

# Potential Ordinance Amendments for Sediment Removal

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CITY COUNCIL WORK SESSION

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# Introduction/History

- Some concerns have been expressed by McKinney residents regarding the appearance and health concerns of lakes and ponds due to excessive sedimentation.
- These concerns go back almost 20 years in some cases.
- While many pond/lake owners have plans in place to address excessive sediment, some do not.

# Introduction/History

- Some residents/HOA's/property owners do not wish to remove sediment since
  - They are concerned about the cost of sediment removal
  - Some like the appearance of the wetlands

2001

Legend



Google earth

N

100 ft



2009

Legend



Google earth

100 ft

N



2018

Legend



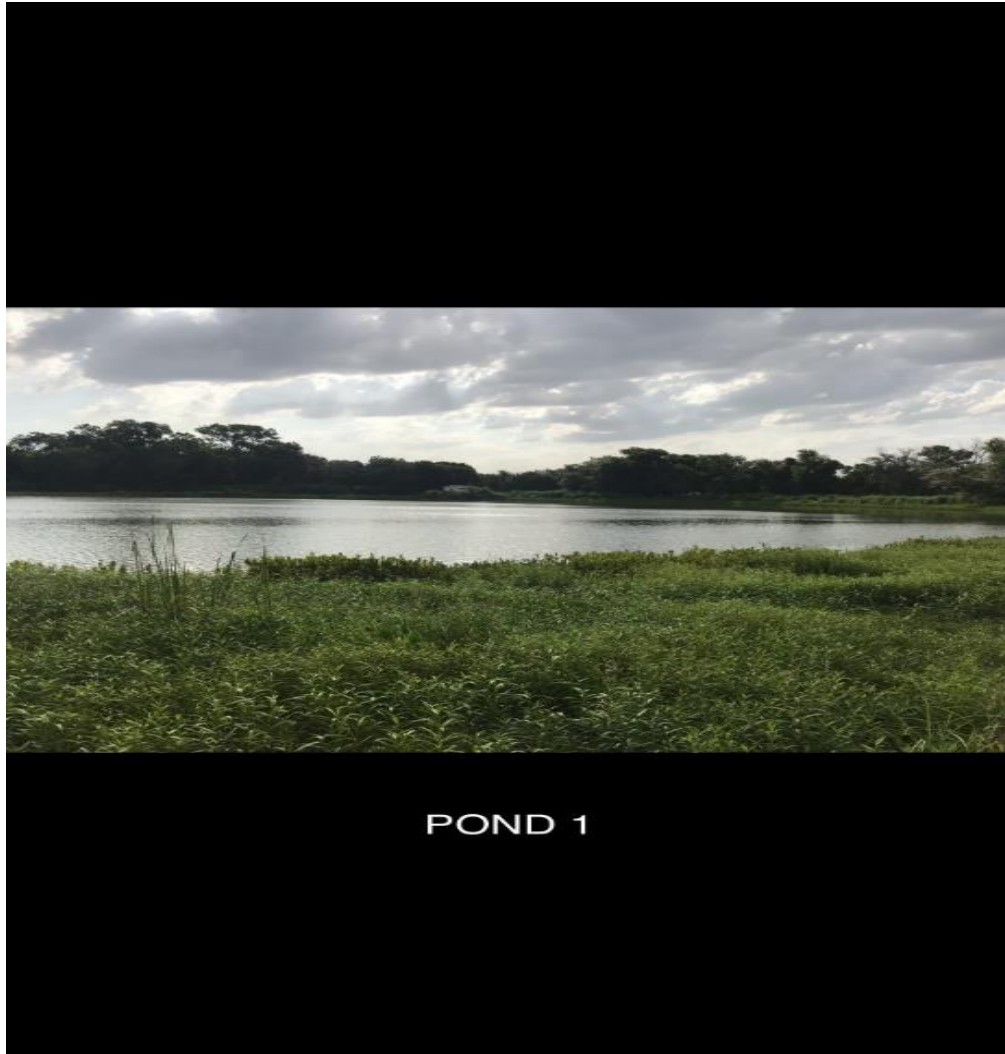
Google earth

100 ft

N

## Examples of ponds in McKinney

Most of pond in  
good condition



POND 1





**Pond is in good  
condition with  
very minor algae  
growth**





**Some cattail  
growth, but not  
over a large  
section of the  
pond**



**Pond with more  
algae growth**



**Multiple cattails  
on one side of  
pond.  
Conflicting  
opinions of  
property owners**





**Significant  
cattail growth at  
backwaters of  
the pond**



**Pond in good  
condition, but  
some algae**



**Some algae, but  
overall fair  
condition**





**Significant  
vegetation and  
sediment in  
pond**

## Possible Ordinance Revision items

- Begin the process to remove sediment when any one acre section is 1/3 full
- Require a study first to determine the steps to remove the sediment and a possible cost (1 year)
- After approval of the study, remove sediment within 5 years
  - Provides adequate time to determine the problem, fund the improvements, and remove the sediment

## Possible Ordinance Revision items (continued)

- Install aeration in water bodies where an industry professional determines it will be beneficial
- These only apply for portions of lakes/ponds within 200 feet of a residential property line
  - There are approximately 135 lakes/ponds within 200 feet of homes in McKinney
- Since they are designed to retain sediment, NRCS lakes are exempt from the requirements



# Cost of Sediment Removal

- Sediment removal costs are highly variable based on multiple factors
- Estimates can range from \$20 per cubic yard to over \$100 per cubic yard

# Related Factors

- Sediment is one component of the health of a lake or pond
- There are physical, chemical and biological components
  - Excessive sediment loading reduces a lake's ability to “dilute” nitrogen, phosphorous and other pollutants in a lake
  - The different components create correlated cumulative impacts
- Of note is no area cities require sediment removal from amenity ponds

# Staff Request

- Direction to staff to develop storm water ordinance revisions based on the discussed bullet points?
- Suggested changes?