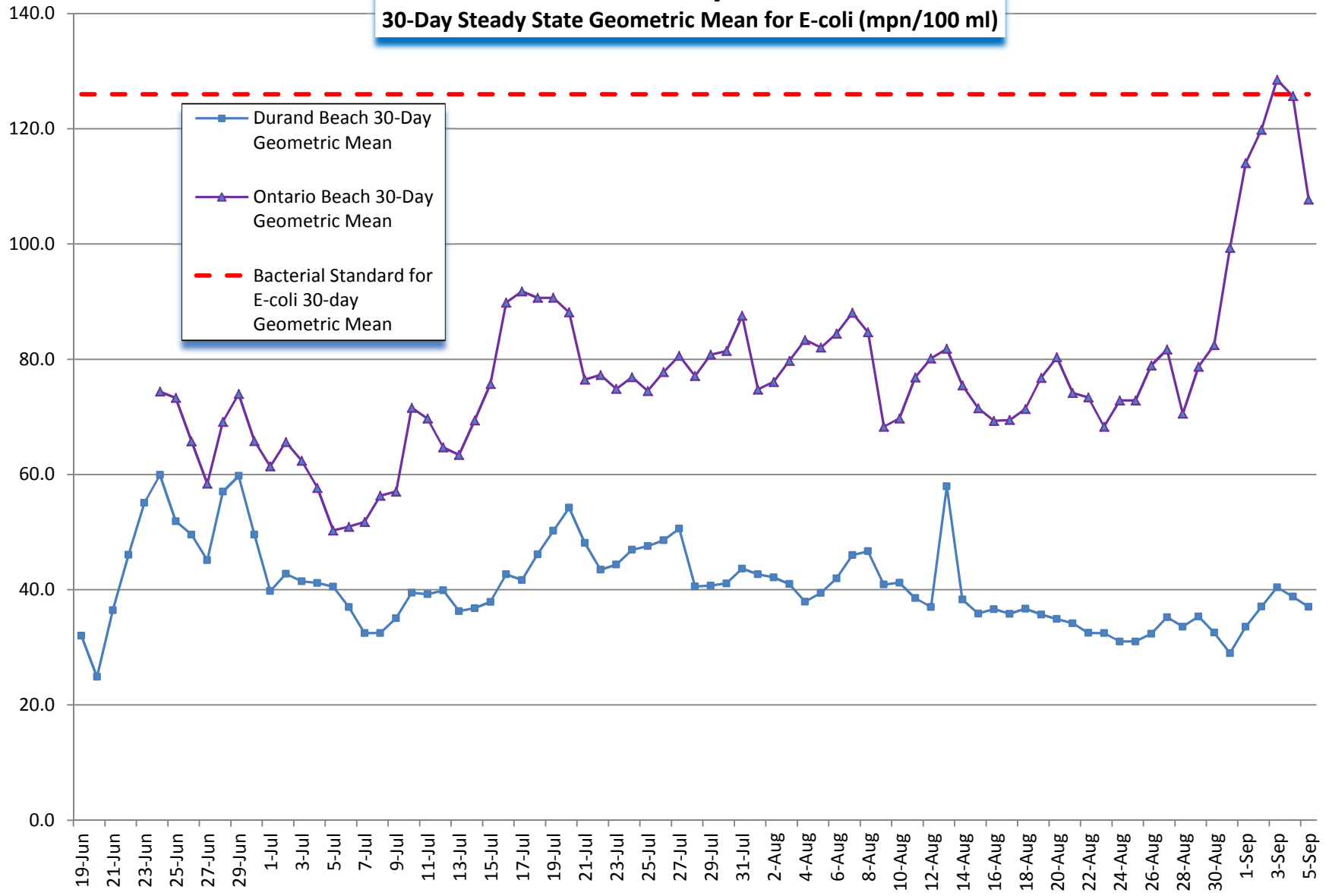
2016 BEACH DATA							
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN							
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml						
	ONTARIO			DURAND			
	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	
		PRE-SEASON			PRE-SEASON		
				21-May	19-Jun	32.0	
				22-May	20-Jun	24.9	
				23-May	21-Jun	36.4	
				24-May	22-Jun	46.1	
				25-May	23-Jun	55.1	
	26-May	24-Jun	74.4	26-May	24-Jun	59.9	
	27-May	25-Jun	73.3	27-May	25-Jun	51.9	
	28-May	26-Jun	65.8	28-May	26-Jun	49.6	
	29-May	27-Jun	58.4	29-May	27-Jun	45.1	
	30-May	28-Jun	69.1	30-May	28-Jun	57.0	
	31-May	29-Jun	74.0	31-May	29-Jun	59.8	
	1-Jun	30-Jun	65.8	1-Jun	30-Jun	49.5	
	2-Jun	1-Jul	61.4	2-Jun	1-Jul	39.8	
	3-Jun	2-Jul	65.6	3-Jun	2-Jul	42.7	
	4-Jun	3-Jul	62.4	4-Jun	3-Jul	41.4	
	5-Jun	4-Jul	57.7	5-Jun	4-Jul	41.2	
	6-Jun	5-Jul	50.3	6-Jun	5-Jul	40.5	
	7-Jun	6-Jul	50.9	7-Jun	6-Jul	37.0	
	8-Jun	7-Jul	51.7	8-Jun	7-Jul	32.5	
	9-Jun	8-Jul	56.3	9-Jun	8-Jul	32.5	
	10-Jun	9-Jul	57.0	10-Jun	9-Jul	35.0	
	11-Jun	10-Jul	71.6	11-Jun	10-Jul	39.5	

2016 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	FROM	TO		FROM	TO	
	12-Jun	11-Jul	69.7	12-Jun	11-Jul	39.2
	13-Jun	12-Jul	64.7	13-Jun	12-Jul	39.9
	14-Jun	13-Jul	63.4	14-Jun	13-Jul	36.3
	15-Jun	14-Jul	69.4	15-Jun	14-Jul	36.8
	16-Jun	15-Jul	75.7	16-Jun	15-Jul	37.9
	17-Jun	16-Jul	89.8	17-Jun	16-Jul	42.7
	18-Jun	17-Jul	91.8	18-Jun	17-Jul	41.7
	19-Jun	18-Jul	90.7	19-Jun	18-Jul	46.1
	20-Jun	19-Jul	90.7	20-Jun	19-Jul	50.2
	21-Jun	20-Jul	88.1	21-Jun	20-Jul	54.2
	22-Jun	21-Jul	76.5	22-Jun	21-Jul	48.1
	23-Jun	22-Jul	77.3	23-Jun	22-Jul	43.5
	24-Jun	23-Jul	74.8	24-Jun	23-Jul	44.4
	25-Jun	24-Jul	76.9	25-Jun	24-Jul	46.9
	26-Jun	25-Jul	74.5	26-Jun	25-Jul	47.6
	27-Jun	26-Jul	77.8	27-Jun	26-Jul	48.6
	28-Jun	27-Jul	80.6	28-Jun	27-Jul	50.6
	29-Jun	28-Jul	77.1	29-Jun	28-Jul	40.6
	30-Jun	29-Jul	80.8	30-Jun	29-Jul	40.7
	1-Jul	30-Jul	81.4	1-Jul	30-Jul	41.1
	2-Jul	31-Jul	87.6	2-Jul	31-Jul	43.7
	3-Jul	1-Aug	74.7	3-Jul	1-Aug	42.7
	4-Jul	2-Aug	76.1	4-Jul	2-Aug	42.1
	5-Jul	3-Aug	79.7	5-Jul	3-Aug	41.0
	6-Jul	4-Aug	83.3	6-Jul	4-Aug	37.9
	7-Jul	5-Aug	82.0	7-Jul	5-Aug	39.4
	8-Jul	6-Aug	84.4	8-Jul	6-Aug	42.0
	9-Jul	7-Aug	88.0	9-Jul	7-Aug	46.0
	10-Jul	8-Aug	84.7	10-Jul	8-Aug	46.7
	11-Jul	9-Aug	68.3	11-Jul	9-Aug	40.9
	12-Jul	10-Aug	69.7	12-Jul	10-Aug	41.2
	13-Jul	11-Aug	76.9	13-Jul	11-Aug	38.5
	14-Jul	12-Aug	80.1	14-Jul	12-Aug	37.0

2016 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
ONTARIO				DURAND		
	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	15-Jul	13-Aug	81.8	15-Jul	13-Aug	57.9
	16-Jul	14-Aug	75.5	16-Jul	14-Aug	38.3
	17-Jul	15-Aug	71.5	17-Jul	15-Aug	35.9
	18-Jul	16-Aug	69.3	18-Jul	16-Aug	36.6
	19-Jul	17-Aug	69.5	19-Jul	17-Aug	35.8
	20-Jul	18-Aug	71.4	20-Jul	18-Aug	36.7
	21-Jul	19-Aug	76.8	21-Jul	19-Aug	35.7
	22-Jul	20-Aug	80.3	22-Jul	20-Aug	34.9
	23-Jul	21-Aug	74.2	23-Jul	21-Aug	34.2
	24-Jul	22-Aug	73.4	24-Jul	22-Aug	32.5
	25-Jul	23-Aug	68.3	25-Jul	23-Aug	32.5
	26-Jul	24-Aug	72.8	26-Jul	24-Aug	31.0
	27-Jul	25-Aug	72.8	27-Jul	25-Aug	31.0
	28-Jul	26-Aug	78.9	28-Jul	26-Aug	32.3
	29-Jul	27-Aug	81.7	29-Jul	27-Aug	35.2
	30-Jul	28-Aug	70.6	30-Jul	28-Aug	33.6
	31-Jul	29-Aug	78.7	31-Jul	29-Aug	35.3
	1-Aug	30-Aug	82.5	1-Aug	30-Aug	32.5
	2-Aug	31-Aug	99.3	2-Aug	31-Aug	29.0
	3-Aug	1-Sep	114.0	3-Aug	1-Sep	33.6
	4-Aug	2-Sep	119.8	4-Aug	2-Sep	37.1
	5-Aug	3-Sep	128.5	5-Aug	3-Sep	40.4
	6-Aug	4-Sep	125.7	6-Aug	4-Sep	38.8
	7-Aug	5-Sep	107.7	7-Aug	5-Sep	37.0
	ONTARIO BEACH 2016			DURAND BEACH 2016		
	# BEACH DAYS =		74	# BEACH DAYS =		79
	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		1	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		0
	% OF THE 2016 SWIMMING SEASON THAT BATHING BEACHES IN ROCHESTER EMBAYMENT MEET BACTERIAL STANDARDS =					99.3%

2016 Rochester Embayment Beach Data

30-Day Steady State Geometric Mean for E-coli (mpn/100 ml)



2015 BEACH DATA					
SAMPLE RESULTS					
= PRE-SEASON, BEACH NOT OPEN					
= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS					
		ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	19-May	24	816	140	19
	21-May	72	153	105	6
	26-May	2420	378	956	148
	29-May	25	39	31	4
	2-Jun	461	345	399	378
	4-Jun	75	45	58	5
	8-Jun	66	35	48	4
	11-Jun	102	38	62	32
	15-Jun	387	161	250	114
	19-Jun	2420	308	863	166
	20-Jun				122
	21-Jun				47
	22-Jun				8
	23-Jun	1046	2420	1591	488
	24-Jun				101
	25-Jun	201	105	145	40
	26-Jun	548	687	614	73
	27-Jun	155	236	191	12
	28-Jun	238	1203	535	1,733
	29-Jun	137	276	194	517
	30-Jun	6	13	9	727
	1-Jul	2420	867	1448	649
	2-Jul	291	238	263	108
	3-Jul	39	17	26	148
	4-Jul	345	435	387	64
	5-Jul	111	76	92	29
	6-Jul	34	26	30	20
	7-Jul	21	119	50	10
	8-Jul	2420	2420	2420	2,420
	9-Jul	99	365	190	80
	10-Jul	365	137	224	50
	11-Jul	517	201	322	72
	12-Jul	249	15	61	81

2015 BEACH DATA					
SAMPLE RESULTS					
= PRE-SEASON, BEACH NOT OPEN					
= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS					
		ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	13-Jul	30	13	20	56
	14-Jul	37	31	34	26
	15-Jul	893	509	674	153
	16-Jul	256	85	148	72
	17-Jul	411	66	165	22
	18-Jul	2053	2176	2114	866
	19-Jul	925	589	738	326
	20-Jul	599	863	719	172
	21-Jul	411	579	488	18
	22-Jul	804	832	818	248
	23-Jul	261	221	240	31
	24-Jul	45	48	46	9
	25-Jul	123	132	127	22
	26-Jul	435	194	290	24
	27-Jul	108	138	122	31
	28-Jul	248	99	157	3
	29-Jul	579	167	311	9
	30-Jul	124	93	107	6
	31-Jul	411	770	563	186
	1-Aug	2420	1733	2048	124
	2-Aug	816	866	841	49
	3-Aug	727	1300	972	50
	4-Aug	131	96	112	210
	5-Aug	1628	1180	1386	291
	6-Aug	175	221	197	21
	7-Aug	81	49	63	7
	8-Aug	65	19	35	11
	9-Aug	66	96	80	24
	10-Aug	15	4	8	4
	11-Aug	2420	770	1365	11
	12-Aug	444	589	511	133
	13-Aug	114	387	210	14
	14-Aug	866	70	246	13

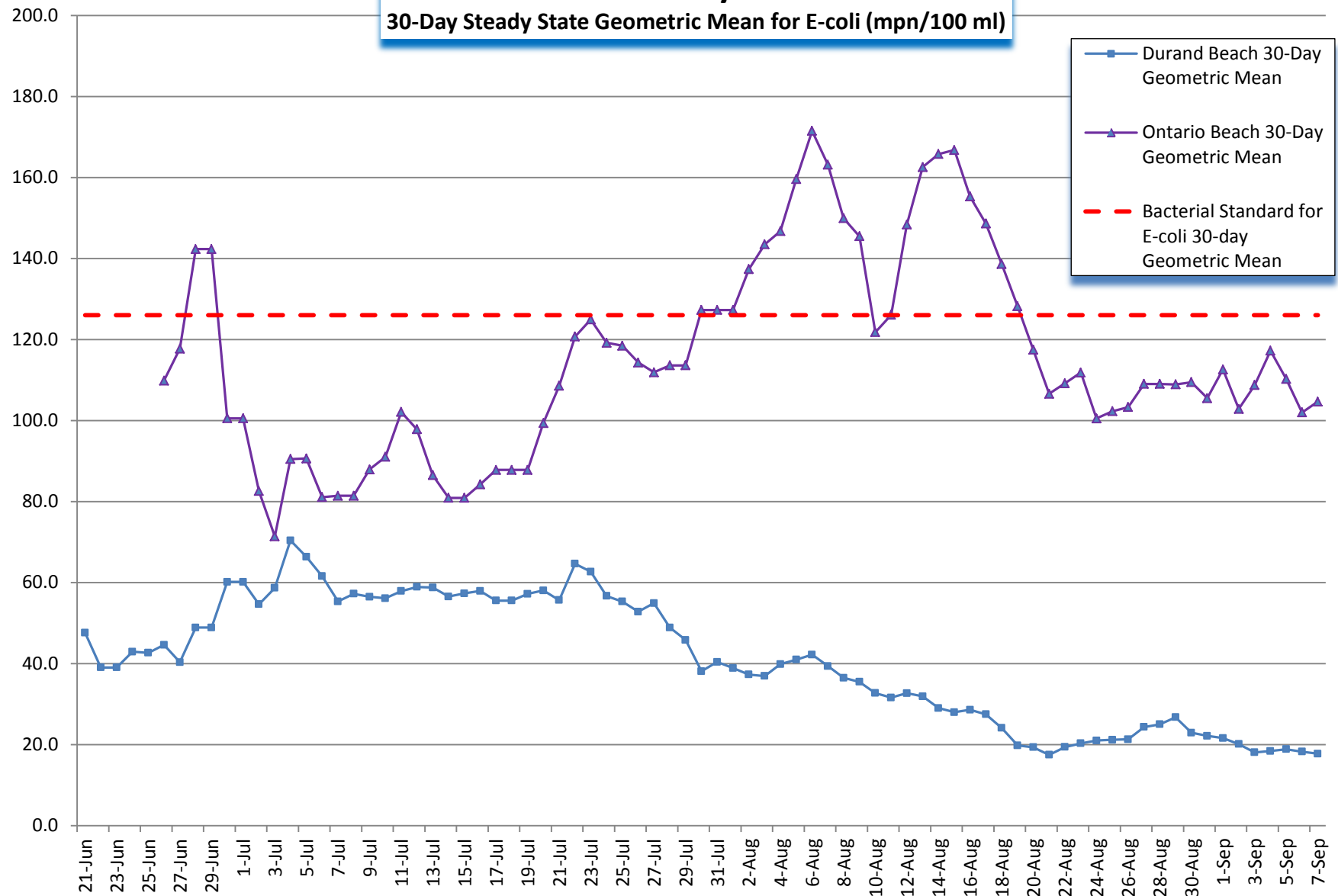
2015 BEACH DATA							
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN							
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml						
	ONTARIO			DURAND			
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	
	FROM	TO		FROM	TO		
		PRE-SEASON			PRE-SEASON		
				23-May	21-Jun	47.6	
				24-May	22-Jun	39.0	
				25-May	23-Jun	39.0	
				26-May	24-Jun	42.9	
				27-May	25-Jun	42.6	
	28-May	26-Jun	109.8	28-May	26-Jun	44.6	
	29-May	27-Jun	117.7	29-May	27-Jun	40.3	
	30-May	28-Jun	142.3	30-May	28-Jun	48.9	
	31-May	29-Jun	142.3	31-May	29-Jun	48.9	
	1-Jun	30-Jun	100.5	1-Jun	30-Jun	60.2	
	2-Jun	1-Jul	100.5	2-Jun	1-Jul	60.2	
	3-Jun	2-Jul	82.6	3-Jun	2-Jul	54.6	
	4-Jun	3-Jul	71.4	4-Jun	3-Jul	58.7	
	5-Jun	4-Jul	90.5	5-Jun	4-Jul	70.4	
	6-Jun	5-Jul	90.6	6-Jun	5-Jul	66.3	
	7-Jun	6-Jul	81.1	7-Jun	6-Jul	61.5	
	8-Jun	7-Jul	81.4	8-Jun	7-Jul	55.3	
	9-Jun	8-Jul	81.4	9-Jun	8-Jul	57.2	
	10-Jun	9-Jul	87.9	10-Jun	9-Jul	56.5	
	11-Jun	10-Jul	91.0	11-Jun	10-Jul	56.1	
	12-Jun	11-Jul	102.1	12-Jun	11-Jul	57.9	
	13-Jun	12-Jul	97.8	13-Jun	12-Jul	58.9	

2015 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	FROM	TO		FROM	TO	
	14-Jun	13-Jul	86.5	14-Jun	13-Jul	58.8
	15-Jun	14-Jul	80.9	15-Jun	14-Jul	56.5
	16-Jun	15-Jul	80.9	16-Jun	15-Jul	57.3
	17-Jun	16-Jul	84.2	17-Jun	16-Jul	57.9
	18-Jun	17-Jul	87.8	18-Jun	17-Jul	55.5
	19-Jun	18-Jul	87.8	19-Jun	18-Jul	55.5
	20-Jun	19-Jul	87.8	20-Jun	19-Jul	57.2
	21-Jun	20-Jul	99.4	21-Jun	20-Jul	58.0
	22-Jun	21-Jul	108.5	22-Jun	21-Jul	55.7
	23-Jun	22-Jul	120.7	23-Jun	22-Jul	64.6
	24-Jun	23-Jul	124.9	24-Jun	23-Jul	62.7
	25-Jun	24-Jul	119.2	25-Jun	24-Jul	56.7
	26-Jun	25-Jul	118.5	26-Jun	25-Jul	55.3
	27-Jun	26-Jul	114.3	27-Jun	26-Jul	52.8
	28-Jun	27-Jul	111.9	28-Jun	27-Jul	54.9
	29-Jun	28-Jul	113.6	29-Jun	28-Jul	48.9
	30-Jun	29-Jul	113.6	30-Jun	29-Jul	45.8
	1-Jul	30-Jul	127.3	1-Jul	30-Jul	38.1
	2-Jul	31-Jul	127.3	2-Jul	31-Jul	40.4
	3-Jul	1-Aug	127.3	3-Jul	1-Aug	38.9
	4-Jul	2-Aug	137.3	4-Jul	2-Aug	37.3
	5-Jul	3-Aug	143.5	5-Jul	3-Aug	36.9
	6-Jul	4-Aug	146.7	6-Jul	4-Aug	39.8
	7-Jul	5-Aug	159.6	7-Jul	5-Aug	41.0
	8-Jul	6-Aug	171.5	8-Jul	6-Aug	42.2
	9-Jul	7-Aug	163.1	9-Jul	7-Aug	39.4
	10-Jul	8-Aug	149.9	10-Jul	8-Aug	36.5
	11-Jul	9-Aug	145.5	11-Jul	9-Aug	35.5
	12-Jul	10-Aug	121.8	12-Jul	10-Aug	32.7
	13-Jul	11-Aug	126.1	13-Jul	11-Aug	31.6
	14-Jul	12-Aug	148.4	14-Jul	12-Aug	32.7
	15-Jul	13-Aug	162.5	15-Jul	13-Aug	31.9
	16-Jul	14-Aug	165.8	16-Jul	14-Aug	29.0

2015 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	FROM	TO		FROM	TO	
	17-Jul	15-Aug	166.8	17-Jul	15-Aug	28.0
	18-Jul	16-Aug	155.3	18-Jul	16-Aug	28.6
	19-Jul	17-Aug	148.6	19-Jul	17-Aug	27.5
	20-Jul	18-Aug	138.6	20-Jul	18-Aug	24.1
	21-Jul	19-Aug	128.2	21-Jul	19-Aug	19.8
	22-Jul	20-Aug	117.5	22-Jul	20-Aug	19.3
	23-Jul	21-Aug	106.6	23-Jul	21-Aug	17.5
	24-Jul	22-Aug	109.2	24-Jul	22-Aug	19.4
	25-Jul	23-Aug	111.8	25-Jul	23-Aug	20.3
	26-Jul	24-Aug	100.5	26-Jul	24-Aug	21.0
	27-Jul	25-Aug	102.3	27-Jul	25-Aug	21.2
	28-Jul	26-Aug	103.3	28-Jul	26-Aug	21.3
	29-Jul	27-Aug	109.0	29-Jul	27-Aug	24.3
	30-Jul	28-Aug	109.0	30-Jul	28-Aug	25.0
	31-Jul	29-Aug	108.9	31-Jul	29-Aug	26.7
	1-Aug	30-Aug	109.5	1-Aug	30-Aug	22.9
	2-Aug	31-Aug	105.5	2-Aug	31-Aug	22.1
	3-Aug	1-Sep	112.6	3-Aug	1-Sep	21.6
	4-Aug	2-Sep	102.9	4-Aug	2-Sep	20.1
	5-Aug	3-Sep	108.7	5-Aug	3-Sep	18.1
	6-Aug	4-Sep	117.2	6-Aug	4-Sep	18.4
	7-Aug	5-Sep	110.3	7-Aug	5-Sep	18.8
	8-Aug	6-Sep	102.0	8-Aug	6-Sep	18.3
	9-Aug	7-Sep	104.7	9-Aug	7-Sep	17.7
	ONTARIO BEACH 2015			DURAND BEACH 2015		
	# BEACH DAYS =		74	# BEACH DAYS =		79
	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		22	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		0
	% OF THE 2015 SWIMMING SEASON THAT BATHING BEACHES IN ROCHESTER EMBAYMENT MEET BACTERIAL STANDARDS =					85.6%

2015 Rochester Embayment Beach Data

30-Day Steady State Geometric Mean for E-coli (mpn/100 ml)



2014 BEACH DATA						
SAMPLE RESULTS						
		= PRE-SEASON, BEACH NOT OPEN				
		= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS				
		ONTARIO	ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) CENTER	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	20-May	16	23	18	19	194
	22-May	20	26	26	24	112
	27-May	3	107	16	17	23
	29-May	72	20	5	19	50
	3-Jun	435	980	649	652	3
	5-Jun	68	51	38	51	30
	10-Jun	46	40	23	35	29
	12-Jun	30	10	11	15	19
	17-Jun	5	8	5	6	2
	19-Jun	579	461	770	590	172
	21-Jun					19
	22-Jun					12
	23-Jun					6
	24-Jun	3	4	1	2	2
	25-Jun					687
	26-Jun	328	365	276	321	435
	27-Jun	84	73	47	66	12
	28-Jun	16	16	45	23	27
	29-Jun	11	5	4	6	19
	30-Jun	649	93	93	178	19
	1-Jul	20	10	8	12	3
	2-Jul	8	3	1	3	2
	3-Jul	40	57	58	51	15
	4-Jul	365	345	921	488	649
	5-Jul	345	326	228	295	58
	6-Jul	9	8	11	9	6
	7-Jul	35	37	20	30	23
	8-Jul	88	39	37	50	61
	9-Jul	276	1733	548	640	517
	10-Jul	68	75	39	58	15
	11-Jul	16	12	17	15	13
	12-Jul	77	150	33	73	16
	13-Jul	19	56	12	23	1

2014 BEACH DATA						
SAMPLE RESULTS						
		= PRE-SEASON, BEACH NOT OPEN				
		= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS				
		ONTARIO	ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) CENTER	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	14-Jul	11	93	59	39	19
	15-Jul	28	54	46	41	47
	16-Jul	93	146	60	93	488
	17-Jul	79	122	58	82	73
	18-Jul	201	157	345	222	15
	19-Jul	41	58	75	56	15
	20-Jul	41	40	81	51	8
	21-Jul	88	104	186	119	12
	22-Jul	131	58	64	79	178
	23-Jul	22	28	179	48	2
	24-Jul	690	372	456	489	398
	25-Jul	1120	488	261	523	167
	26-Jul	579	461	225	392	110
	27-Jul	78	308	172	160	225
	28-Jul	1733	1733	2420	1937	1986
	29-Jul	5446	5226	3130	4466	4839
	30-Jul	139	252	155	176	1095
	31-Jul	70	55	19	42	135
	1-Aug	96	28	27	42	79
	2-Aug	2420	2420	2420	2420	1203
	3-Aug	461	1046	488	617	147
	4-Aug	345	210	387	304	99
	5-Aug	42	46	19	33	122
	6-Aug	517	770	649	637	192
	7-Aug	100	1730	2910	796	182
	8-Aug	145	118	88	115	30
	9-Aug	33	31	17	26	13
	10-Aug	210	127	129	151	40
	11-Aug	145	120	84	113	12
	12-Aug	111	78	980	204	69
	13-Aug	59	75	66	66	66
	14-Aug	731	3466	1773	1650	80
	15-Aug	3106	2092	291	1237	70

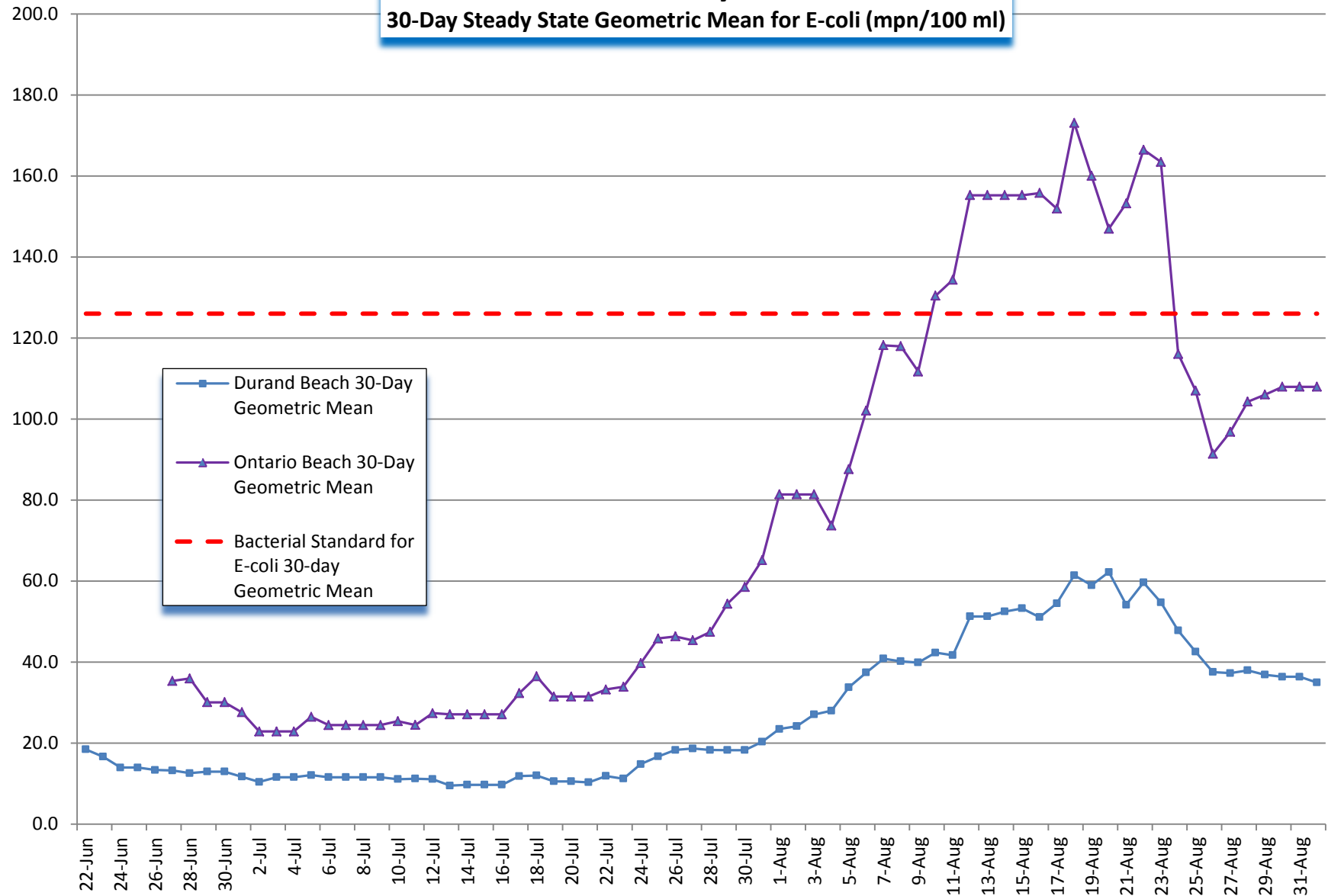
2014 BEACH DATA							
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN							
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml						
ONTARIO				DURAND			
	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	
		PRE-SEASON			PRE-SEASON		
				24-May	22-Jun	18.4	
				25-May	23-Jun	16.6	
				26-May	24-Jun	13.9	
				27-May	25-Jun	13.9	
				28-May	26-Jun	13.3	
	29-May	27-Jun	35.3	29-May	27-Jun	13.2	
	30-May	28-Jun	35.9	30-May	28-Jun	12.5	
	31-May	29-Jun	30.1	31-May	29-Jun	12.9	
	1-Jun	30-Jun	30.1	1-Jun	30-Jun	12.9	
	2-Jun	1-Jul	27.6	2-Jun	1-Jul	11.7	
	3-Jun	2-Jul	22.9	3-Jun	2-Jul	10.4	
	4-Jun	3-Jul	22.9	4-Jun	3-Jul	11.5	
	5-Jun	4-Jul	22.9	5-Jun	4-Jul	11.5	
	6-Jun	5-Jul	26.5	6-Jun	5-Jul	12.1	
	7-Jun	6-Jul	24.4	7-Jun	6-Jul	11.5	
	8-Jun	7-Jul	24.4	8-Jun	7-Jul	11.5	
	9-Jun	8-Jul	24.4	9-Jun	8-Jul	11.5	
	10-Jun	9-Jul	24.4	10-Jun	9-Jul	11.5	
	11-Jun	10-Jul	25.4	11-Jun	10-Jul	11.1	
	12-Jun	11-Jul	24.4	12-Jun	11-Jul	11.2	
	13-Jun	12-Jul	27.4	13-Jun	12-Jul	11.1	
	14-Jun	13-Jul	27.1	14-Jun	13-Jul	9.5	

2014 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	FROM	TO		FROM	TO	
	15-Jun	14-Jul	27.1	15-Jun	14-Jul	9.7
	16-Jun	15-Jul	27.1	16-Jun	15-Jul	9.7
	17-Jun	16-Jul	27.1	17-Jun	16-Jul	9.7
	18-Jun	17-Jul	32.3	18-Jun	17-Jul	11.8
	19-Jun	18-Jul	36.4	19-Jun	18-Jul	12.0
	20-Jun	19-Jul	31.5	20-Jun	19-Jul	10.5
	21-Jun	20-Jul	31.5	21-Jun	20-Jul	10.5
	22-Jun	21-Jul	31.5	22-Jun	21-Jul	10.3
	23-Jun	22-Jul	33.2	23-Jun	22-Jul	11.9
	24-Jun	23-Jul	33.9	24-Jun	23-Jul	11.2
	25-Jun	24-Jul	39.7	25-Jun	24-Jul	14.8
	26-Jun	25-Jul	45.8	26-Jun	25-Jul	16.7
	27-Jun	26-Jul	46.3	27-Jun	26-Jul	18.3
	28-Jun	27-Jul	45.4	28-Jun	27-Jul	18.6
	29-Jun	28-Jul	47.4	29-Jun	28-Jul	18.3
	30-Jun	29-Jul	54.4	30-Jun	29-Jul	18.2
	1-Jul	30-Jul	58.5	1-Jul	30-Jul	18.2
	2-Jul	31-Jul	65.1	2-Jul	31-Jul	20.3
	3-Jul	1-Aug	81.4	3-Jul	1-Aug	23.4
	4-Jul	2-Aug	81.4	4-Jul	2-Aug	24.2
	5-Jul	3-Aug	81.4	5-Jul	3-Aug	27.0
	6-Jul	4-Aug	73.7	6-Jul	4-Aug	28.0
	7-Jul	5-Aug	87.6	7-Jul	5-Aug	33.8
	8-Jul	6-Aug	102.1	8-Jul	6-Aug	37.4
	9-Jul	7-Aug	118.2	9-Jul	7-Aug	40.8
	10-Jul	8-Aug	117.9	10-Jul	8-Aug	40.2
	11-Jul	9-Aug	111.7	11-Jul	9-Aug	39.9
	12-Jul	10-Aug	130.4	12-Jul	10-Aug	42.3
	13-Jul	11-Aug	134.4	13-Jul	11-Aug	41.7
	14-Jul	12-Aug	155.2	14-Jul	12-Aug	51.3
	15-Jul	13-Aug	155.2	15-Jul	13-Aug	51.3
	16-Jul	14-Aug	155.2	16-Jul	14-Aug	52.5
	17-Jul	15-Aug	155.2	17-Jul	15-Aug	53.2

2014 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	18-Jul	16-Aug	155.8	18-Jul	16-Aug	51.1
	19-Jul	17-Aug	151.9	19-Jul	17-Aug	54.5
	20-Jul	18-Aug	173.1	20-Jul	18-Aug	61.4
	21-Jul	19-Aug	160.0	21-Jul	19-Aug	58.9
	22-Jul	20-Aug	147.0	22-Jul	20-Aug	62.2
	23-Jul	21-Aug	153.2	23-Jul	21-Aug	54.1
	24-Jul	22-Aug	166.5	24-Jul	22-Aug	59.6
	25-Jul	23-Aug	163.5	25-Jul	23-Aug	54.7
	26-Jul	24-Aug	116.0	26-Jul	24-Aug	47.8
	27-Jul	25-Aug	107.0	27-Jul	25-Aug	42.6
	28-Jul	26-Aug	91.4	28-Jul	26-Aug	37.5
	29-Jul	27-Aug	96.8	29-Jul	27-Aug	37.2
	30-Jul	28-Aug	104.3	30-Jul	28-Aug	37.9
	31-Jul	29-Aug	106.0	31-Jul	29-Aug	36.9
	1-Aug	30-Aug	108.0	1-Aug	30-Aug	36.3
	2-Aug	31-Aug	108.0	2-Aug	31-Aug	36.3
	3-Aug	1-Sep	108.0	3-Aug	1-Sep	34.9
	ONTARIO BEACH 2014			DURAND BEACH 2014		
	# BEACH DAYS =		67	# BEACH DAYS =		72
	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		14	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		0
	% OF THE 2014 SWIMMING SEASON THAT BATHING BEACHES IN ROCHESTER EMBAYMENT MEET BACTERIAL STANDARDS =					89.9%

2014 Rochester Embayment Beach Data

30-Day Steady State Geometric Mean for E-coli (mpn/100 ml)



2013 BEACH DATA						
SAMPLE RESULTS						
		= PRE-SEASON, BEACH NOT OPEN				
		= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS				
		ONTARIO	ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) CENTER	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	28-May	70	411	10	66	15
	30-May	32	12	24	21	5
	3-Jun	727	517	770	661	299
	6-Jun	649	99	816	374	178
	11-Jun	5	488	58	52	336
	13-Jun	39	326	2420	313	1230
	17-Jun		49		49	44
	18-Jun	579	71	687	305	245
	19-Jun		186		186	58
	20-Jun	36	6	7	11	23
	21-Jun	20	9	36	19	1
	22-Jun	8	17	12	12	3
	23-Jun	22	24	47	29	35
	24-Jun	121	28	12	34	2
	25-Jun	44	26	35	34	3
	26-Jun	114	133	179	139	115
	27-Jun	50	6	26	20	13
	28-Jun	238	770	178	320	172
	29-Jun	101	79	140	104	688
	30-Jun	60	45	58	54	579
	1-Jul	50	41	32	40	126
	2-Jul	79	60	70	69	461
	3-Jul	38	36	37	37	99
	4-Jul	186	74	72	100	160
	5-Jul	123	120	91	110	16
	6-Jul	770	649	261	507	96
	7-Jul	122	187	142	148	99
	8-Jul	25	46	46	38	11
	9-Jul	65	61	22	44	45
	10-Jul	50	35	71	50	4
	11-Jul	313	770	921	605	308
	12-Jul	122	104	82	101	162
	13-Jul	36	55	51	47	22

2013 BEACH DATA						
SAMPLE RESULTS						
	= PRE-SEASON, BEACH NOT OPEN					
	= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS					
		ONTARIO	ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) CENTER	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	14-Jul	11	16	26	17	3
	15-Jul	29	41	34	34	2
	16-Jul	84	82	43	67	16
	17-Jul	27	50	249	70	6
	18-Jul	61	77	27	50	31
	19-Jul	548	517	129	332	206
	20-Jul	2420	2420	1733	2165	580
	21-Jul	615	163	429	350	91
	22-Jul	58	21	172	59	72
	23-Jul	23	44	17	26	20
	24-Jul	2420	2420	2420	2420	44
	25-Jul	6	86	15	20	29
	26-Jul	111	261	131	156	22
	27-Jul	63	23	32	36	5
	28-Jul	69	43	31	45	4
	29-Jul	179	345	411	294	26
	30-Jul	228	80	87	117	38
	31-Jul	78	40	27	44	74
	1-Aug	47	45	49	47	101
	2-Aug	272	345	2420	610	488
	3-Aug	435	276	548	404	66
	4-Aug	816	517	687	662	225
	5-Aug	228	387	326	306	35
	6-Aug	89	32	64	57	39
	7-Aug	43	59	17	35	22
	8-Aug	48	27	249	69	33
	9-Aug	48	34	120	58	29
	10-Aug	4839	4839	3466	4330	2420
	11-Aug	261	35	73	87	66
	12-Aug	96	96	770	192	48
	13-Aug	86	150	261	150	24
	14-Aug	615	870	456	625	105
	15-Aug	449	45	86	120	44

2013 BEACH DATA						
SAMPLE RESULTS						
	= PRE-SEASON, BEACH NOT OPEN					
	= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS					
		ONTARIO	ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) CENTER	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	16-Aug	172	105	53	99	40
	17-Aug	411	91	153	179	32
	18-Aug	25	19	8	16	20
	19-Aug	548	548	152	357	35
	20-Aug	488	56	29	93	261
	21-Aug	770	308	138	320	54
	22-Aug	84	96	42	70	816
	23-Aug	2420	2420	9678	3841	1733
	24-Aug	135	79	326	151	88
	25-Aug	47	54	40	47	5
	26-Aug	2092	3106	3973	2955	411
	27-Aug	488	649	816	637	225
	28-Aug	59	40	50	49	137
	29-Aug	308	205	308	269	79
	30-Aug	99	111	79	95	17
	31-Aug	155	435	387	297	27
	1-Sep	291	291	155	236	84
	2-Sep	44	63	111	68	37

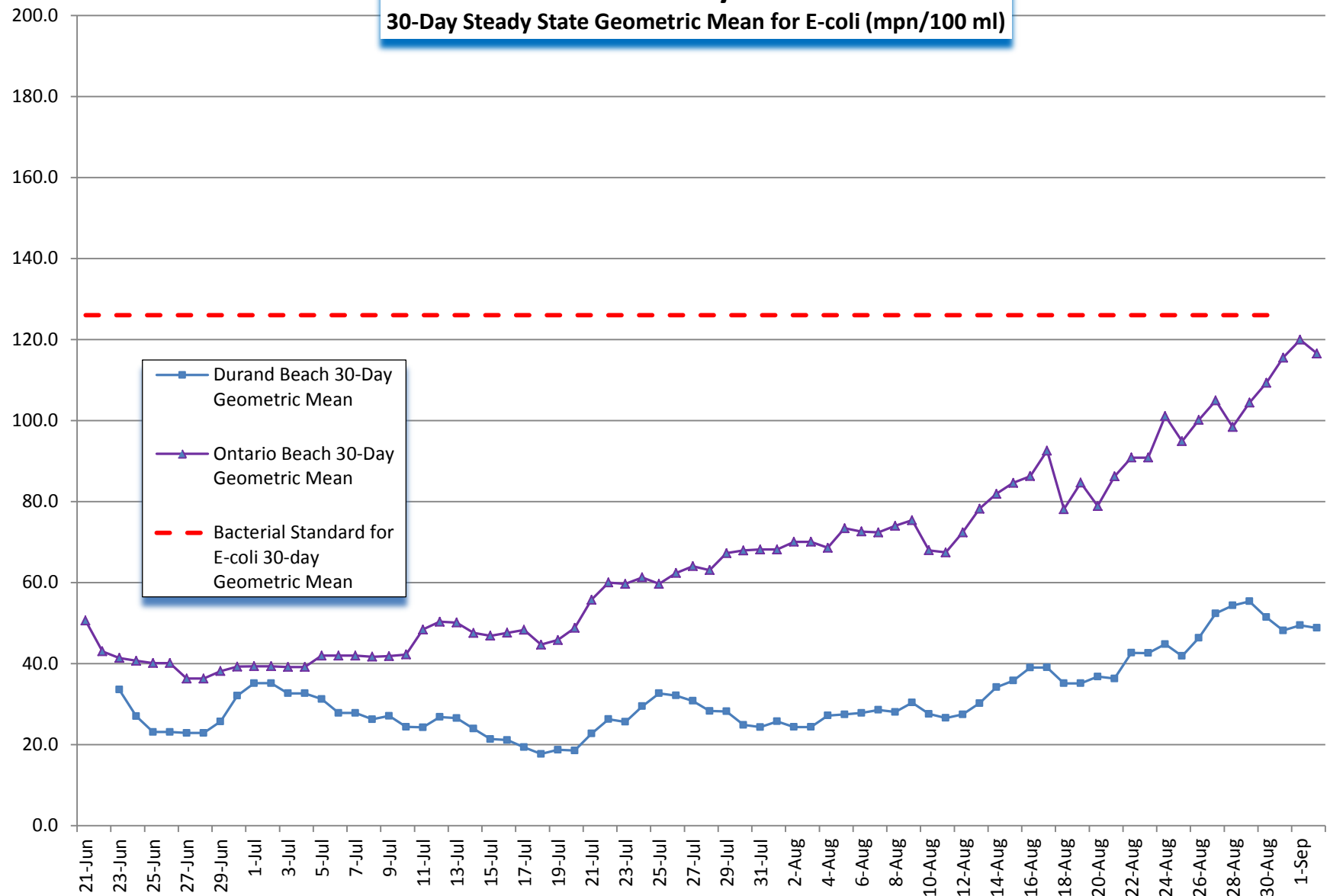
2013 BEACH DATA							
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN							
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml						
	ONTARIO			DURAND			
	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	
		PRE-SEASON			PRE-SEASON		
	23-May	21-Jun	50.6				
	24-May	22-Jun	43.0				
	25-May	23-Jun	41.4	25-May	23-Jun	33.5	
	26-May	24-Jun	40.7	26-May	24-Jun	27.0	
	27-May	25-Jun	40.1	27-May	25-Jun	23.1	
	28-May	26-Jun	40.1	28-May	26-Jun	23.1	
	29-May	27-Jun	36.3	29-May	27-Jun	22.8	
	30-May	28-Jun	36.3	30-May	28-Jun	22.8	
	31-May	29-Jun	38.1	31-May	29-Jun	25.7	
	1-Jun	30-Jun	39.2	1-Jun	30-Jun	32.1	
	2-Jun	1-Jul	39.3	2-Jun	1-Jul	35.1	
	3-Jun	2-Jul	39.3	3-Jun	2-Jul	35.1	
	4-Jun	3-Jul	39.2	4-Jun	3-Jul	32.6	
	5-Jun	4-Jul	39.2	5-Jun	4-Jul	32.6	
	6-Jun	5-Jul	42.0	6-Jun	5-Jul	31.2	
	7-Jun	6-Jul	42.0	7-Jun	6-Jul	27.8	
	8-Jun	7-Jul	42.0	8-Jun	7-Jul	27.8	
	9-Jun	8-Jul	41.7	9-Jun	8-Jul	26.2	
	10-Jun	9-Jul	41.8	10-Jun	9-Jul	27.1	
	11-Jun	10-Jul	42.2	11-Jun	10-Jul	24.3	
	12-Jun	11-Jul	48.4	12-Jun	11-Jul	24.2	
	13-Jun	12-Jul	50.3	13-Jun	12-Jul	26.8	
	14-Jun	13-Jul	50.1	14-Jun	13-Jul	26.5	

2013 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	FROM	TO		FROM	TO	
	15-Jun	14-Jul	47.6	15-Jun	14-Jul	23.9
	16-Jun	15-Jul	46.9	16-Jun	15-Jul	21.4
	17-Jun	16-Jul	47.6	17-Jun	16-Jul	21.1
	18-Jun	17-Jul	48.3	18-Jun	17-Jul	19.3
	19-Jun	18-Jul	44.7	19-Jun	18-Jul	17.7
	20-Jun	19-Jul	45.8	20-Jun	19-Jul	18.7
	21-Jun	20-Jul	48.8	21-Jun	20-Jul	18.5
	22-Jun	21-Jul	55.7	22-Jun	21-Jul	22.7
	23-Jun	22-Jul	60.0	23-Jun	22-Jul	26.2
	24-Jun	23-Jul	59.7	24-Jun	23-Jul	25.6
	25-Jun	24-Jul	61.2	25-Jun	24-Jul	29.4
	26-Jun	25-Jul	59.7	26-Jun	25-Jul	32.6
	27-Jun	26-Jul	62.3	27-Jun	26-Jul	32.1
	28-Jun	27-Jul	64.0	28-Jun	27-Jul	30.8
	29-Jun	28-Jul	63.1	29-Jun	28-Jul	28.3
	30-Jun	29-Jul	67.3	30-Jun	29-Jul	28.2
	1-Jul	30-Jul	67.9	1-Jul	30-Jul	24.8
	2-Jul	31-Jul	68.1	2-Jul	31-Jul	24.3
	3-Jul	1-Aug	68.1	3-Jul	1-Aug	25.7
	4-Jul	2-Aug	70.1	4-Jul	2-Aug	24.3
	5-Jul	3-Aug	70.1	5-Jul	3-Aug	24.3
	6-Jul	4-Aug	68.6	6-Jul	4-Aug	27.1
	7-Jul	5-Aug	73.4	7-Jul	5-Aug	27.4
	8-Jul	6-Aug	72.6	8-Jul	6-Aug	27.8
	9-Jul	7-Aug	72.4	9-Jul	7-Aug	28.6
	10-Jul	8-Aug	74.0	10-Jul	8-Aug	28.0
	11-Jul	9-Aug	75.4	11-Jul	9-Aug	30.3
	12-Jul	10-Aug	67.9	12-Jul	10-Aug	27.6
	13-Jul	11-Aug	67.4	13-Jul	11-Aug	26.5
	14-Jul	12-Aug	72.4	14-Jul	12-Aug	27.4
	15-Jul	13-Aug	78.2	15-Jul	13-Aug	30.2
	16-Jul	14-Aug	81.9	16-Jul	14-Aug	34.2
	17-Jul	15-Aug	84.6	17-Jul	15-Aug	35.8

2013 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	FROM	TO	STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	18-Jul	16-Aug	86.3	18-Jul	16-Aug	39.0
	19-Jul	17-Aug	92.6	19-Jul	17-Aug	39.0
	20-Jul	18-Aug	78.1	20-Jul	18-Aug	35.1
	21-Jul	19-Aug	84.6	21-Jul	19-Aug	35.1
	22-Jul	20-Aug	78.9	22-Jul	20-Aug	36.8
	23-Jul	21-Aug	86.2	23-Jul	21-Aug	36.3
	24-Jul	22-Aug	90.8	24-Jul	22-Aug	42.6
	25-Jul	23-Aug	90.8	25-Jul	23-Aug	42.6
	26-Jul	24-Aug	101.1	26-Jul	24-Aug	44.8
	27-Jul	25-Aug	94.9	27-Jul	25-Aug	41.9
	28-Jul	26-Aug	100.1	28-Jul	26-Aug	46.3
	29-Jul	27-Aug	104.9	29-Jul	27-Aug	52.4
	30-Jul	28-Aug	98.4	30-Jul	28-Aug	54.3
	31-Jul	29-Aug	104.4	31-Jul	29-Aug	55.4
	1-Aug	30-Aug	109.3	1-Aug	30-Aug	51.4
	2-Aug	31-Aug	115.5	2-Aug	31-Aug	48.2
	3-Aug	1-Sep	119.9	3-Aug	1-Sep	49.4
	4-Aug	2-Sep	116.5	4-Aug	2-Sep	48.8
	ONTARIO BEACH 2013			DURAND BEACH 2013		
	# BEACH DAYS =		74	# BEACH DAYS =		72
	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		0	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		0
	% OF THE 2013 SWIMMING SEASON THAT BATHING BEACHES IN ROCHESTER EMBAYMENT MEET BACTERIAL STANDARDS =					100.0%

2013 Rochester Embayment Beach Data

30-Day Steady State Geometric Mean for E-coli (mpn/100 ml)



2012 BEACH DATA						
SAMPLE RESULTS						
		= PRE-SEASON, BEACH NOT OPEN				
		= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS				
		ONTARIO	ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) CENTER	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	21-May	15	1	6	4	
	24-May	4	1	5	3	
	29-May	7	26	461	44	1
	31-May	168	582	512	369	93
	6-Jun	24	58	6	20	4
	7-Jun	9	25	55	23	3
	12-Jun	9	47	63	30	11
	14-Jun	213	429	323	309	16
	15-Jun	122	75	80	90	
	16-Jun	35	62	9	27	
	17-Jun	10	2	5	5	
	18-Jun	40	14	83	36	
	19-Jun	18	4	5	7	1
	20-Jun	272	387	210	281	
	21-Jun	42	27	442	79	7
	22-Jun	579	276	120	268	
	23-Jun	2452	890	714	1159	123
	24-Jun	48	187	43	73	10
	25-Jun	5654	2190	4480	3814	384
	26-Jun	212	335	662	360	50
	27-Jun	97	140	346	167	17
	28-Jun	65	16	37	34	8
	29-Jun	2420	579	261	715	73
	30-Jun	74	104	411	147	22
	1-Jul	99	194	142	140	11
	2-Jul	141	91	152	125	60
	3-Jul	158	216	53	122	15
	4-Jul	291	613	344	394	12
	5-Jul	696	806	707	735	650
	6-Jul	198	135	163	163	6
	7-Jul	372	323	237	305	94
	8-Jul	2359	2382	744	1611	195
	9-Jul	149	176	89	133	40

2012 BEACH DATA						
SAMPLE RESULTS						
	= PRE-SEASON, BEACH NOT OPEN					
	= DAYS OMITTED FROM CALCULATION OF STEADY STATE GEOMETRIC MEAN DUE TO WET WEATHER CONDITIONS					
		ONTARIO	ONTARIO	ONTARIO	ONTARIO	DURAND
	Date	E-COLI (mpn/100ml) WEST	E-COLI (mpn/100ml) CENTER	E-COLI (mpn/100ml) EAST	E-COLI (mpn/100ml) GEOMETRIC MEAN	E-COLI (mpn/100ml)
	10-Jul	157	345	141	197	5
	11-Jul	162	73	219	137	17
	12-Jul	20	15	14	16	18
	13-Jul	88	53	26	49	3
	14-Jul	121	16	66	50	6
	15-Jul	16	43	33	28	15
	16-Jul	70	79	54	67	69
	17-Jul	2420	1094	545	1130	55
	18-Jul	445	1741	1302	1003	203
	19-Jul	2150	3294	6979	3670	954
	20-Jul	118	53	30	57	22
	21-Jul	75	27	70	52	22
	22-Jul	47	54	16	34	1
	23-Jul	145	1300	461	443	70
	24-Jul	176	586	64	188	337
	25-Jul	69	74	80	74	65
	26-Jul	73	91	29	58	74
	27-Jul	261	201	179	211	79
	28-Jul	229	111	236	182	81
	29-Jul	30	33	48	36	16
	30-Jul	14	24	18	18	15
	31-Jul	11	30	12	16	41
	1-Aug	31	99	82	63	179
	2-Aug	280	236	45	143	74
	3-Aug	579	365	587	499	108
	4-Aug	42	40	56	45	45
	5-Aug	121	50	118	89	15
	6-Aug	2481	2495	4106	2940	217
	7-Aug	11	21	365	43	55
	8-Aug	291	291	326	302	58
	9-Aug	39	88	47	55	78
	10-Aug	106	120	403	172	49
	11-Aug	105	49	45	61	135

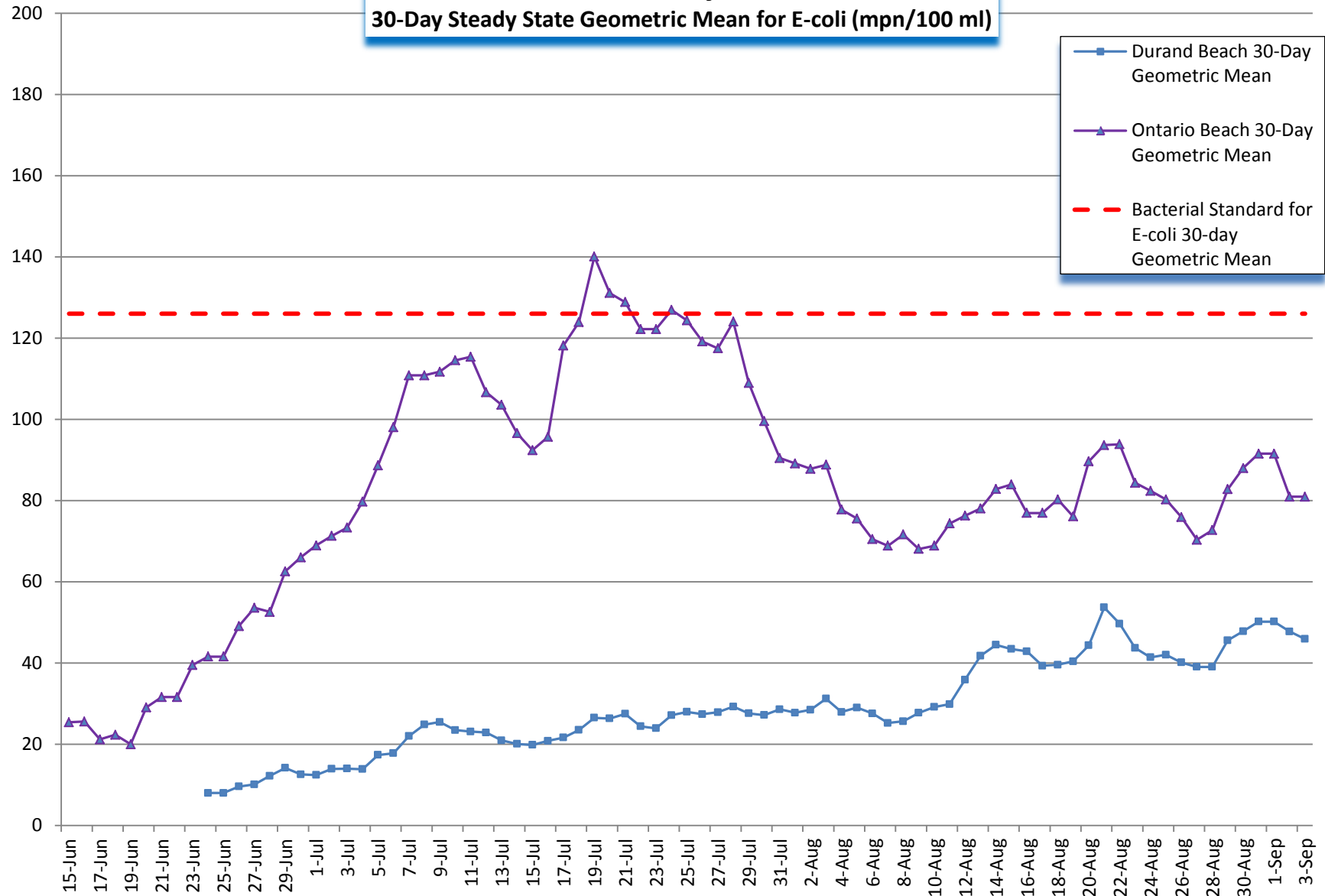
2012 BEACH DATA							
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN							
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml						
	ONTARIO			DURAND			
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)	
	FROM	TO		FROM	TO		
		PRE-SEASON			PRE-SEASON		
	17-May	15-Jun	25.4				
	18-May	16-Jun	25.6				
	19-May	17-Jun	21.2				
	20-May	18-Jun	22.3				
	21-May	19-Jun	20.0				
	22-May	20-Jun	29.1				
	23-May	21-Jun	31.6				
	24-May	22-Jun	31.6				
	25-May	23-Jun	39.5				
	26-May	24-Jun	41.6	26-May	24-Jun	8.0	
	27-May	25-Jun	41.6	27-May	25-Jun	8.0	
	28-May	26-Jun	49.1	28-May	26-Jun	9.6	
	29-May	27-Jun	53.6	29-May	27-Jun	10.1	
	30-May	28-Jun	52.6	30-May	28-Jun	12.2	
	31-May	29-Jun	62.5	31-May	29-Jun	14.1	
	1-Jun	30-Jun	66.0	1-Jun	30-Jun	12.5	
	2-Jun	1-Jul	69.0	2-Jun	1-Jul	12.4	
	3-Jun	2-Jul	71.3	3-Jun	2-Jul	13.9	
	4-Jun	3-Jul	73.3	4-Jun	3-Jul	14.0	
	5-Jun	4-Jul	79.7	5-Jun	4-Jul	13.8	
	6-Jun	5-Jul	88.6	6-Jun	5-Jul	17.3	
	7-Jun	6-Jul	98.0	7-Jun	6-Jul	17.8	
	8-Jun	7-Jul	110.8	8-Jun	7-Jul	22.0	
	9-Jun	8-Jul	110.8	9-Jun	8-Jul	24.8	
	10-Jun	9-Jul	111.7	10-Jun	9-Jul	25.5	

2012 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	FROM	TO		FROM	TO	
	11-Jun	10-Jul	114.5	11-Jun	10-Jul	23.5
	12-Jun	11-Jul	115.4	12-Jun	11-Jul	23.1
	13-Jun	12-Jul	106.7	13-Jun	12-Jul	22.8
	14-Jun	13-Jul	103.5	14-Jun	13-Jul	20.9
	15-Jun	14-Jul	96.6	15-Jun	14-Jul	20.0
	16-Jun	15-Jul	92.4	16-Jun	15-Jul	19.8
	17-Jun	16-Jul	95.7	17-Jun	16-Jul	20.8
	18-Jun	17-Jul	118.2	18-Jun	17-Jul	21.6
	19-Jun	18-Jul	123.9	19-Jun	18-Jul	23.5
	20-Jun	19-Jul	140.1	20-Jun	19-Jul	26.5
	21-Jun	20-Jul	131.1	21-Jun	20-Jul	26.3
	22-Jun	21-Jul	128.8	22-Jun	21-Jul	27.5
	23-Jun	22-Jul	122.2	23-Jun	22-Jul	24.4
	24-Jun	23-Jul	122.2	24-Jun	23-Jul	23.9
	25-Jun	24-Jul	126.9	25-Jun	24-Jul	27.1
	26-Jun	25-Jul	124.3	26-Jun	25-Jul	27.9
	27-Jun	26-Jul	119.1	27-Jun	26-Jul	27.4
	28-Jun	27-Jul	117.5	28-Jun	27-Jul	27.9
	29-Jun	28-Jul	124.0	29-Jun	28-Jul	29.2
	30-Jun	29-Jul	109.0	30-Jun	29-Jul	27.6
	1-Jul	30-Jul	99.5	1-Jul	30-Jul	27.2
	2-Jul	31-Jul	90.4	2-Jul	31-Jul	28.6
	3-Jul	1-Aug	89.1	3-Jul	1-Aug	27.7
	4-Jul	2-Aug	87.8	4-Jul	2-Aug	28.5
	5-Jul	3-Aug	88.8	5-Jul	3-Aug	31.2
	6-Jul	4-Aug	77.8	6-Jul	4-Aug	27.9
	7-Jul	5-Aug	75.6	7-Jul	5-Aug	29.0
	8-Jul	6-Aug	70.5	8-Jul	6-Aug	27.5
	9-Jul	7-Aug	68.9	9-Jul	7-Aug	25.2
	10-Jul	8-Aug	71.6	10-Jul	8-Aug	25.6
	11-Jul	9-Aug	68.1	11-Jul	9-Aug	27.7
	12-Jul	10-Aug	68.9	12-Jul	10-Aug	29.1
	13-Jul	11-Aug	74.3	13-Jul	11-Aug	29.8

2012 BEACH DATA						
RUNNING 30-DAY STEADY STATE GEOMETRIC MEAN						
	= 30-DAY GEOMETRIC MEAN EXCEEDS 126 mpn/100ml					
	ONTARIO			DURAND		
			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)			STEADY STATE 30-DAY GEO MEAN OF E-COLI RESULTS (mpn/100ml)
	FROM	TO		FROM	TO	
	14-Jul	12-Aug	76.2	14-Jul	12-Aug	35.9
	15-Jul	13-Aug	78.0	15-Jul	13-Aug	41.8
	16-Jul	14-Aug	82.8	16-Jul	14-Aug	44.4
	17-Jul	15-Aug	83.9	17-Jul	15-Aug	43.4
	18-Jul	16-Aug	76.9	18-Jul	16-Aug	42.8
	19-Jul	17-Aug	76.9	19-Jul	17-Aug	39.3
	20-Jul	18-Aug	80.3	20-Jul	18-Aug	39.5
	21-Jul	19-Aug	76.1	21-Jul	19-Aug	40.4
	22-Jul	20-Aug	89.6	22-Jul	20-Aug	44.3
	23-Jul	21-Aug	93.7	23-Jul	21-Aug	53.7
	24-Jul	22-Aug	93.9	24-Jul	22-Aug	49.7
	25-Jul	23-Aug	84.3	25-Jul	23-Aug	43.7
	26-Jul	24-Aug	82.4	26-Jul	24-Aug	41.4
	27-Jul	25-Aug	80.3	27-Jul	25-Aug	42.0
	28-Jul	26-Aug	75.9	28-Jul	26-Aug	40.1
	29-Jul	27-Aug	70.3	29-Jul	27-Aug	39.0
	30-Jul	28-Aug	72.7	30-Jul	28-Aug	39.0
	31-Jul	29-Aug	82.8	31-Jul	29-Aug	45.6
	1-Aug	30-Aug	88.0	1-Aug	30-Aug	47.8
	2-Aug	31-Aug	91.5	2-Aug	31-Aug	50.2
	3-Aug	1-Sep	91.5	3-Aug	1-Sep	50.2
	4-Aug	2-Sep	80.9	4-Aug	2-Sep	47.7
	5-Aug	3-Sep	80.9	5-Aug	3-Sep	45.9
	ONTARIO BEACH 2012			DURAND BEACH 2012		
	# BEACH DAYS =		81	# BEACH DAYS =		72
	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		4	# DAYS WHERE 30 DAY GEOMETRIC MEAN > 126 ECOLI =		0
	% OF THE 2012 SWIMMING SEASON THAT BATHING BEACHES IN ROCHESTER EMBAYMENT MEET BACTERIAL STANDARDS =					97.4%

2012 Rochester Embayment Beach Data

30-Day Steady State Geometric Mean for E-coli (mpn/100 ml)



APPENDIX C
Secchi Disk Data

Source: Monroe County Department of Public Health

2018 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	22-Jun	1.0			
	23-Jun	1.0			
	24-Jun	1.0	24-Jun	1.0	
	25-Jun	0.9	25-Jun	0.9	
	26-Jun	1.0	26-Jun	1.0	
	27-Jun	1.0	27-Jun	1.0	
	28-Jun	1.0	28-Jun	1.0	
	29-Jun	1.0	29-Jun	1.0	
	30-Jun	1.0	30-Jun	1.0	
	1-Jul	1.0	1-Jul	1.0	
	2-Jul	1.0	2-Jul	1.0	
	3-Jul	1.0	3-Jul	1.0	
	4-Jul	1.0	4-Jul	1.0	
	5-Jul	1.0	5-Jul	1.0	
	6-Jul	0.4	6-Jul	0.6	
	7-Jul	1.0	7-Jul	1.0	
	8-Jul	1.0	8-Jul	1.0	
	9-Jul	1.0	9-Jul	1.0	
	10-Jul	1.0	10-Jul	1.0	
	11-Jul	0.8	11-Jul	0.5	
	12-Jul	1.0	12-Jul	1.0	
	13-Jul	1.0	13-Jul	1.0	
	14-Jul	1.0	14-Jul	1.0	
	15-Jul	1.0	15-Jul	1.0	
	16-Jul	1.0	16-Jul	1.0	
	17-Jul	1.0	17-Jul	0.8	
	18-Jul	0.8	18-Jul	0.5	
	19-Jul	1.0	19-Jul	1.0	
	20-Jul	1.0	20-Jul	1.0	
	21-Jul	0.5	21-Jul	1.0	
	22-Jul	0.5	22-Jul	0.4	
	23-Jul	0.4	23-Jul	0.9	
	24-Jul	0.9	24-Jul	1.0	
	25-Jul	1.0	25-Jul	1.0	
	26-Jul	1.0	26-Jul	1.0	

2018 BEACH DATA				
Water Clarity Data				
	= SECCHI DISK READING < 0.6 m			
	ONTARIO		DURAND	
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)
	27-Jul	1.0	27-Jul	1.0
	28-Jul	1.0	28-Jul	1.0
	29-Jul	1.0	29-Jul	0.9
	30-Jul	1.0	30-Jul	1.0
	31-Jul	1.0	31-Jul	1.0
	1-Aug	0.6	1-Aug	0.6
	2-Aug	1.0	2-Aug	1.0
	3-Aug	1.0	3-Aug	1.0
	4-Aug	1.0	4-Aug	1.0
	5-Aug	1.0	5-Aug	1.0
	6-Aug	1.0	6-Aug	1.0
	7-Aug	0.8	7-Aug	1.0
	8-Aug	1.0	8-Aug	1.0
	9-Aug	0.7	9-Aug	0.8
	10-Aug	0.4	10-Aug	0.3
	11-Aug	0.5	11-Aug	0.7
	12-Aug	0.9	12-Aug	1.0
	13-Aug	0.8	13-Aug	0.7
	14-Aug	1.0	14-Aug	1.0
	15-Aug	1.0	15-Aug	0.9
	16-Aug	1.0	16-Aug	1.0
	17-Aug	0.8	17-Aug	1.0
	18-Aug	0.8	18-Aug	0.7
	19-Aug	0.9	19-Aug	0.9
	20-Aug	1.0	20-Aug	1.0
	21-Aug	1.0	21-Aug	1.0
	22-Aug	0.7	22-Aug	1.0
	23-Aug	1.0	23-Aug	1.0
	24-Aug	1.0	24-Aug	1.0
	25-Aug	1.0	25-Aug	1.0
	26-Aug	0.5	26-Aug	1.0
	27-Aug	1.0	27-Aug	1.0
	28-Aug	1.0	28-Aug	1.0
	29-Aug	1.0	29-Aug	1.0
	30-Aug	1.0	30-Aug	1.0

2018 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	31-Aug	0.8	31-Aug	1.0	
	1-Sep	1.0	1-Sep	1.0	
	2-Sep	1.0	2-Sep	1.0	
	3-Sep	1.0	3-Sep	1.0	
	ONTARIO BEACH 2018		DURAND BEACH 2018		
	# BEACH DAYS =	74	# BEACH DAYS =	72	
	# DAYS SECCHI < 0.6 m =	7	# DAYS SECCHI < 0.6 m =	4	
	% OF THE 2017 SWIMMING SEASON THAT BEACHES IN ROCHESTER EMBAYMENT MEET WATER CLARITY STANDARDS =			92.5%	

2017 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	27-Aug	1.0	27-Aug	DURAND BEACH CLOSED FOR SEASON DUE TO HIGH LAKE LEVEL	
	28-Aug	1.0	28-Aug		
	29-Aug	1.0	29-Aug		
	30-Aug	1.0	30-Aug		
	31-Aug	0.6	31-Aug		
	1-Sep	0.1	1-Sep		
	2-Sep	1.0	2-Sep		
	3-Sep	1.0	3-Sep		
	4-Sep	1.0	4-Sep		
	ONTARIO BEACH 2016		DURAND BEACH 2016		
	# BEACH DAYS =	74	# BEACH DAYS =	0	
	# DAYS SECCHI < 0.6 m =	13	# DAYS SECCHI < 0.6 m =	0	
	% OF THE 2017 SWIMMING SEASON THAT BEACHES IN ROCHESTER EMBAYMENT MEET WATER CLARITY STANDARDS =		82.4%		

2016 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	24-Jul	1.0	24-Jul	1.0	
	25-Jul	1.0	25-Jul	1.0	
	26-Jul	0.3	26-Jul	0.7	
	27-Jul	1.0	27-Jul	1.0	
	28-Jul	1.0	28-Jul	1.0	
	29-Jul	0.6	29-Jul	0.8	
	30-Jul	0.7	30-Jul	0.7	
	31-Jul	0.8	31-Jul	0.8	
	1-Aug	1.0	1-Aug	1.0	
	2-Aug	1.0	2-Aug	1.0	
	3-Aug	1.0	3-Aug	1.0	
	4-Aug	1.0	4-Aug	1.0	
	5-Aug	1.0	5-Aug	1.0	
	6-Aug	1.0	6-Aug	0.8	
	7-Aug	0.7	7-Aug	1.0	
	8-Aug	0.9	8-Aug	1.0	
	9-Aug	1.0	9-Aug	1.0	
	10-Aug	1.0	10-Aug	1.0	
	11-Aug	1.0	11-Aug	1.0	
	12-Aug	1.0	12-Aug	1.0	
	13-Aug	0.8	13-Aug	0.8	
	14-Aug	0.4	14-Aug	1.0	
	15-Aug	1.0	15-Aug	1.0	
	16-Aug	1.0	16-Aug	1.0	
	17-Aug	0.2	17-Aug	1.0	
	18-Aug	1.0	18-Aug	1.0	
	19-Aug	1.0	19-Aug	1.0	
	20-Aug	1.0	20-Aug	1.0	
	21-Aug	1.0	21-Aug	1.0	
	22-Aug	0.4	22-Aug	0.8	
	23-Aug	1.0	23-Aug	1.0	
	24-Aug	1.0	24-Aug	1.0	
	25-Aug	1.0	25-Aug	1.0	
	26-Aug	1.0	26-Aug	1.0	
	27-Aug	0.9	27-Aug	1.0	

2016 BEACH DATA				
Water Clarity Data				
	= SECCHI DISK READING < 0.6 m			
	ONTARIO		DURAND	
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)
	28-Aug	1.0	28-Aug	1.0
	29-Aug	0.9	29-Aug	1.0
	30-Aug	1.0	30-Aug	1.0
	31-Aug	1.0	31-Aug	1.0
	1-Sep	0.4	1-Sep	0.7
	2-Sep	0.4	2-Sep	0.6
	3-Sep	0.8	3-Sep	1.0
	4-Sep	1.0	4-Sep	1.0
	5-Sep	1.0	5-Sep	1.0
	ONTARIO BEACH 2016		DURAND BEACH 2016	
	# BEACH DAYS =	74	# BEACH DAYS =	79
	# DAYS SECCHI < 0.6 m =	6	# DAYS SECCHI < 0.6 m =	0
	% OF THE 2016 SWIMMING SEASON THAT BEACHES IN ROCHESTER EMBAYMENT MEET WATER CLARITY STANDARDS =			96.1%

2015 BEACH DATA						
Water Clarity Data						
		= SECCHI DISK READING < 0.6 m				
		ONTARIO		DURAND		
		DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
				21-Jun	0.6	
				22-Jun	0.8	
				23-Jun	0.8	
				24-Jun	0.5	
				25-Jun	1.0	
		26-Jun	0.5	26-Jun	0.5	
		27-Jun	1.0	27-Jun	0.9	
		28-Jun	0.4	28-Jun	0.4	
		29-Jun	0.5	29-Jun	0.5	
		30-Jun	1.0	30-Jun	0.4	
		1-Jul	0.8	1-Jul	0.5	
		2-Jul	0.8	2-Jul	0.6	
		3-Jul	1.0	3-Jul	0.4	
		4-Jul	1.0	4-Jul	0.7	
		5-Jul	1.0	5-Jul	0.6	
		6-Jul	1.0	6-Jul	1.0	
		7-Jul	1.0	7-Jul	1.0	
		8-Jul	0.1	8-Jul	0.1	
		9-Jul	1.0	9-Jul	1.0	
		10-Jul	1.0	10-Jul	1.0	
		11-Jul	1.0	11-Jul	1.0	
		12-Jul	1.0	12-Jul	1.0	
		13-Jul	1.0	13-Jul	1.0	
		14-Jul	1.0	14-Jul	1.0	
		15-Jul	0.3	15-Jul	0.2	
		16-Jul	0.6	16-Jul	0.6	
		17-Jul	1.0	17-Jul	0.9	
		18-Jul	0.2	18-Jul	0.1	
		19-Jul	0.2	19-Jul	1.0	
		20-Jul	0.2	20-Jul	0.8	
		21-Jul	0.8	21-Jul	1.0	
		22-Jul	0.2	22-Jul	0.3	
		23-Jul	0.7	23-Jul	0.8	
		24-Jul	1.0	24-Jul	1.0	
		25-Jul	1.0	25-Jul	1.0	

2015 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	26-Jul	1.0	26-Jul	1.0	
	27-Jul	1.0	27-Jul	1.0	
	28-Jul	1.0	28-Jul	1.0	
	29-Jul	1.0	29-Jul	1.0	
	30-Jul	1.0	30-Jul	1.0	
	31-Jul	0.6	31-Jul	1.0	
	1-Aug	0.5	1-Aug	1.0	
	2-Aug	0.6	2-Aug	1.0	
	3-Aug	0.5	3-Aug	1.0	
	4-Aug	1.0	4-Aug	1.0	
	5-Aug	0.0	5-Aug	1.0	
	6-Aug	0.1	6-Aug	1.0	
	7-Aug	1.0	7-Aug	1.0	
	8-Aug	1.0	8-Aug	1.0	
	9-Aug	1.0	9-Aug	1.0	
	10-Aug	1.0	10-Aug	1.0	
	11-Aug	1.0	11-Aug	1.0	
	12-Aug	0.5	12-Aug	0.8	
	13-Aug	0.6	13-Aug	1.0	
	14-Aug	1.0	14-Aug	1.0	
	15-Aug	1.0	15-Aug	1.0	
	16-Aug	1.0	16-Aug	1.0	
	17-Aug	1.0	17-Aug	1.0	
	18-Aug	1.0	18-Aug	1.0	
	19-Aug	1.0	19-Aug	1.0	
	20-Aug	1.0	20-Aug	1.0	
	21-Aug	1.0	21-Aug	1.0	
	22-Aug	1.0	22-Aug	1.0	
	23-Aug	1.0	23-Aug	1.0	
	24-Aug	1.0	24-Aug	1.0	
	25-Aug	1.0	25-Aug	1.0	
	26-Aug	1.0	26-Aug	1.0	
	27-Aug	0.9	27-Aug	1.0	
	28-Aug	1.0	28-Aug	1.0	
	29-Aug	1.0	29-Aug	1.0	

2015 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	30-Aug	1.0	30-Aug	1.0	
	31-Aug	1.0	31-Aug	1.0	
	1-Sep	1.0	1-Sep	1.0	
	2-Sep	1.0	2-Sep	1.0	
	3-Sep	1.0	3-Sep	1.0	
	4-Sep	0.8	4-Sep	1.0	
	5-Sep	0.7	5-Sep	0.7	
	6-Sep	0.9	6-Sep	1.0	
	7-Sep	1.0	7-Sep	1.0	
	ONTARIO BEACH 2015		DURAND BEACH 2015		
	# BEACH DAYS =	74	# BEACH DAYS =	79	
	# DAYS SECCHI < 0.6 m =	14	# DAYS SECCHI < 0.6 m =	11	
	% OF THE 2015 SWIMMING SEASON THAT BEACHES IN ROCHESTER EMBAYMENT MEET WATER CLARITY STANDARDS =			83.7%	

2014 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
		ONTARIO	DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
			22-Jun	1.0	
			23-Jun	1.0	
			24-Jun	1.0	
			25-Jun	1.0	
			26-Jun	1.0	
	27-Jun	1.0	27-Jun	1.0	
	28-Jun	1.0	28-Jun	1.0	
	29-Jun	1.0	29-Jun	0.9	
	30-Jun	1.0	30-Jun	1.0	
	1-Jul	1.0	1-Jul	1.0	
	2-Jul	1.0	2-Jul	1.0	
	3-Jul	1.0	3-Jul	1.0	
	4-Jul	0.2	4-Jul	0.2	
	5-Jul	0.3	5-Jul	0.4	
	6-Jul	1.0	6-Jul	0.9	
	7-Jul	1.0	7-Jul	1.0	
	8-Jul	1.0	8-Jul	0.8	
	9-Jul	0.5	9-Jul	0.7	
	10-Jul	1.0	10-Jul	1.0	
	11-Jul	1.0	11-Jul	1.0	
	12-Jul	1.0	12-Jul	1.0	
	13-Jul	1.0	13-Jul	1.0	
	14-Jul	1.0	14-Jul	1.0	
	15-Jul	1.0	15-Jul	1.0	
	16-Jul	1.0	16-Jul	1.0	
	17-Jul	1.0	17-Jul	1.0	
	18-Jul	1.0	18-Jul	1.0	
	19-Jul	1.0	19-Jul	1.0	
	20-Jul	1.0	20-Jul	1.0	
	21-Jul	1.0	21-Jul	1.0	
	22-Jul	1.0	22-Jul	1.0	
	23-Jul	1.0	23-Jul	1.0	
	24-Jul	0.4	24-Jul	0.5	
	25-Jul	0.6	25-Jul	0.5	
	26-Jul	0.8	26-Jul	0.8	

2014 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
		SECCHI DISK READING		SECCHI DISK READING	
	DATE	(m)	DATE	(m)	
	27-Jul	1.0	27-Jul	1.0	
	28-Jul	0.2	28-Jul	0.2	
	29-Jul	0.2	29-Jul	0.3	
	30-Jul	0.5	30-Jul	0.5	
	31-Jul	1.0	31-Jul	1.0	
	1-Aug	1.0	1-Aug	0.9	
	2-Aug	1.0	2-Aug	0.4	
	3-Aug	1.0	3-Aug	0.7	
	4-Aug	0.6	4-Aug	0.8	
	5-Aug	1.0	5-Aug	1.0	
	6-Aug	0.8	6-Aug	0.9	
	7-Aug	0.2	7-Aug	0.9	
	8-Aug	1.0	8-Aug	1.0	
	9-Aug	1.0	9-Aug	1.0	
	10-Aug	1.0	10-Aug	1.0	
	11-Aug	1.0	11-Aug	1.0	
	12-Aug	0.5	12-Aug	1.0	
	13-Aug	0.6	13-Aug	1.0	
	14-Aug	0.1	14-Aug	1.0	
	15-Aug	0.5	15-Aug	0.4	
	16-Aug	1.0	16-Aug	0.9	
	17-Aug	0.3	17-Aug	0.5	
	18-Aug	0.4	18-Aug	0.4	
	19-Aug	1.0	19-Aug	1.0	
	20-Aug	0.8	20-Aug	1.0	
	21-Aug	0.7	21-Aug	1.0	
	22-Aug	1.0	22-Aug	1.0	
	23-Aug	0.8	23-Aug	1.0	
	24-Aug	0.7	24-Aug	0.7	
	25-Aug	1.0	25-Aug	1.0	
	26-Aug	1.0	26-Aug	1.0	
	27-Aug	1.0	27-Aug	1.0	
	28-Aug	0.1	28-Aug	0.6	
	29-Aug	0.4	29-Aug	0.7	
	30-Aug	0.7	30-Aug	1.0	

2014 BEACH DATA								
Water Clarity Data								
		= SECCHI DISK READING < 0.6 m						
		ONTARIO		DURAND				
		DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)			
		31-Aug	1.0	31-Aug	1.0			
		1-Sep	1.0	1-Sep	1.0			
		ONTARIO BEACH 2014		DURAND BEACH 2014				
		# BEACH DAYS =	67	# BEACH DAYS =	72			
		# DAYS SECCHI < 0.6 m =	15	# DAYS SECCHI < 0.6 m =	11			
		% OF THE 2014 SWIMMING SEASON THAT BEACHES IN ROCHESTER EMBAYMENT MEET WATER CLARITY STANDARDS =			81.3%			

2013 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	21-Jun	1.0			
	22-Jun	1.0			
	23-Jun	1.0	23-Jun	1.0	
	24-Jun	1.0	24-Jun	1.0	
	25-Jun	1.0	25-Jun	1.0	
	26-Jun	1.0	26-Jun	1.0	
	27-Jun	1.0	27-Jun	1.0	
	28-Jun	1.0	28-Jun	0.8	
	29-Jun	0.7	29-Jun	0.8	
	30-Jun	1.0	30-Jun	1.0	
	1-Jul	0.7	1-Jul	0.7	
	2-Jul	0.5	2-Jul	0.7	
	3-Jul	0.5	3-Jul	1.0	
	4-Jul	1.0	4-Jul	1.0	
	5-Jul	1.0	5-Jul	1.0	
	6-Jul	1.0	6-Jul	1.0	
	7-Jul	1.0	7-Jul	1.0	
	8-Jul	1.0	8-Jul	1.0	
	9-Jul	1.0	9-Jul	1.0	
	10-Jul	1.0	10-Jul	1.0	
	11-Jul	0.4	11-Jul	0.8	
	12-Jul	0.5	12-Jul	0.6	
	13-Jul	0.9	13-Jul	0.9	
	14-Jul	1.0	14-Jul	1.0	
	15-Jul	1.0	15-Jul	1.0	
	16-Jul	1.0	16-Jul	1.0	
	17-Jul	1.0	17-Jul	1.0	
	18-Jul	1.0	18-Jul	1.0	
	19-Jul	1.0	19-Jul	1.0	
	20-Jul	1.0	20-Jul	1.0	
	21-Jul	0.5	21-Jul	0.6	
	22-Jul	1.0	22-Jul	1.0	
	23-Jul	1.0	23-Jul	1.0	
	24-Jul	0.4	24-Jul	0.6	
	25-Jul	1.0	25-Jul	1.0	

2013 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	26-Jul	0.5	26-Jul	0.8	
	27-Jul	1.0	27-Jul	1.0	
	28-Jul	1.0	28-Jul	1.0	
	29-Jul	1.0	29-Jul	1.0	
	30-Jul	0.7	30-Jul	1.0	
	31-Jul	1.0	31-Jul	1.0	
	1-Aug	0.9	1-Aug	0.9	
	2-Aug	1.0	2-Aug	1.0	
	3-Aug	1.0	3-Aug	1.0	
	4-Aug	0.6	4-Aug	0.9	
	5-Aug	1.0	5-Aug	0.7	
	6-Aug	1.0	6-Aug	1.0	
	7-Aug	1.0	7-Aug	1.0	
	8-Aug	1.0	8-Aug	1.0	
	9-Aug	1.0	9-Aug	1.0	
	10-Aug	0.3	10-Aug	0.9	
	11-Aug	1.0	11-Aug	1.0	
	12-Aug	0.8	12-Aug	1.0	
	13-Aug	1.0	13-Aug	1.0	
	14-Aug	0.5	14-Aug	0.7	
	15-Aug	0.5	15-Aug	0.7	
	16-Aug	0.6	16-Aug	0.9	
	17-Aug	1.0	17-Aug	1.0	
	18-Aug	1.0	18-Aug	1.0	
	19-Aug	0.3	19-Aug	1.0	
	20-Aug	0.7	20-Aug	0.9	
	21-Aug	1.0	21-Aug	1.0	
	22-Aug	0.9	22-Aug	1.0	
	23-Aug	0.2	23-Aug	0.7	
	24-Aug	1.0	24-Aug	1.0	
	25-Aug	1.0	25-Aug	1.0	
	26-Aug	0.5	26-Aug	0.9	
	27-Aug	0.9	27-Aug	1.0	
	28-Aug	1.0	28-Aug	1.0	
	29-Aug	1.0	29-Aug	1.0	

2013 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	30-Aug	1.0	30-Aug	1.0	
	31-Aug	1.0	31-Aug	1.0	
	1-Sep	0.3	1-Sep	0.5	
	2-Sep	0.8	2-Sep	1.0	
	ONTARIO BEACH 2013		DURAND BEACH 2013		
	# BEACH DAYS =	74	# BEACH DAYS =	72	
	# DAYS SECCHI < 0.6 m =	14	# DAYS SECCHI < 0.6 m =	1	
	% OF THE 2013 SWIMMING SEASON THAT BEACHES IN ROCHESTER EMBAYMENT MEET WATER CLARITY STANDARDS =			89.7%	

2012 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	15-Jun	1.0			
	16-Jun	1.0			
	17-Jun	1.0			
	18-Jun	1.0			
	19-Jun	1.0			
	20-Jun	1.0			
	21-Jun	1.0			
	22-Jun	1.0			
	23-Jun	0.3			
	24-Jun	1.0	24-Jun	1.0	
	25-Jun	0.2	25-Jun	0.4	
	26-Jun	0.6	26-Jun	0.6	
	27-Jun	0.4	27-Jun	0.8	
	28-Jun	1.0	28-Jun	1.0	
	29-Jun	0.7	29-Jun	1.0	
	30-Jun	1.0	30-Jun	1.0	
	1-Jul	1.0	1-Jul	1.0	
	2-Jul	1.0	2-Jul	1.0	
	3-Jul	1.0	3-Jul	1.0	
	4-Jul	1.0	4-Jul	1.0	
	5-Jul	0.7	5-Jul	0.7	
	6-Jul	1.0	6-Jul	1.0	
	7-Jul	1.0	7-Jul	1.0	
	8-Jul	0.7	8-Jul	1.0	
	9-Jul	0.7	9-Jul	1.0	
	10-Jul	1.0	10-Jul	1.0	
	11-Jul	1.0	11-Jul	1.0	
	12-Jul	1.0	12-Jul	1.0	
	13-Jul	1.0	13-Jul	1.0	
	14-Jul	1.0	14-Jul	1.0	
	15-Jul	1.0	15-Jul	1.0	
	16-Jul	1.0	16-Jul	1.0	
	17-Jul	0.7	17-Jul	1.0	
	18-Jul	0.8	18-Jul	0.6	
	19-Jul	0.4	19-Jul	0.7	

2012 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	20-Jul	0.5	20-Jul	0.8	
	21-Jul	1.0	21-Jul	1.0	
	22-Jul	1.0	22-Jul	1.0	
	23-Jul	1.0	23-Jul	1.0	
	24-Jul	1.0	24-Jul	1.0	
	25-Jul	1.0	25-Jul	1.0	
	26-Jul	1.0	26-Jul	1.0	
	27-Jul	1.0	27-Jul	1.0	
	28-Jul	0.7	28-Jul	0.7	
	29-Jul	1.0	29-Jul	1.0	
	30-Jul	1.0	30-Jul	1.0	
	31-Jul	1.0	31-Jul	1.0	
	1-Aug	1.0	1-Aug	1.0	
	2-Aug	1.0	2-Aug	1.0	
	3-Aug	0.8	3-Aug	1.0	
	4-Aug	1.0	4-Aug	1.0	
	5-Aug	1.0	5-Aug	1.0	
	6-Aug	0.2	6-Aug	0.7	
	7-Aug	0.6	7-Aug	1.0	
	8-Aug	1.0	8-Aug	1.0	
	9-Aug	1.0	9-Aug	1.0	
	10-Aug	0.6	10-Aug	0.9	
	11-Aug	1.0	11-Aug	1.0	
	12-Aug	0.8	12-Aug	1.0	
	13-Aug	0.8	13-Aug	1.0	
	14-Aug	1.0	14-Aug	1.0	
	15-Aug	1.0	15-Aug	1.0	
	16-Aug	1.0	16-Aug	1.0	
	17-Aug	1.0	17-Aug	1.0	
	18-Aug	0.5	18-Aug	1.0	
	19-Aug	1.0	19-Aug	1.0	
	20-Aug	0.2	20-Aug	1.0	
	21-Aug	0.8	21-Aug	1.0	
	22-Aug	1.0	22-Aug	1.0	
	23-Aug	0.9	23-Aug	1.0	

2012 BEACH DATA					
Water Clarity Data					
	= SECCHI DISK READING < 0.6 m				
	ONTARIO		DURAND		
	DATE	SECCHI DISK READING (m)	DATE	SECCHI DISK READING (m)	
	24-Aug	1.0	24-Aug	1.0	
	25-Aug	1.0	25-Aug	1.0	
	26-Aug	1.0	26-Aug	1.0	
	27-Aug	1.0	27-Aug	1.0	
	28-Aug	0.2	28-Aug	1.0	
	29-Aug	0.8	29-Aug	1.0	
	30-Aug	1.0	30-Aug	1.0	
	31-Aug	1.0	31-Aug	1.0	
	1-Sep	0.2	1-Sep	0.2	
	2-Sep	1.0	2-Sep	1.0	
	3-Sep	1.0	3-Sep	1.0	
	ONTARIO BEACH 2012		DURAND BEACH 2012		
	# BEACH DAYS =	81	# BEACH DAYS =	72	
	# DAYS SECCHI < 0.6 m =	10	# DAYS SECCHI < 0.6 m =	2	
	% OF THE 2012 SWIMMING SEASON THAT BEACHES IN ROCHESTER EMBAYMENT MEET WATER CLARITY STANDARDS =			92.2%	

APPENDIX D
Beach Closure Data

Source: Monroe County Department of Public Health

APPENDIX D

Data contained in Appendix D is presented to show the actual closure rates for each beach. The Monroe County Department of Public Health (MCDPH) determines each morning whether the beaches will be open or closed based on a predictive model. These closure rates are not a reflection of the actual water quality. Rather, they are a representation of how the MCDPH predicted the water quality.

Ontario and Durand Eastman Beaches differ in the reasons for their closure. The variation in closure between these two beaches may be a result of structural differences and location on the Lake Ontario shoreline. Ontario Beach experiences more closures due to bacteria and water clarity than compared to Durand. This could be due to lack of shoreline water flow due to the location of the pier at Ontario Beach. Durand has no obstructions in shoreline water flow allowing for continual movement of materials along the shore. In contrast Ontario has a pier which allows for the accumulation of materials and microorganisms as waves move down the shore resulting in greater frequency of water clarity and bacteria related closures.

ONTARIO BEACH **LONG TERM PERFORMANCE (DAYS)**

(Based on E. coli only. Does not account for water clarity requirements)

Year	Closed/ Dirty	Open/Clean	Closed/Clean	Open/Dirty
2010	23	33	19	6
2011	19	33	10	19
2012	26	26	18	11
2013	24	24	18	8
2014	19	37	4	7
2015	25	29	4	15
2016	10	45	4	15
2017	13	56	8	5
2018	5	56	5	8
Average	18.2	37.7	70.0	10.4

(2014) 4 of these days only one of three samples were >235mpn/100ml

(2015) 7 of these days only one of two samples were >235mpn/100ml

(2016) 7 of these days only one of two samples were >235mpn/100ml

(2017) 2 of these days only one of two samples were >235mpn/100ml

(2018) 9 of these days only one of two samples were >235mpn/100ml

ONTARIO BEACH
PREDICTION PERFORMANCE

Year	Accurate Predictions	Inaccurate Prediction
2010	64%	36%
2011	64%	36%
2012	67%	33%
2013	65%	35%
2014	84%	16%
2015	73%	27%
2016	74%	26%
2017	93%	7%
2018	88%	12%
Average	74.7%	25.3%

ONTARIO BEACH
REASONS FOR CLOSURES

Year	# of Open days	% Open	# of Closed days	% Closed	% River Flow	% Rain	% Algae	% Water Clarity	% Bacteria
2010	39	48.1	42	51.9	0	16.3	7	36	40.7
2011	52	64	29	36	0	14.3	6.9	31.6	47.2
2012	37	45.7	44	54.3	0	7.6	1.1	21.2	70.1
2013	32	43	42	57	1	8.3	7.8	27	56
2014	44	65.7	23	34.3	0	0	0	78.3	21.7
2015	46	62.2	28	38	0	14	0	50	36
2016	60	81.1	14	18.9	0	0	0	64.3	35.7
2017	61	82.4	13	17.6	0	0	0	100	0
2018	64	86.5	10	13.5	0	30	0	70	0
Avg	48.3	64.3	27.2	35.7	0.1	10.1	2.5	53.2	34.2

DURAND EASTMAN BEACH
LONG TERM PERFORMANCE (DAYS)

(Based on E. coli only. Does not account for water clarity requirements)

Year	Closed/ Dirty	Open/Clean	Closed/Clean	Open/Dirty
2010	12	47	20	4
2011	9	44	12	7
2012	3	52	11	6
2013	4	50	11	7
2014	10	53	8	1
2015	9	58	8	4
2016	1	62	3	13
2018	6	60	2	4
Average	6.8	53.3	9.4	5.8

**Note: Durand Eastman Beach did not open in 2017

DURAND EASTMAN BEACH
PREDICTION PERFORMANCE

Year	Accurate Predictions	Inaccurate Prediction
2010	71%	29%
2011	74%	26%
2012	76%	24%
2013	75%	25%
2014	94.4%	5.6%
2015	93.5%	6.5%
2016	79.7%	20.3%
2018	93.1%	6.9%
Average	82%	18%

**Note: Durand Eastman Beach did not open in 2017

DURAND EASTMAN BEACH
REASONS FOR CLOSURES

Year	# of Open days	% Open	# of Closed days	% Closed	% River Flow	% Rain	% Algae	% Water clarity	% Bacteria
2010	51	61.4	32	38.6	0	30.2	0	42.7	27.1
2011	51	71	21	29	0	25.4	0	25.4	49.2
2012	58	81	14	19	0	35.7	0	10.7	53.6
2013	57	79.2	15	20.8	3.3	33.3	0	20	43.3
2014	54	75	18	25	5.55	38.9	0	50	5.55
2015	62	78.5	17	21.5	0	23.5	0	70.6	5.9
2016	75	94.9	4	5.1	0	50	0	25	25
2018	64	88.9	8	11.1	0	50	0	50	0
Average	59.0	78.7	16.1	21.3	1.1	35.9	0.0	36.8	26.2

**Note: Durand Eastman Beach did not open in 2017