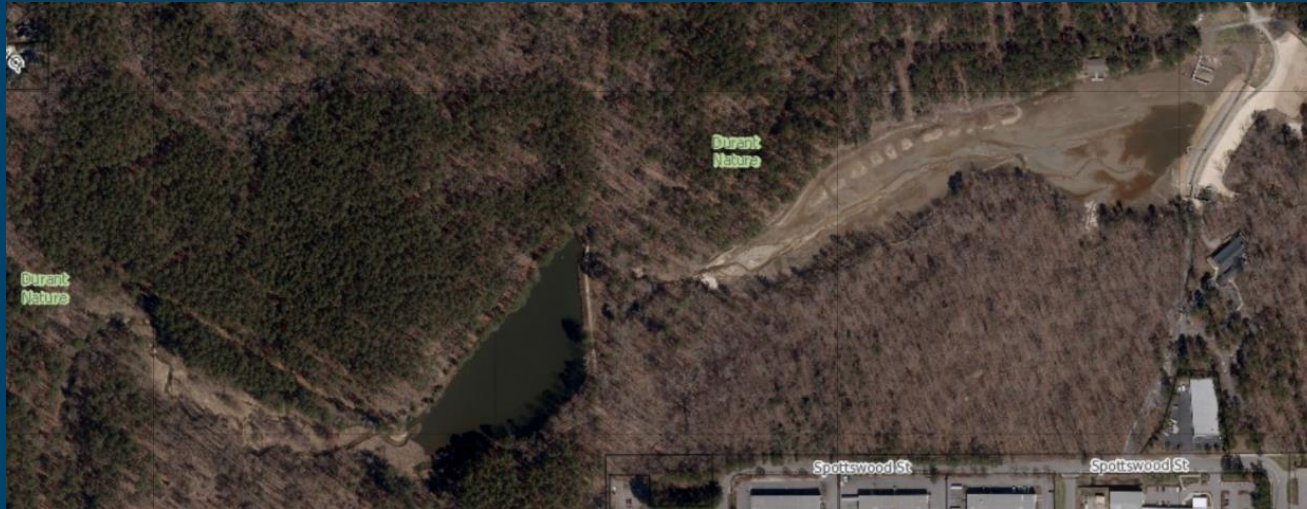




Upper Durant Lake Study Summary





Background

There is a 6-acre upper lake at Durant Nature Preserve. In 2013, an engineering firm contracted by the City of Raleigh deemed the dam and spillway of the upper lake to be deficient and in need of repair. A study was conducted to explore options to maintain the area and protect the preserve.

Before making a recommendation, we would like to gather feedback about the experiences most important to patrons when visiting Durant Nature Preserve. We will consider the impact on user experience, initial project cost, ongoing operation and maintenance cost, and environmental benefit.

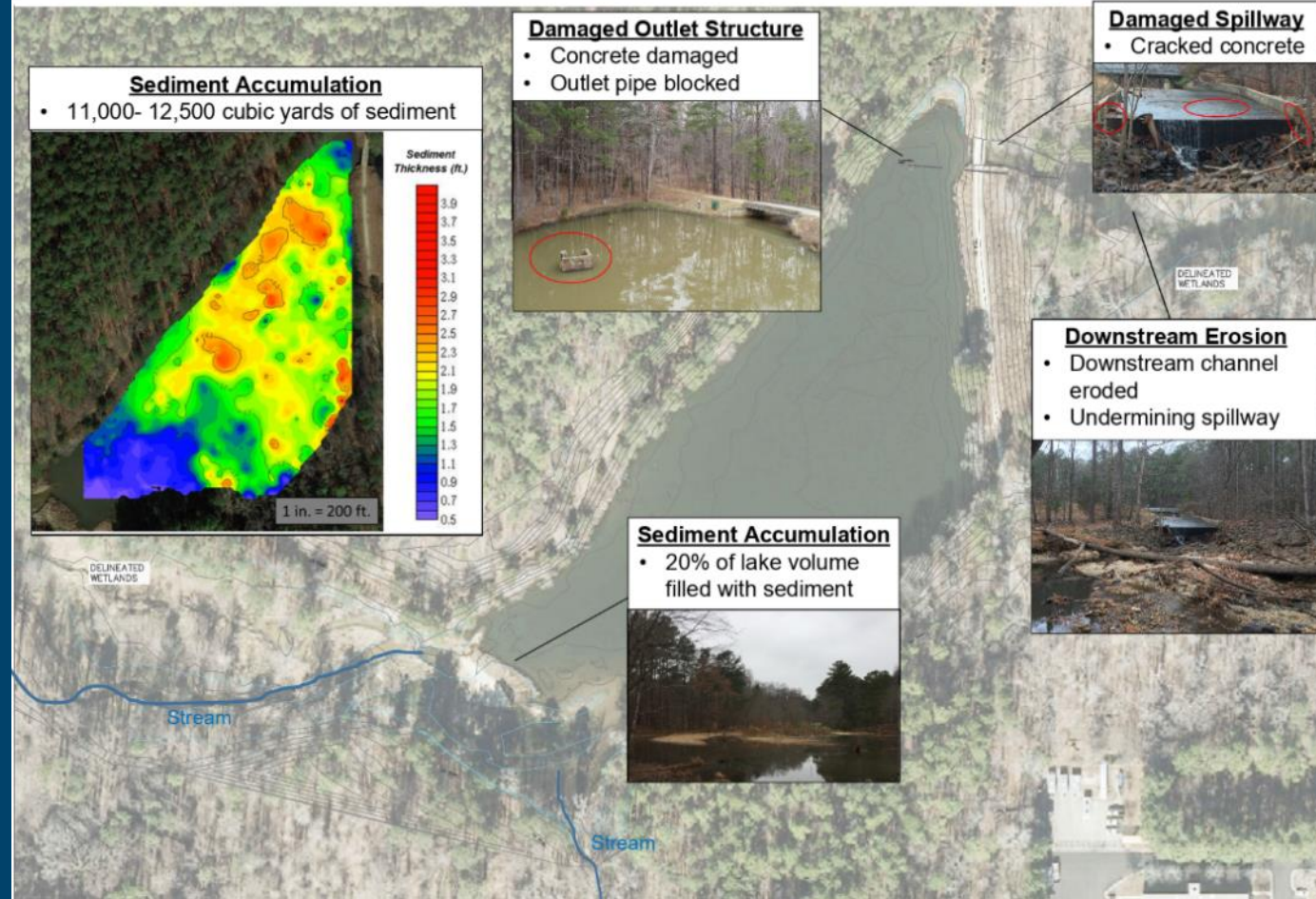


Raleigh

Upper Durant Lake

*Study with
NCSU
exploring
alternatives*

Existing Condition Schematic





Four Alternatives

Based on the existing conditions analyzed in the study, and shown on the previous slide, four alternatives are under consideration and appear in the following slides:

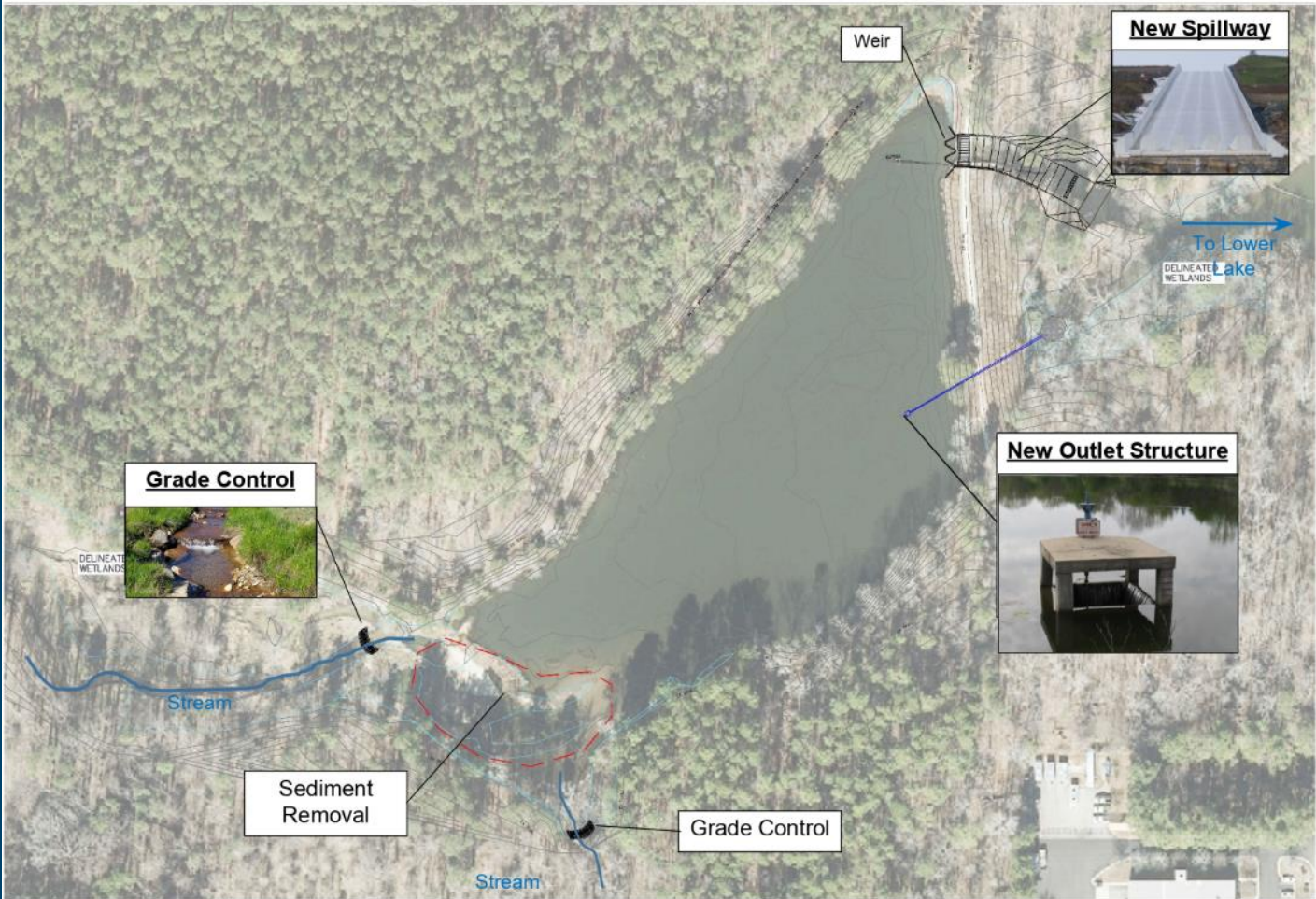
- Lake as is
- Stormwater wetland
- Habitat wetland
- Stream Restoration

Lake As Is Conceptual Design



Raleigh

Upper Durant Lake



Weir

New Spillway



To Lower Lake

Grade Control



New Outlet Structure



Sediment Removal

Grade Control

DELINEATE WETLANDS

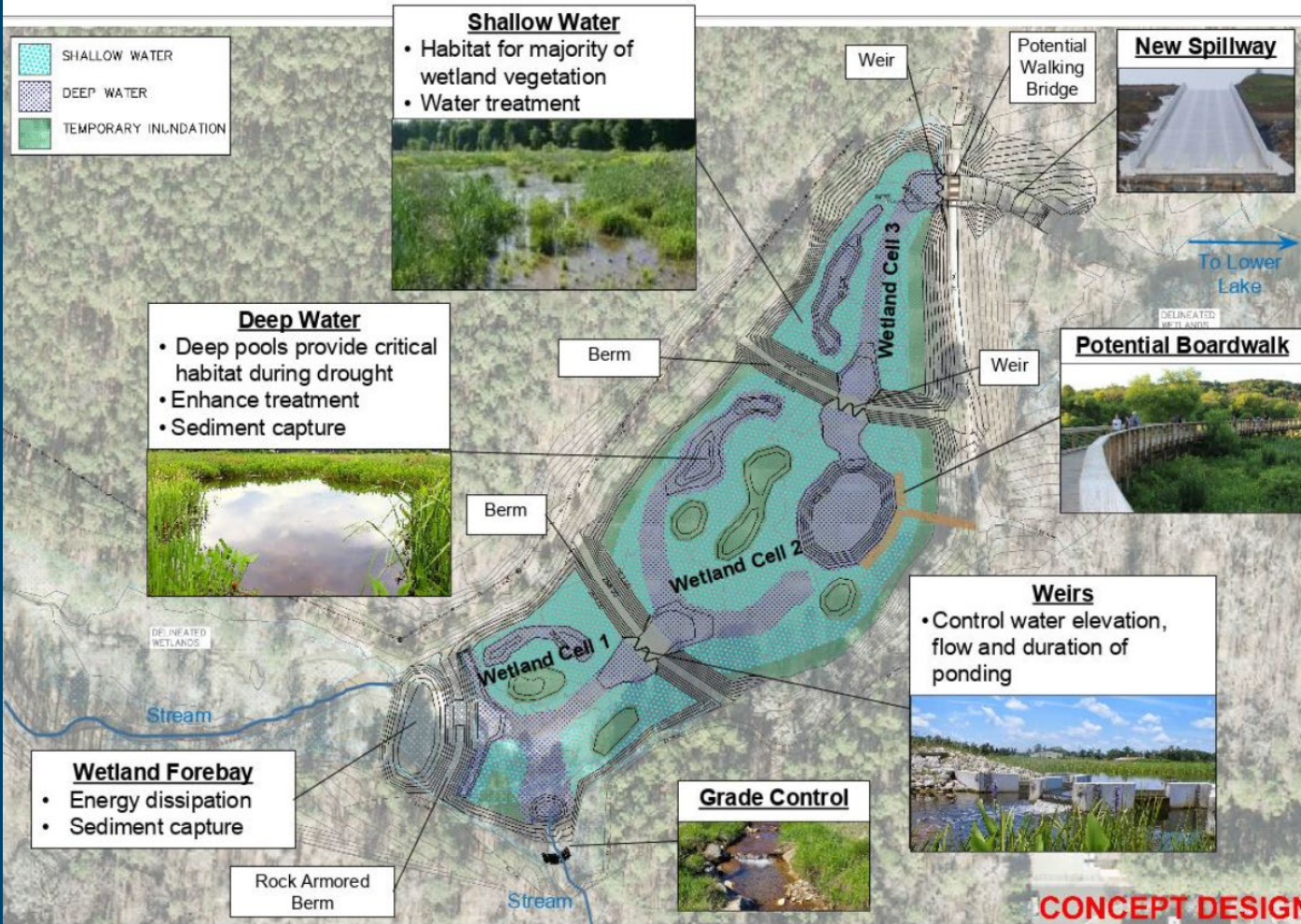
Stream

Stream



Upper Durant Lake

Stormwater Wetland Conceptual Design

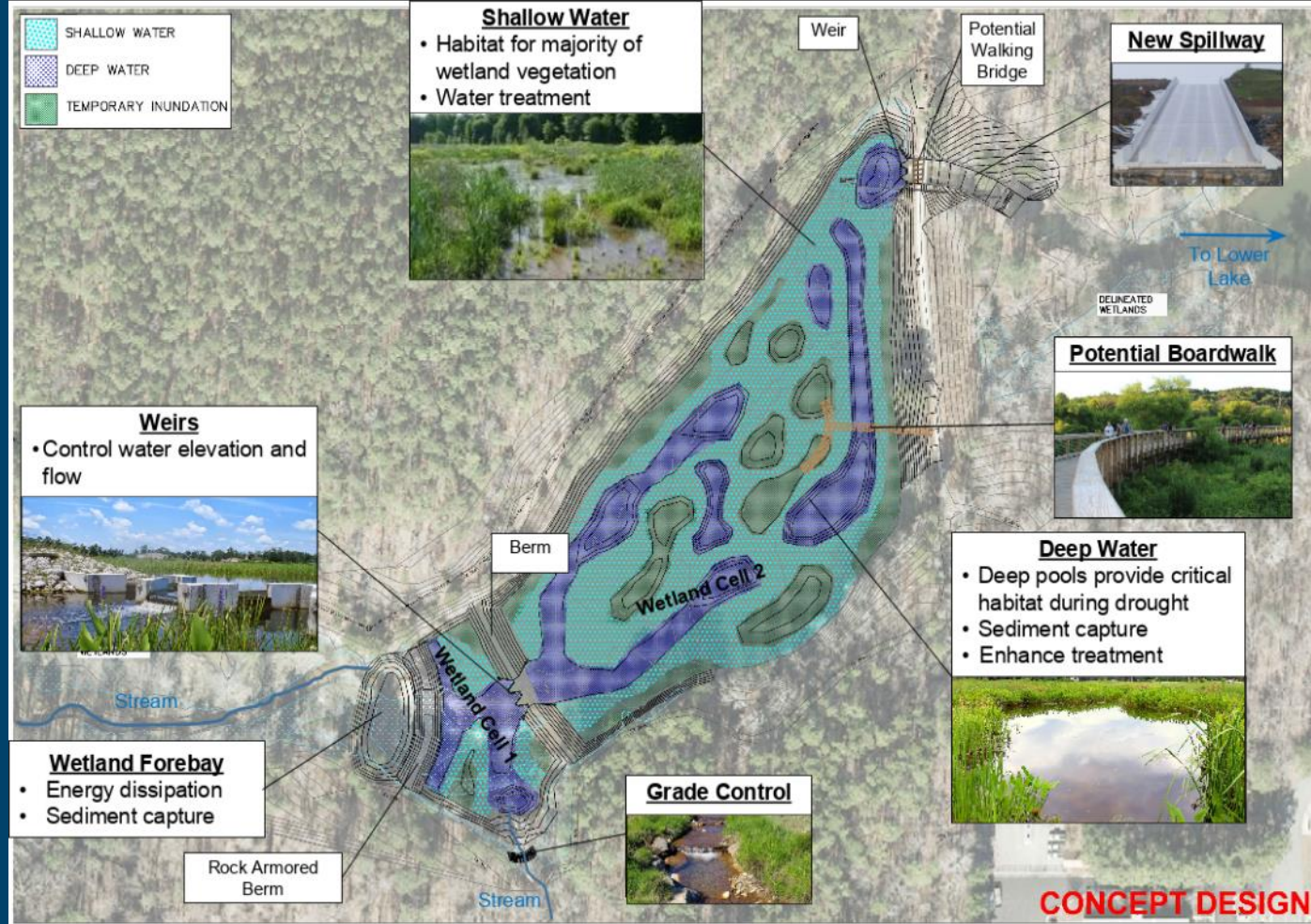


Habitat Wetland Conceptual Design



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Upper Durant Lake

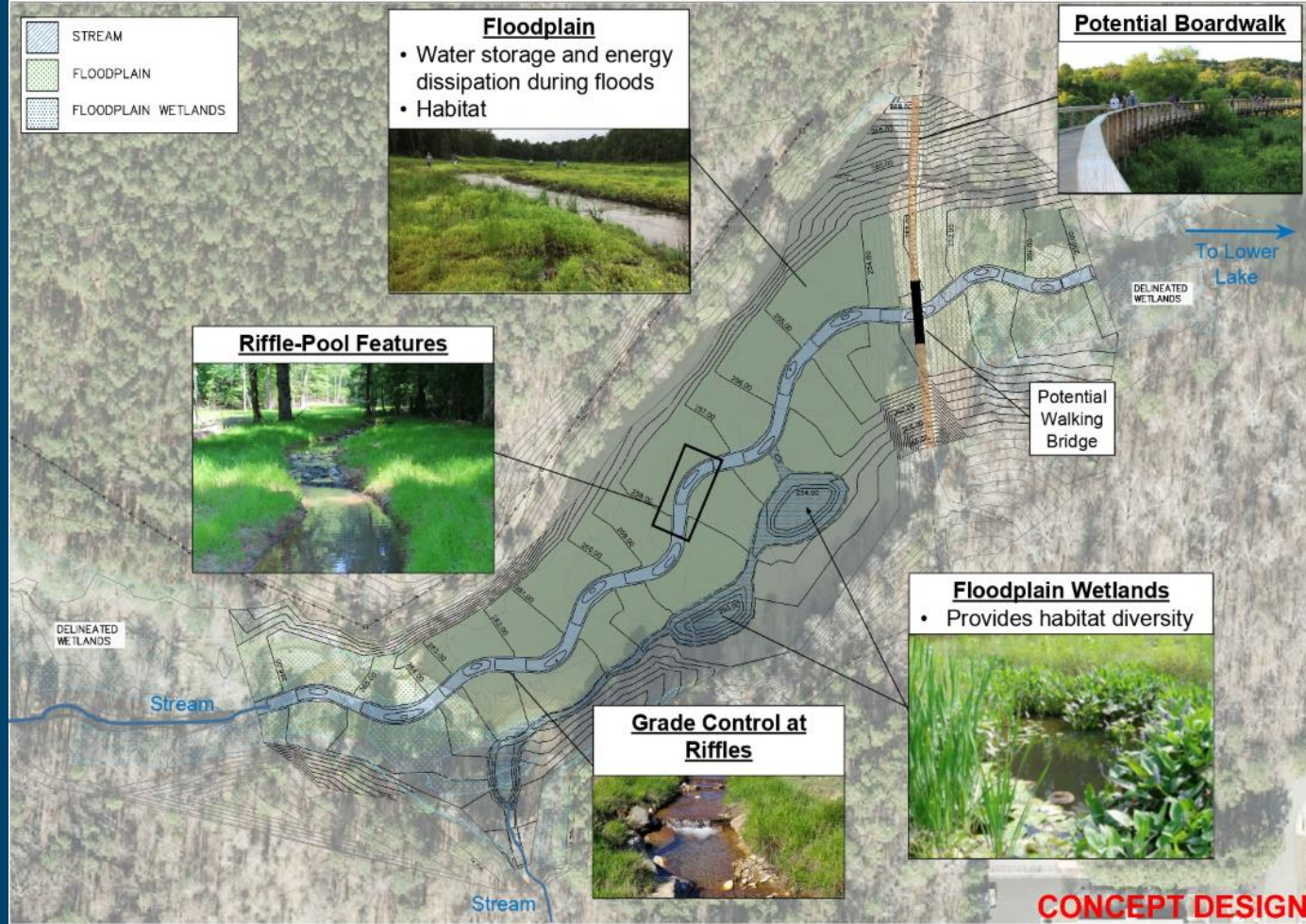




Raleigh

Upper Durant Lake

Stream Restoration Conceptual Design





Multi Criteria Decision Analysis

Criteria and weighting factors selected by COR Staff (PRCR and Stormwater). Analysis and scoring conducted by NCSU.

MCDA Decision Criteria Variables	MCDA Rating (1-4)*								MCDA Score***	MCDA Rank****
	Water Quality	Flood Control	Habitat Enhancement	Educational/ Interpretive Opportunities	Risk to Downstream Lake	Project Implementation	Initial Capital Cost	Yearly Ongoing Cost		
Weighting Factor (1-4)	3	1	3	3	4	1	3	2		
Lake As Is	2	1	1	1	4	3	4	2	48	3
Wetland - Stormwater	4	1	2	3	4	1	3	1	56	2
Wetland - Habitat	3	1	3	4	4	1	3	1	59	1
Stream Restoration	1	1	3	4	1	2	2	3	43	4

*MCDA rating represent a relative rating of the alternatives. Ratings range from 1 (less favorable) to 4 (more favorable).

**Weighting factors represent the importance of the decision criteria variables to the City. Higher values represent more important variables.

***Represents final weighted score for each alternative

****MCDA rank represents the final ranking of the alternatives based on the MCDA score (1 represents the most favorable alternative and 4 the least favorable).



Next Steps

- Online survey open 1/4/2021 – 2/02-2021
- Virtual Public meetings – 1/12 and 1/26/2021 @ 6:00
 - <https://zoom.us/j/93076325662?pwd=SG1hT2FsSFJsUVYxbG1UMWZlY2loQT09>
 - Or by Phone: +1 646 558 8656 , Webinar ID: 930 7632 5662
- Respond to public comments
- Present study, feedback, and recommendation to Parks Recreation and Greenways Advisory Board - *planned for 2/18/2021*
- Recommend preferred option to Stormwater Management Advisory Commission – *planned for 3/4/2021*