



Streambank Stabilization Program Update

Preliminary Open Meeting – February 12, 2024

Director of Engineering – Caleb Thornhill
Engineer, Sr. – Russell Erskine
Engineer, Sr. – Alison Smith

Streambank Stabilization – Update

1. Presented program to Council in Preliminary Open Meeting – August 8, 2022
2. Perform Citywide Streambank Erosion Assessment – Approved by Council on December 22, 2022
3. Year 1 – Approx. 30 miles
4. Year 2 – Approx. 20 miles to date

Streambank Stabilization – Update

How Are Erosion Sites Identified?

- Threat to Structure
- Bank Heights
- In/Out of Erosion Hazard Zone
- Chance of Failure
- Channel Orientation
- Bank Stability
- Threat to Trees
- Safety





- Year 1 (Phase 1 - 30 Miles)
- Year 2 (Phase 2 - 20.3 Miles)
- Year 2 - Evaluation Pending



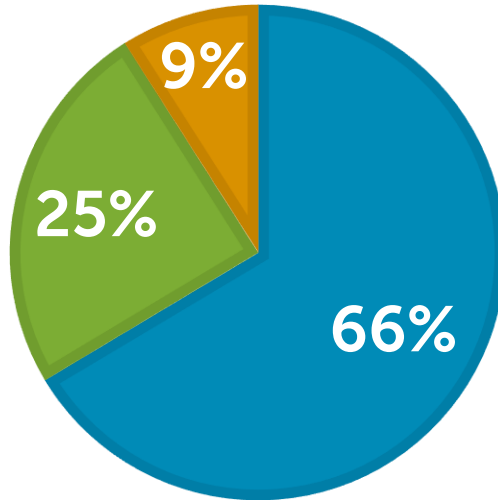
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Streambank Stabilization – 1st Year Update

SITES VISITED -
RESPONSIBILITY (PER PLAT)

■ City ■ Owner ■ HOA



- Approx. 30 miles evaluated
- 1023 Sites Identified
 - 923 Stream Sites
 - 100 Lake Sites

Streambank Stabilization – 1st Year Update

- Scoring – Lowest Score 7.5



- Structure failing
- erosion threat behind structure
- loss of back fill
- base undermined

- Average Score – 67.5



- Medium Value Threat
- Failure in 3 to 5 yrs
- stable slope with vegetation
- no safety issues.

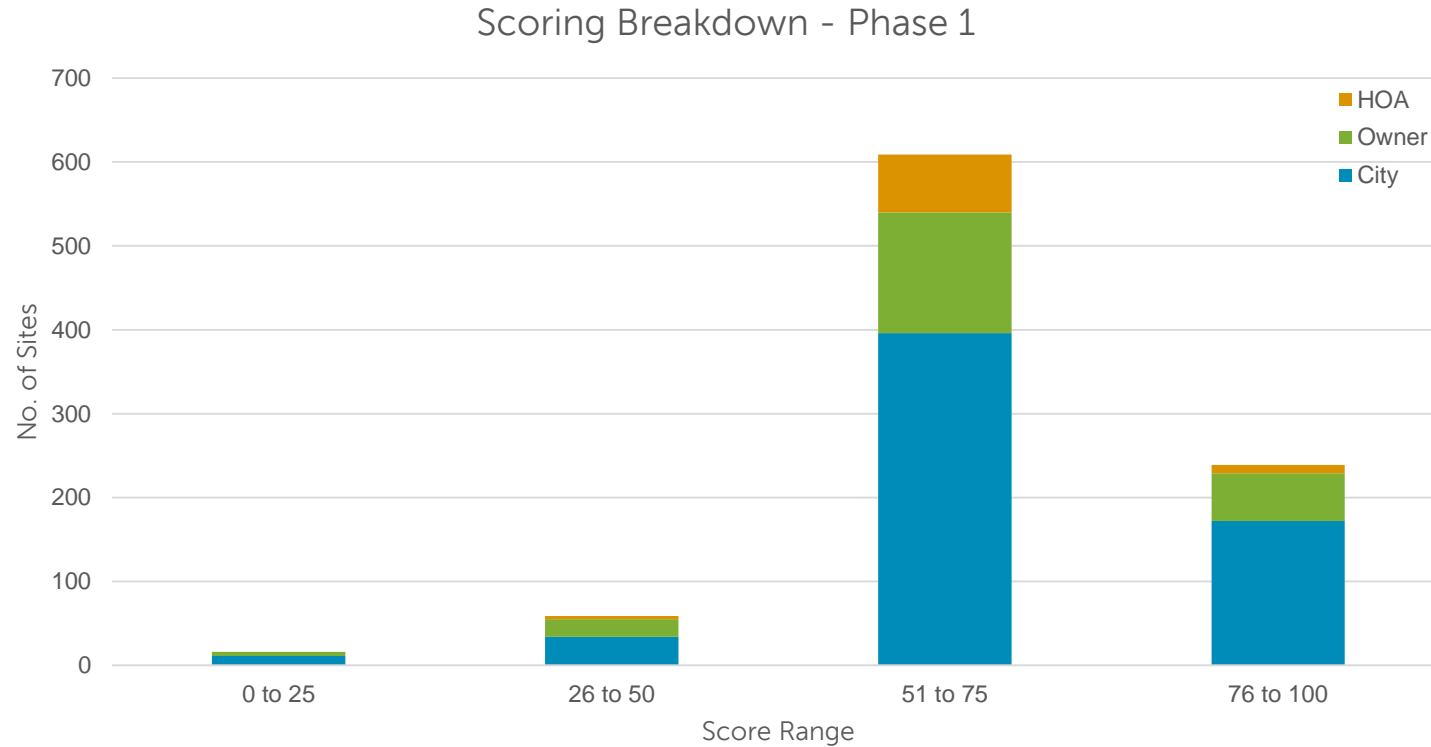
Streambank Stabilization – 1st Year Update

- Responsibility – Owner

HOA



Streambank Stabilization – 1st Year Update





Streambank Stabilization – 1st Year Update

- Maintenance Requests – Westlake Pond



Maintenance Responsibility per Plat:

Residential – 9 Lots. Not Specified
Commercial – 4 Lots. Property Owner

- - Residential
- - Commercial

Streambank Stabilization – 1st Year Update

- Maintenance Requests – Waasland Drive



Maintenance Responsibility per Plat:
Property Owner

Property Evaluated on November 2,
2023. **Score – 71**

Owner Sites Visited to Date – 227
Avg. Score - 67

Streambank Stabilization – 1st Year Update

- Maintenance Requests – Avignon/The Outlook



Maintenance Responsibility per Plat:
HOA and City (Parks)

No Evaluation Performed to Date.

HOA Sites visited to Date – 83

Avg. Score – 66.9

■ - HOA

■ - City

Streambank Stabilization – 1st Year Update

- Maintenance Requests – The Estates of Wooded Cove



Maintenance Responsibility per Plat:
HOAs (2) and City(Parks)

No Evaluation performed to date.

HOA Sites visited to Date – 83

Avg. Score – 66.9

■ - HOA

■ - City

Streambank Stabilization – 1st Year Update

- Maintenance Requests – The Hills of Indian Creek



Maintenance Responsibility per Plat:
HOA and City

Evaluation has been Performed.


Scores:

- **HOA Side - 41.25 to 93**
- **City Side – 43.75 to 78.75**

HOA Avg. – 66.9 (all sites)

City Avg. – 68 (all sites)

 - HOA

 - City

Streambank Stabilization – 1st Year Update

Scoring Breakdown - Phase 1



Streambank Stabilization – Upcoming Activities

1. Complete creek evaluations – Fall 2024/Spring 2025
2. Prepare alternatives with budget impacts
3. Present alternatives to Council – Summer/Fall 2025

Streambank Stabilization Program

Questions

B. Caleb Thornhill

Director of Engineering

972-941-7152

Streambank Stabilization – 1st Year Update

Findings:

Responsibility	No. of Sites*	Extent of Problem	Scores		
		(miles)	Low	High	Avgerage
City	218	7.1	15.5	95	65.6
Non-City	191	4.1	11	92	65.3
HOA Only	27	0.6	56	87.5	67.9
Excludes structures(bridges, culverts, outfalls, dams) and off-channel lakes					

Streambank Stabilization – Case Study

- Case by Case evaluation
- Acquire parcel needed for improvements
 - Require removal of any obstructions/violations
- Min. Lot Size – Meet 9000 sqft Min
- Rear Setbacks – Below 10ft Min
- Minimum Lot Depth - Below 100ft Min
- Lot Coverage – Below 45% Max

