

# Aeration Options - Storm Water Management Facilities

October 15, 2024 Regular Council Meeting

# Background

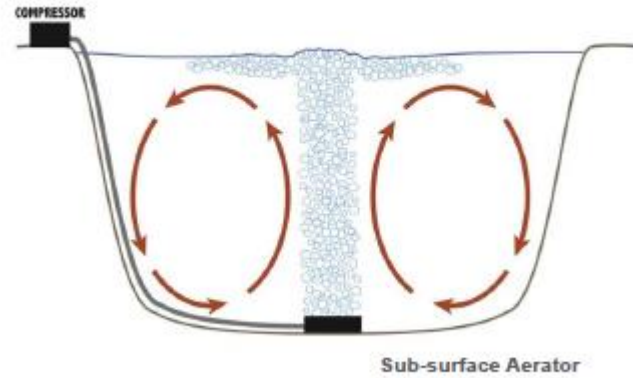
- During the June 24, 2024 Regular Council meeting a motion was passed to have Administration explore options to run a trial of aeration technology at one of our Stormwater Management Facilities (SWMF).
- Administration looked at the possibility of adding aeration to one of the following SWMF:
  - McLaughlin
  - Hawthorne
  - Greenbury

# Benefits of SWMF Aeration

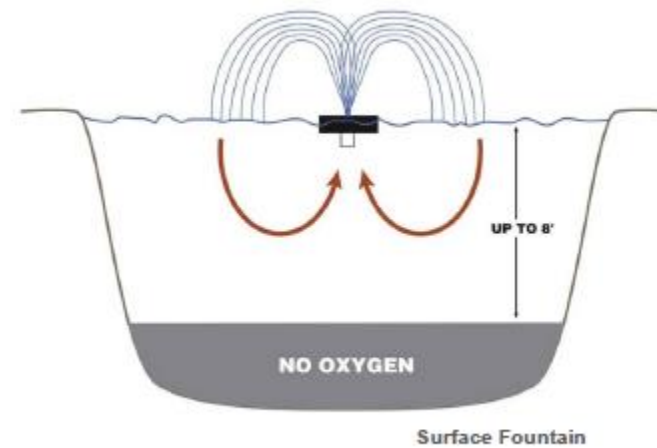
- Reduces Algae and Odours
- Boosts Oxygen levels
- Improves Water Quality
- Low Noise
  - 66.3 dB at source (Vacuum Cleaner)
  - 60 dB at 1m away (Dishwasher)
  - 59.7 dB at 3m away (Normal conversation)
  - At 10m away the motor is not distinguishable from other external noises

# Types of Aeration

## Bottom Diffused Aeration



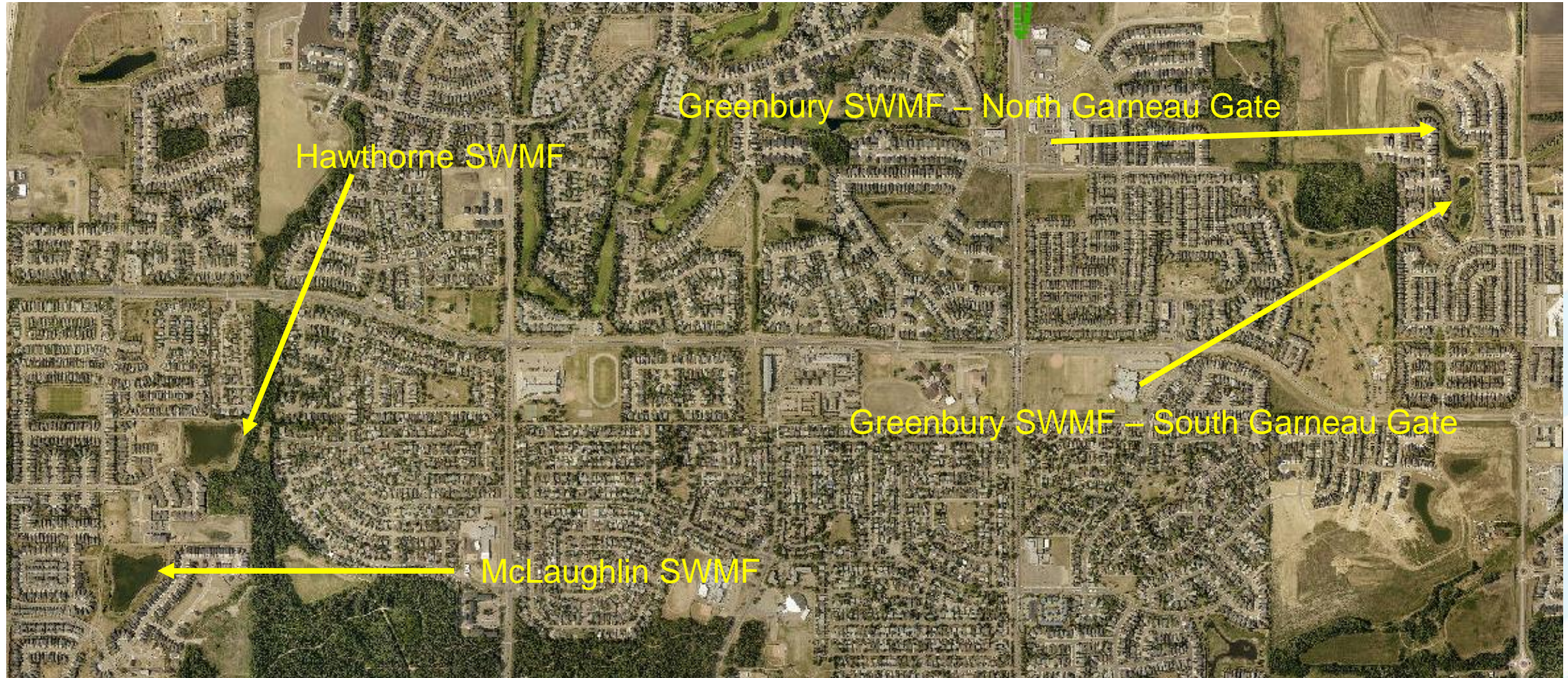
## Fountain Aeration



# Possible Trial Locations

1. McLaughlin SWMF
2. Hawthorne SWMF
3. Greenbury - North Garneau Gate SWMF
4. Greenbury - South Garneau Gate SWMF

# SWMF Trial Locations



# McLaughlin SWMF

## Bottom Diffusers



### Costs:

\$13,000 for system  
\$34,000 install  
\$26,000 power  
\$2,000 fence

### Total cost

\$75,000

# Hawthorne SWMF

## Bottom Diffusers



Full System Price  
**\$11,472.50**  
+ tax

### Costs:

\$11,500 for system  
\$34,000 install  
\$17,500 power  
\$2,000 fence

Total cost - \$65,000



# Greenbury Pond - North Garneau Gate

## Bottom Diffusers and Circulators



### Cost

\$12,000 for system

\$34,000 for install

\$43,000 power

\$2,000 fence

Total cost - \$91,000

# Greenbury Pond - South Garneau Gate

## Bottom Diffusers & Circulators



Full System Price  
**\$12,235.86**  
+ tax

## Cost

\$12,500 for system

\$34,500 for install

\$53,500 power






\$2,000 fence

Total cost - \$102,500

# Fountains

Included Spray Pattern Dimensions			Specialty Nozzles (Sold Separately)	
Ravine	Cove	Canyon	Glacier	Everest
14' H x 7' W	6' H x 16' W	8' H x 34' W	8' H x 32' W	10.5' H x 3' W
				

Cost to install a Fountain - \$1800 above types  
 Can be installed with the bottom diffuser system  
 3 interchangeable nozzles

Standard Pattern Dimensions (H x W) (FT)				
Linden	Birch	Balsam	Spruce	Redwood
20.5' H x 38' W	16' H x 12' W	19' H x 34' W	26' H x 12' W	27' H x 6' W
				

Cost to install a Fountain - \$7800 above types  
 Can be installed with the bottom diffuser system  
 5 interchangeable nozzles

# Summary of Costs for SWMF

## Diffusers Only

- McLaughlin SWMF - \$75,000
- Hawthorne SWMF - \$65,000
- Greenbury Pond - North Garneau Gate - \$91,000
- Greenbury Pond - South Garneau Gate - \$102,500

## Fountain

- \$1800 - \$7800 per pond

# Questions?

