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Waller County Drainage Easement Amendment Request
Sand Hill Farm Mitigation Bank (SWG-2021-00571)
Waller County, Texas

A. Summary of Activities:

Wildwood Environmental Credit Company, LLC is assisting Waller Land and Cattle (the Tucker family) in permitting a stream and wetland mitigation bank (SWG-2021-00571) in Waller County, Texas near the intersection of Penick and Hebert roads, across the street from the Coastal Prairie Conservancy Indiangrass Preserve. The project will consist of 15,000 feet of stream restoration along Live Oak Creek and 600 acres of adjacent wetlands restoration. Low berms would be used to add approximately 337 acre-feet of storage within the floodplain of Live Oak Creek, a tributary of Cypress Creek.

Three of these berms would cross a 40' wide drainage easement held by Waller County. The existing easement dates to 1953 and is shown on **Figure 2**. Waller Land & Cattle requests the drainage easement be amended to shorten its length from the current 3,000 feet to 1,200 feet. This would not alter the drainage at Penick Road from its existing condition. It would allow for the creation of approximately 75 acre-feet of storage at the site. Without the amendment, wetland cells will need to be constructed around the drainage easement. Amending the easement as depicted would be mutually beneficial to both parties by improving drainage from the road compared to its current condition and also increasing flood retention along Live Oak Creek.

B. Existing Conditions:

Waller County's drainage easement is fed by a pair of culverts under Penick Road. The north culvert is 100% blocked with sediment and is no longer functioning (**Figure 3**). The south culvert is functioning. It is a 32-inch diameter culvert with a bottom elevation of 181.7 feet at the outfall. Standing water surface elevation at the culvert outfall was observed at 182.5 feet at the time of measurement, which is typical as a result of backwater from downstream blockages (**Figure 4**). From this culvert, the easement traverses an intermittently blocked ditch across the Waller Land and Cattle property until it drains into Live Oak Creek. The easement is 3000' long by 40' wide and does not appear to have been maintained in recent decades.

C. Work Proposal:

The outlet elevation of the first proposed wetland would be 182.5 feet, equal to the water surface elevation shown in **Figure 4**. Rainfall would fill this wetland to 182.5' roughly every other year after first filling the 22 acre-feet of storage it creates. After filling to this level, excess water would be free to flow into stair stepped wetlands at lower elevations and into Live Oak Creek. All three wetlands will have an unrestricted flow path to Live Oak Creek at their respective overflow elevations and are lower than the invert of the existing culverts on Penick Road. The 1,200 feet of ditch remaining after the proposed amendment would be cleared of trees, brush, and blockages and be maintained as a treeless prairie using funds set aside in a permanent maintenance fund.

Creation of these proposed wetland cells would serve multiple benefits for Waller County. Since this site's purpose is to provide compensatory mitigation for future USACE permitted projects in the area, its creation will facilitate future development and infrastructure improvements within Waller County. Furthermore, the wetland berms in question will store ~75-acre feet of water that is currently contributing to downstream flooding in the Cypress Creek watershed. Ducks, geese, and sandhill cranes are expected to make extensive use of the site.

D. Easement Modification Proposal:

Wildwood previously had two meetings with Yancy Scott to discuss the potential easement amendment. At Mr. Scott's request, we have increased the length of the remaining ditch from 150 feet to 1,200 feet. We also removed one of the berms from the plans to allow for more conveyance from the county road. Mr. Scott also requested us to calculate the storage volumes that would be created by the wetlands which we determined to be approximately 75-acre feet directly associated with the easement amendment. **Figure 2** is a map of this information.

The area between this new drainage easement and Live Oak Creek would be placed under an updated conservation easement as part of the mitigation project. As such, the berms would be maintained in perpetuity as depicted and development of the site would be prohibited. The area would be cleared, planted, and maintained as a native prairie wetland. Waller Land and Cattle would cover costs associated with the easement amendment and survey if necessary.

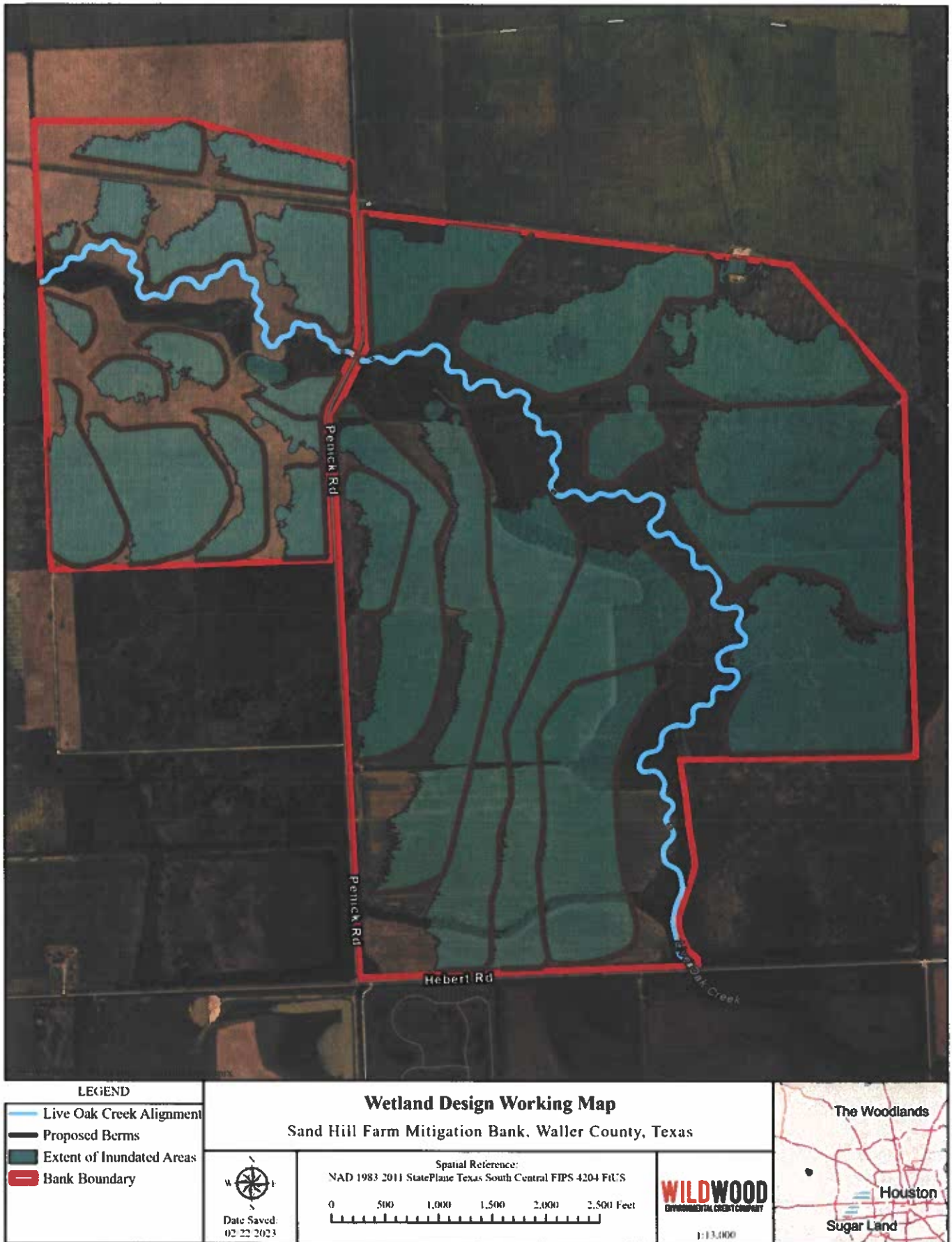


Figure 1. Overview of Sandhill Farms Work Plan.

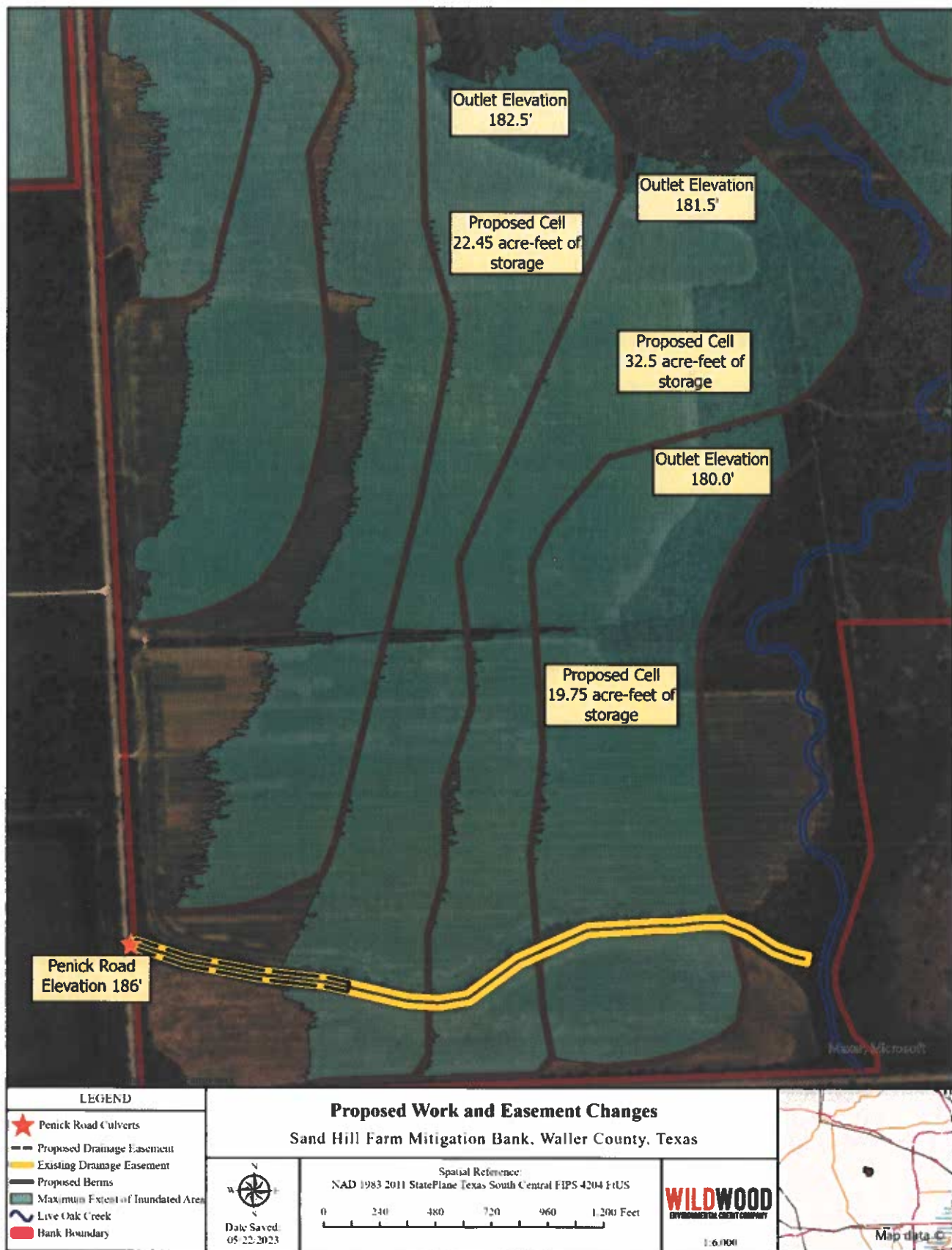


Figure 2. Easement proposal and relevant berms. Note the blue shaded area marks the area where berms would be able to back up water



Figure 3. View of culverts on west side of Penick Road. Note the top edge of the blocked culvert is visible in the center of the photo, with the active culvert to the right.



Figure 4. View of culverts on the east side of Penick Road. The culvert on the right is blocked and inactive. The culvert on the left is actively flowing. The water surface observed in this photo was measured at 182.5 feet elevation.