Mississippi Valley Division,
Regional Planning and Environment Division South

St. Tammany Parish, Louisiana Feasibility Study

Appendix I: Attachment 5 – Project Description Constructed Stream Project (Not Part of Recommended Plan)

February 2024

CONTENTS

Section 1 1

Stream Mitigation Site 1

1.1 Project Location 1

1.2 Project Description 2

1.2.1 Real Estate 3

1.2.2 Operating Plan 3

LIST OF FIGURES

Figure I5:1-1. Location of Backwater Site to Create Stream Mud Bottom along Mile Branch 2

Figure I5:1-2. Conceptual Design for Mile Branch Backwater Feature 3

SECTION 1
Stream Mitigation Site

1.1 PROJECT LOCATION

***Stream impacts were associated with the Mile Branch Channel Improvements, which is not part of the Final RP. Due to this not being implemented, impacts will not need compensatory mitigation the analysis is included for information purposes only.*

The proposed stream mitigation site (M 6-2) is located off of Mile Branch and encompasses the City of Covington boundary for the gravel/storage yard as well as the area adjacent to the channel (Figure I5:1-1). This site will be used as staging during construction and when construction is completed on this segment of Mile Branch, the site will be beneficially used for restoration of water bottoms as the backwater area. The nature-based feature would rectify 3 acres of impacts (work will be done within the entire 5 acres) to Mile branch mud bottom from the construction of the Mile Branch channel improvements under the St. Tammany Parish, Louisiana Feasibility study.

Per ER 1105-2-100, Appendix C, 4e.(3): Separable Features. Full credit shall be given to the beneficial aspects of an alternative plan, or project, before consideration is given to adding separable ecological mitigation features. The significance of the ecological resources affected by an alternative plan/project, and the significance of adverse impacts to these resources shall be evaluated to determine the need for separable ecological mitigation features. Evaluation of a separable ecological mitigation feature is appropriate when it is determined that the net adverse impacts of an alternative plan/project exceed its net beneficial effects, and/or when the resulting losses include values (monetary and non-monetary) of such significance that specific consideration is justified.

This feature was also discussed and considered as a nature-based feature along Mile Branch as the restoration of stream bottoms and is expected to provide flood reduction benefits with additional overbank storage.

Figure I5:1-1. Location of Backwater Site to Create Stream Mud Bottom along Mile Branch

Note: The light blue line is the approximate area. The purple line represents the extent of the city owned property adjacent to Mile Branch.

1.2 PROJECT DESCRIPTION

A conceptual design was developed for the backwater feature off of Mile Branch that provides 3 acres of mud bottom as a project feature (Figure I5:1-2). It would be further designed during Pre-Construction Engineering and design (PED). A free exchange of water between Mile Branch and the backwater area would be preferred, however, if access to Mile Branch must be provided along the full length of Mile Branch, then culverts (4-60 feet; 2 inflow; 2 outflow) would be required to allow inflow and outflow between the two areas. The culverts should be placed at an elevation that allows frequent water exchange between Mile Branch and the backwater area to avoid stagnation. The site would need to be excavated 3-5-feet deep below the average stage to Mile Branch to achieve both deep-water and shallow water habitat. A 40-feet buffer would be planted with bottomland hardwoods around the east, south, and west perimeter of the site. The 40-feet buffer should not be higher than the existing elevation to allow run-off from adjacent areas to flow into the backwater area. The deep-water area would be excavated at a 3:1 slope away from the buffer to achieve the required depth of the site. Finger islands would be created within the site and planted with BLH. Excavated material from within the site would be hauled off-site. The internal tree "fingers" would be at a lower elevation than the perimeter forested buffer. The fingers should be at the former natural ground elevation or maybe a foot or two lower but would be sufficient to support BLH species. Deep water "channels" (see "D" on Figure I5:1-2) would

extend through the southern end of the tract to encourage circulation throughout the site. Some shallow areas should be provided for marsh or swamp vegetation growth.

1.2.1 Real Estate

Real estate will be acquired as needed for the channel improvements staging area, but should be permanent/conservation servitude to protect the area to function as intended post construction.

1.2.2 Operating Plan

The operating plan will be developed in PED when the features are further modeled. It is expected that named storm events and water elevation triggers would be used to determine closing. Final Operations Plan would be completed through coordination with NMFS and USFWS.

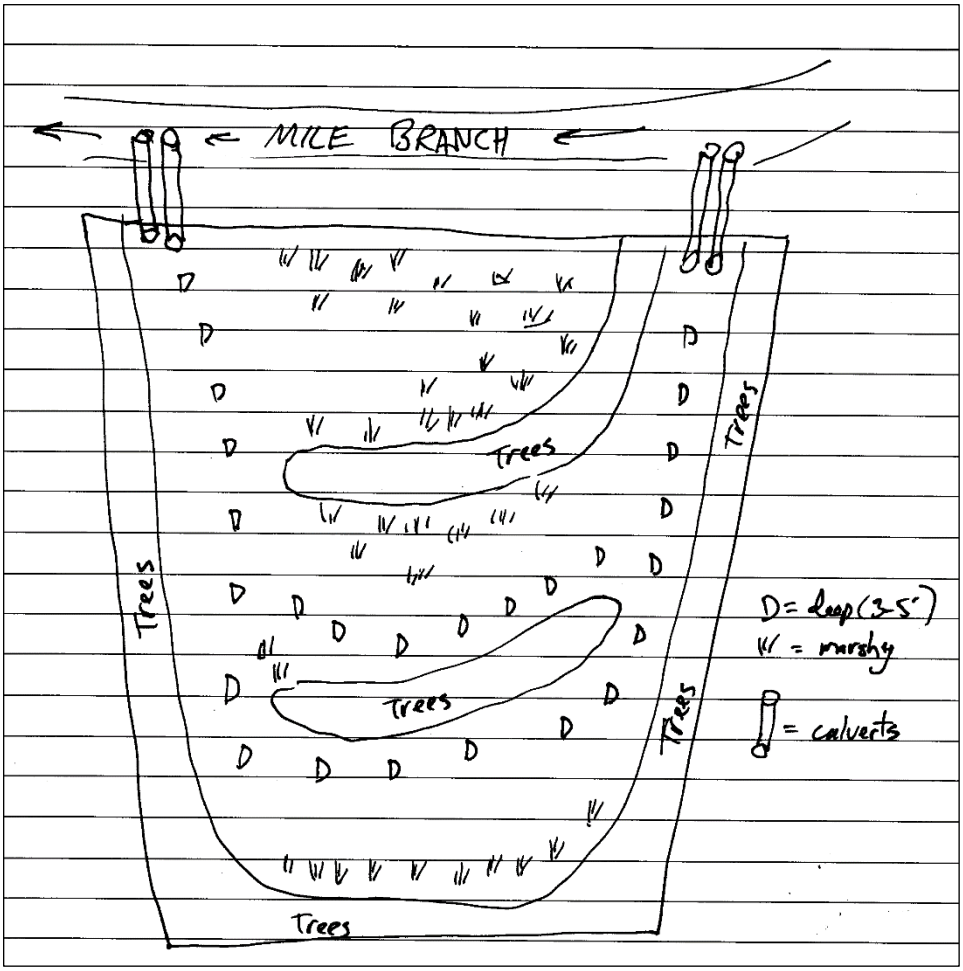

Figure I5:1-2. Conceptual Design for Mile Branch Backwater Feature