

# HAMILTON HARBOUR REMEDIAL ACTION PLAN



Lake Ontario, Canada

# Just how bad was it?

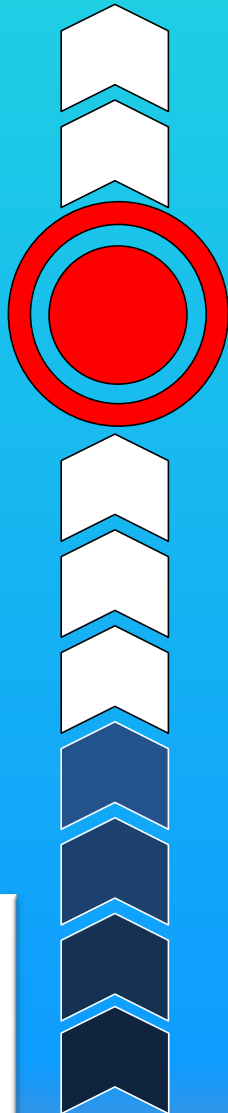
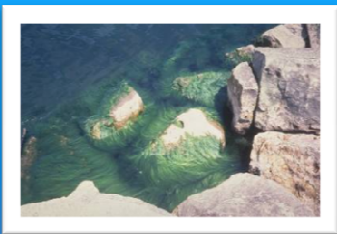
**1850s** City of Hamilton drinking water supply sourced from Lake Ontario to **avoid untreated sewage** in Harbour

**1958** "the world's largest and most **beautiful septic tank**"

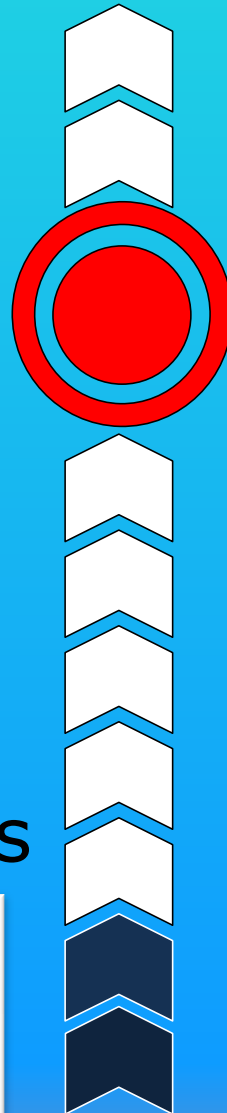
**1969** "a **stinking rotten quagmire** of filth and poisonous waste"

# Status of the Harbour

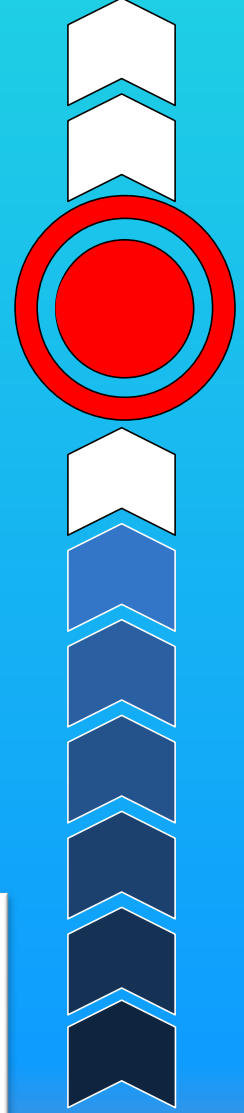
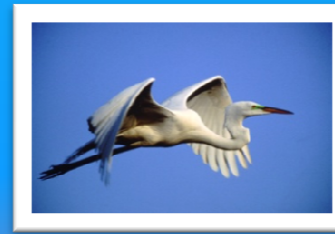
Water  
Quality



Toxic  
Substances



Fish and  
Wildlife



# Toxic Substances and Sediment Remediation





Environment  
Canada

Environnement  
Canada

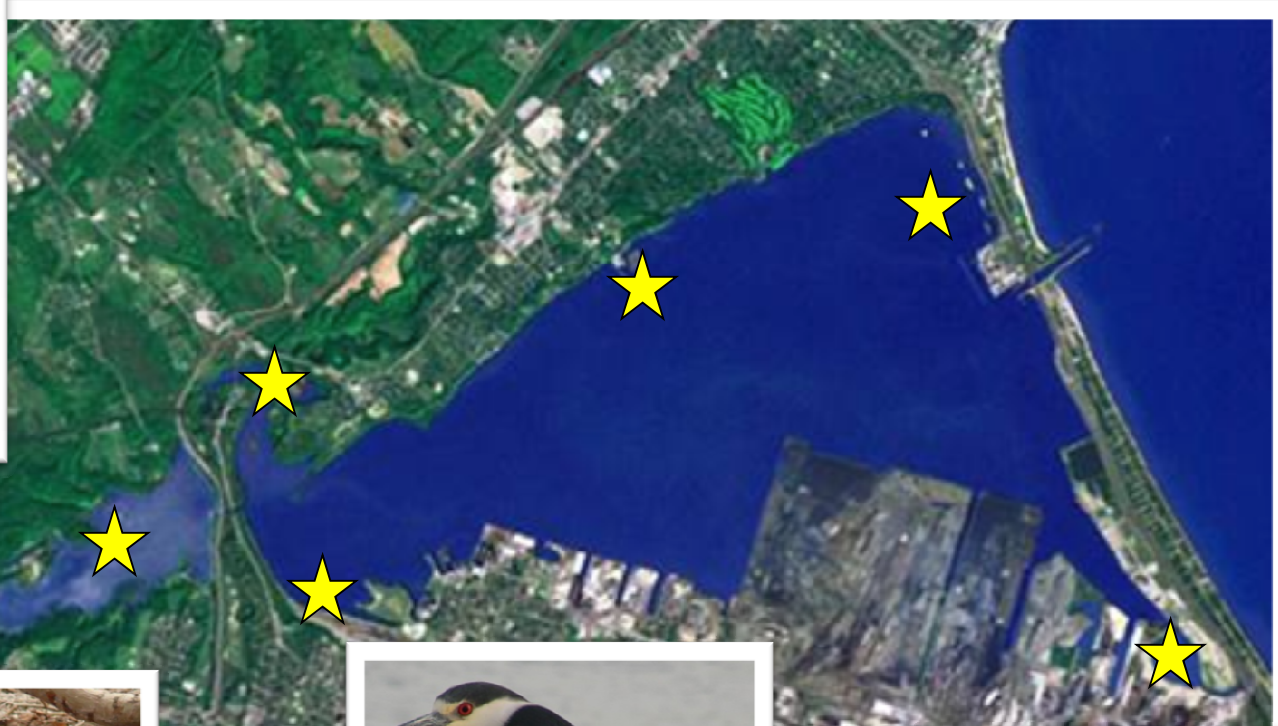
# ***Toxic Substances Priority Actions***

- *Randle Reef Remediation (2016-2022)*
- *ArcelorMittal Dofasco Boat Slip (2017-2019)*
- *PCBs in Strathearne Slip (ongoing)*

# Fish and Wildlife



RBG



J Dolanjski



G Barrett



B Axon





# Hamilton Harbour Walleye



# ***Fish and Wildlife Priority Actions***

- *Cootes Paradise Restoration (2020...)*
- *Windermere Basin (2016 ...)*
- *Research and Monitoring (ongoing)*

# Water Quality



J O'Connor



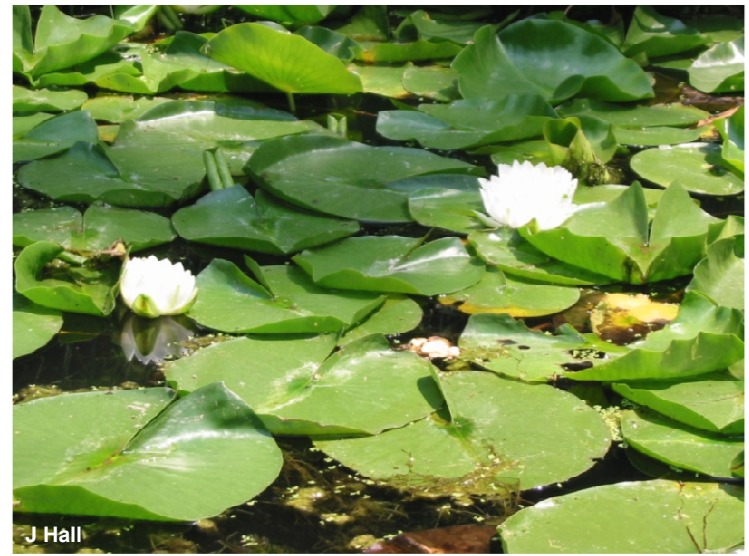
EC



J O'Connor

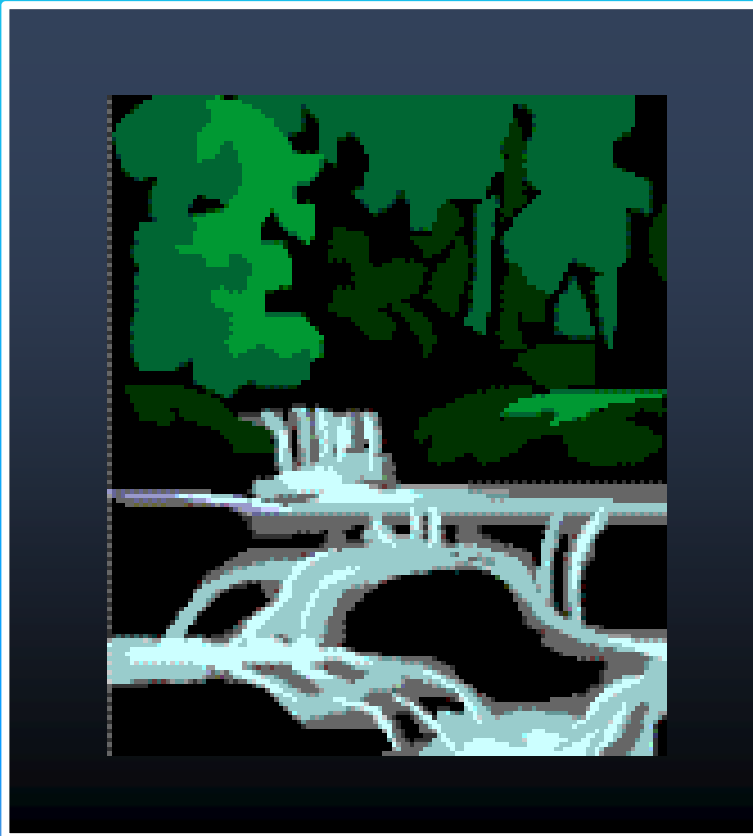


M Bainbridge



J Hall

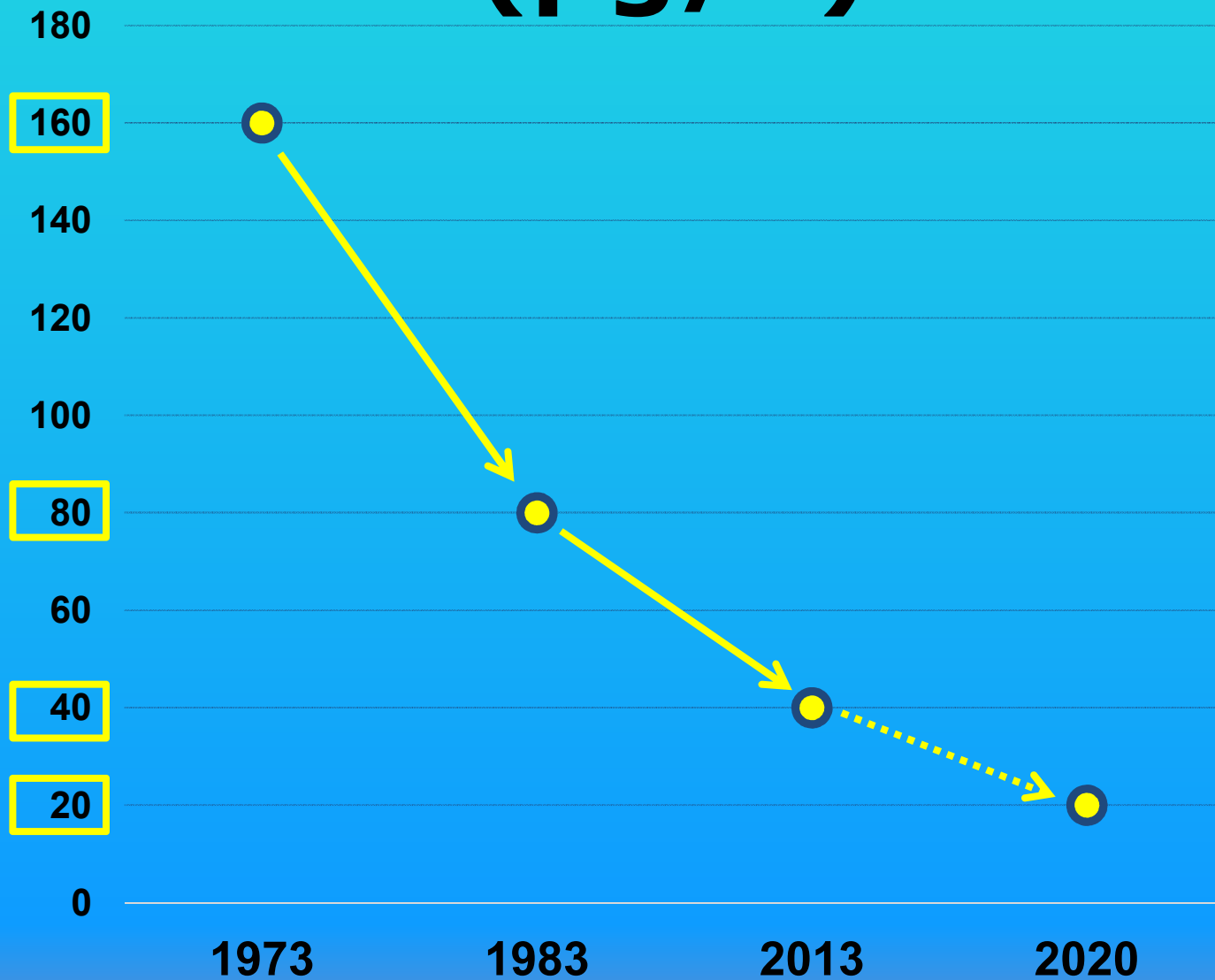
# Flow Ratio to the Harbour



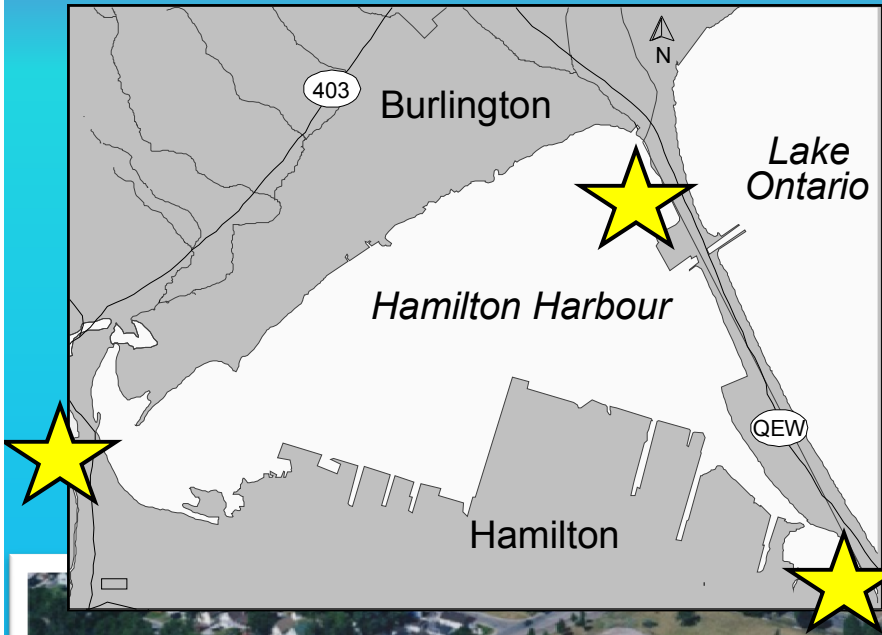
WWTPs = 50%

Watersheds = 50%

# Total Phosphorus ( $\mu\text{g/L}$ )



# 3 Wastewater Treatment Plants



Woodward Wastewater Treatment Plant

March 2016



THE SPECTATOR'S VIEW

Bayfront is not just a beach, but a symbol

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situation  
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Tyler Hyn

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RE: Hamilt

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sources to p  
speed.  
Tim Mahoney,

Sore-loser  
RE: Why were T

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nies, his stimulu  
the kids on his  
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plain about Mr. I  
whopping \$22 bil  
already been lost  
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Rex Meade, Dundas

Now we've lost  
RE: U.S. Steel retirees f

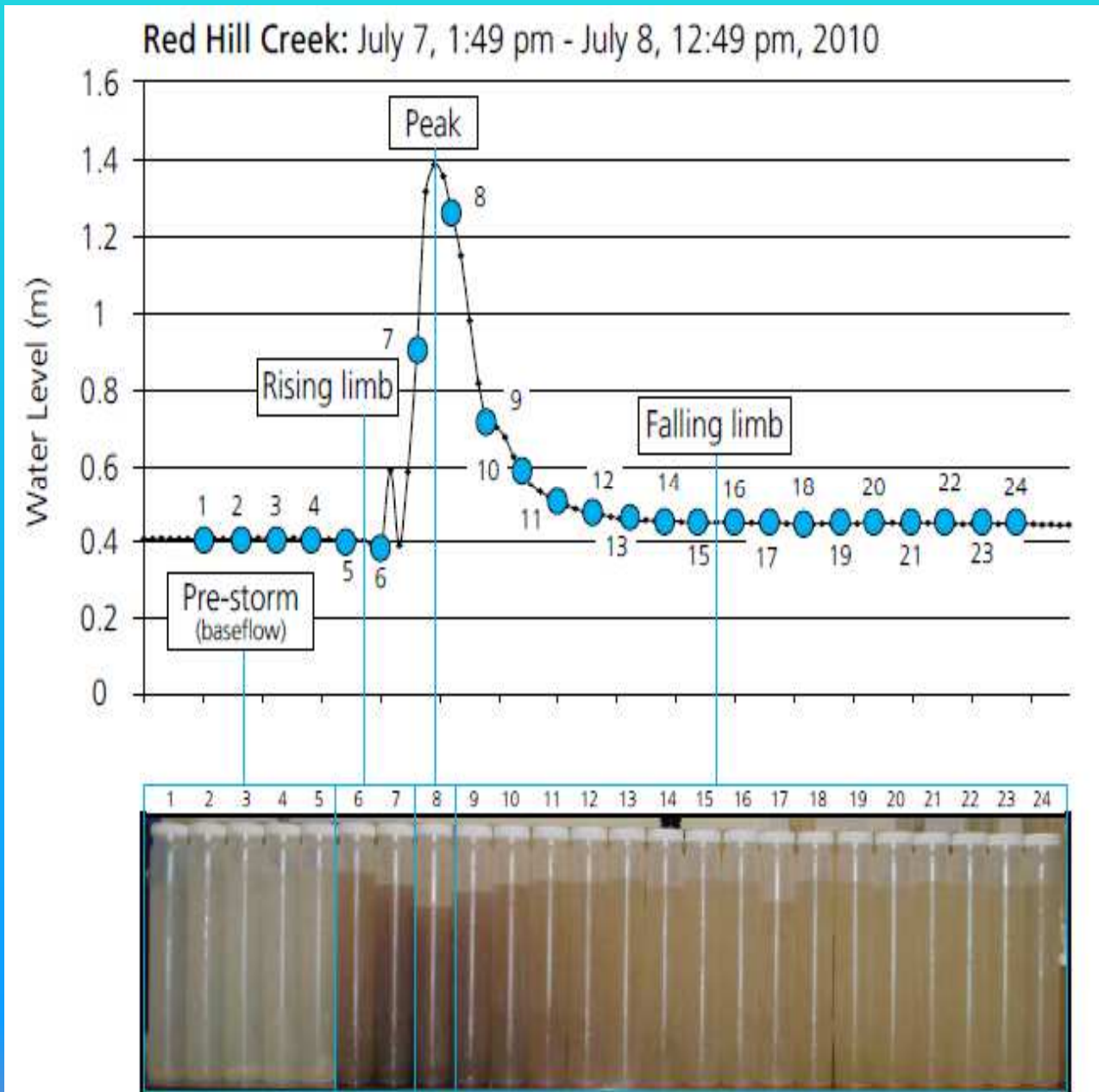
# Watershed Challenges

- Climate Change
- Phosphorus pulses from storms





# What a Storm Looks Like



<b>CREEKS</b>	Min daily load (kg/d)	Max daily load (kg/d)	Event of maximum loading
Red Hill Creek	0.1	841	Sep 28-29, 2010 (54.8 mm)
Indian Creek	0.1	152	Nov 29-30, 2011 (40.2 mm)
Grindstone Creek	0.2	334	Mar 10-11, 2011 (22.1 mm + melt)
Desjardins Canal	1.8	704	Mar 11-12, 2011 (9.6 mm + melt)
<b>Total</b>	<b>2.2</b>	<b>2031</b>	

<b>WWTPs</b>	Skyway	Woodward + CSO	<b>Total</b>	Max creek loads relative to WWTP loads
Current load (kg/d)	20	156	<b>176</b>	12 times greater
Final load (kg/d)	17	82	<b>99</b>	20 times greater

Credit: Tanya Long, OMOECC

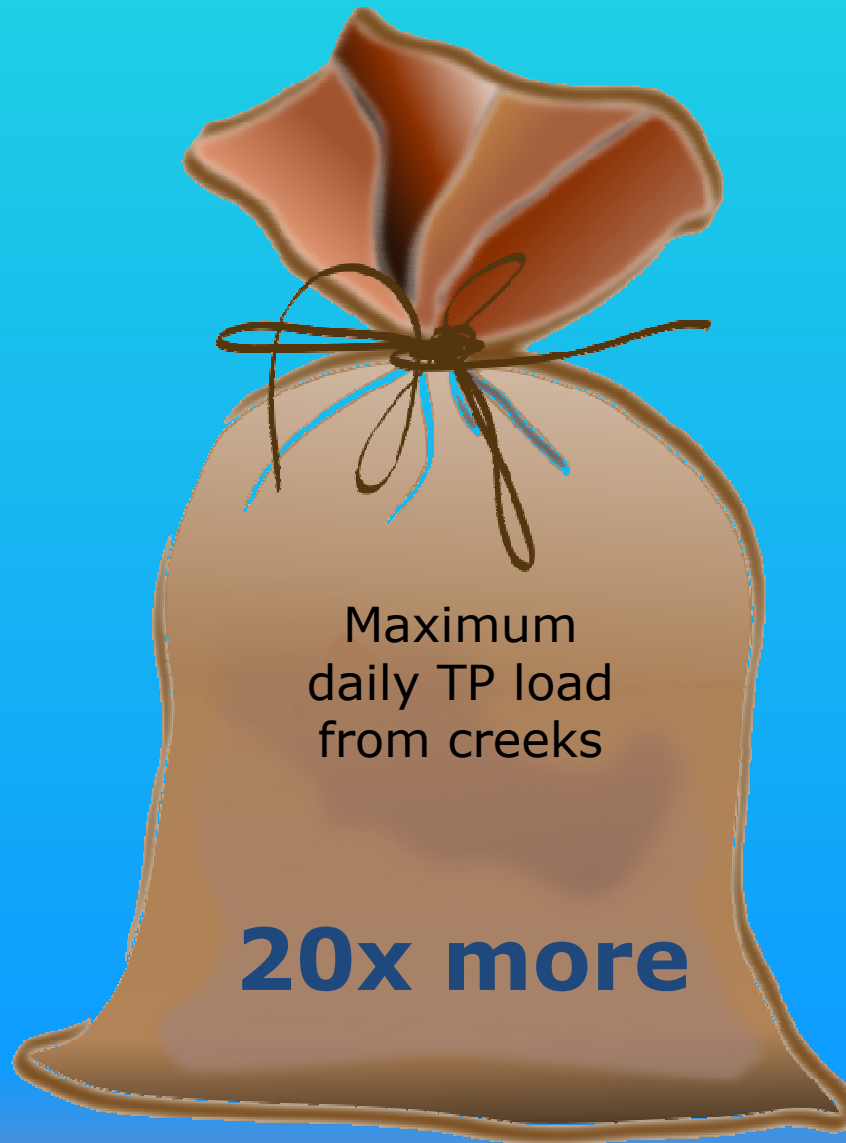
# Phosphorus from creeks

Maximum daily  
TP load from  
upgraded  
wastewater  
treatment plants



Maximum  
daily TP load  
from creeks

**20x more**



# ***Water Quality Priority Actions***

- *Skyway WWTP upgrade (2016)*
- *Woodward WWTP upgrade (2016 – 2021)*
- *Dundas WWTP upgrade (2016 – 2021)*
- *Watershed Runoff Improvements (ongoing)*
- *Watershed Task Group Reports (Fall 2016)*



# **Hamilton Harbour**

**A Vibrant  
Centrepiece in  
Our  
Community's  
Life**