

## **8 Step Decision Making Process**

### Procedures for Making Determinations on Floodplain Management and Wetlands Protection (24 CFR 55.20)

#### **San Jacinto Watershed and Tributary Barrier Flood Mitigation Project Montgomery County, Texas**

The Montgomery County Office of Homeland Security and Emergency Management (the County) proposes the use of CDBG-DR funds to undertake the San Jacinto Watershed and Tributary Barrier Flood Mitigation Project, which was identified as having the potential to affect or be affected by the floodplain and wetlands, and has therefore, conducted the following decision-making process.

The proposed action, San Jacinto Watershed and Tributary Barrier Flood Mitigation, is located within the San Jacinto Watershed, specifically, along segments of Lake Creek, Stewarts Creek, White Oak Creek, Caney Creek, Peach Creek, and San Jacinto River East Fork in Montgomery County, Texas.

The particular waterways and corresponding locations of the project are as follows:

Lake Creek. Begins 1,800 ft north of Johnson Road (approximate geographic coordinates: 30.450690, -95.780920), and traverses downstream to end at Sendera Ranch Drive (approximate geographic coordinates: 30.25773, -95.56381), covering roughly 24 miles.

Stewarts Creek. Begins at Shadow Lake (approximate geographic coordinates: 30.38009, -95.47057), and traverses downstream to end at its confluence with the San Jacinto River West Fork (approximate geographic coordinates: 30.24883, -95.45309), covering roughly 15 miles.

Caney Creek. Begins at the Montgomery-Walker County line (approximate geographic coordinates: 30.50882, -95.42619), and traverses downstream to end at the Montgomery-Harris County line (approximate geographic coordinates: 30.10600, -95.17330), covering roughly 44 miles.

Peach Creek. Begins at North Walker Road (approximate geographic coordinates: 30.50892, -95.36187), and traverses downstream to end at its confluence with Caney Creek (approximate geographic coordinates: 30.11828, -95.17203), covering roughly 40 miles.

White Oak Creek. Begins at Gene Campbell Blvd. (approximate geographic coordinates: 30.16488, -95.30362), and traverses downstream to end at the Montgomery-Harris County line (approximate geographic coordinates: 30.09945, -95.18053), covering roughly 10 miles.

San Jacinto River East Fork. Begins at the Montgomery-Liberty County line (approximate geographic coordinates: 30.18650, -95.10406), and traverses downstream to end at the Montgomery-Harris County line just south of FM 1485 Rd. (approximate geographic coordinates: 30.14484, -95.12461), covering roughly 4.6 miles.

Within each of these segments, the County proposes to remove vegetative and other obstructions from the waterways and restore the creeks to full channel capacity. In addition, where areas of significant erosion are observed, best management practices (BMPs) and non-structural controls will be utilized to stabilize banks and mitigate against scour, sedimentation, and additional degradation of the channels and banks.

Channel obstructions shall be extracted utilizing various types of land- and water-borne equipment deemed appropriate for the depth, width and accessibility of each creek segment, and suitable to accomplish the removal of vegetation and other flood-borne debris. Only dead vegetation will be

removed from the channel and banks. Dead vegetation will be cut and the root balls will be left in place to prevent erosion. Creeks will be accessed via locations that offer ideal entry (gentle bank slopes, clear of vegetation) and matting will be used as necessary to prevent disturbance to soil and vegetation. Grading, dredging and discharge of fill material are not proposed. All work will occur within the channels to top of the bank.

As necessary, debris will be temporarily staged at the County's existing debris management sites prior to disposal. All vegetation and other debris removed from the channels will be disposed of in properly permitted landfills.

Actions within a FFRMS floodplain are guided by Executive Order (E.O.) 11988 enacted to "avoid to the extent possible the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative." E.O. 11988 requires agencies to follow an 8 Step decision making process to assure all alternatives and guidelines would be met. Similarly, such actions in wetlands are guided by E.O. 11990. This E.O. was enacted to "avoid to the extent possible the long- and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative." E.O. 11990 requires agencies to consider relevant factors and develop procedures to assess the effect of the proposed project on wetlands.

Detailed below is the 8-Step Process conducted in accordance with HUD regulations at 24 CFR 55.20 Subpart C Procedures for Making Determinations on Floodplain Management and Wetlands Protection, for the proposed project.

### **Step 1 – Determine whether the proposed action is located in a floodplain and/or wetland.**

According to the FEMA FIRM, the proposed project is located almost entirely within the 100-year floodplain (approximately 1,119.4 acres), Floodway AE and Zone AE (floodway fringe), and 500-year floodplain, Shaded X (approximately 2.2 acres), with fewer than 3 acres being outside of the 100-year and 500-year floodplain, in a Zone X. The proposed project is also within, adjacent and/or connected to areas of NWI mapped wetlands (approximately 1,124 acres), classified as Freshwater Forested/Shrub Wetland, Freshwater Emergent Wetland, Freshwater Pond, Lake, and Riverine habitats.

### **Step 2 – Early Notification and Involvement of the Public in the Decision-Making Process**

An 'Early Notice and Public Review of Proposed Activities in a Floodplain and Wetland' informing the public of the proposed project and potential location within the floodplain and wetland, was published to the County's website at [www.mctx.org/recover/](http://www.mctx.org/recover/) from May 12 through May 27, 2026 and distributed to potentially interested agencies and stakeholders. Additionally, the notice was posted to social media streams (Facebook, X, Instagram, Nextdoor) and posted in the Montgomery County Office of Homeland Security and Emergency Management, Judges office and all precinct offices seeking public engagement and comment. A copy of the early floodplain and wetland notice and proof of publication, posting and distribution, is included in the Environmental Review Record (ERR). The County received two comments from individuals as follows:

Individual #1 Comment – Residential property owner living on the bank of Caney Creek expressed interest in the project and desire to preserve natural areas of their property including wetlands and wildlife habitat, adjacent to the creek and requested to be informed of any public meetings (if held) and the plans and timing of the project.

Response to Individual #1 – The County appreciates the feedback received and has taken this comment into consideration. Best Management Practices (BMPs) and avoidance and minimization measures will be utilized during project implementation to preserve natural areas, wetlands and wildlife habitat to the extent feasible throughout the project area. Additionally, the respondent was encouraged to remain informed and engaged in the process and was educated on how and where to locate the requested information when it becomes available.

Individual #2 Comment – Landowner/developer with property adjacent to Caney Creek proposed a conceptual alternative solution involving the construction of a 7-8 acre engineered detention/retention pond on private land adjacent to Caney Creek with berms constructed 5-6 ft above flood elevation and an outfall control structure to regulate discharge into Caney Creek. The intent of the detention/retention pond would be to provide permeant upstream storage capacity, reduce downstream flood peaks and support ecological habitat.

Response to Individual #2 – Although the comment was not received by the deadline, the County appreciates the feedback received and has opted to voluntarily take this comment into consideration. The conceptual alternative solution (as proposed) was subsequently deemed to not be a genuinely practicable alternative as it would not address the core issue (the drainage capacity of these channels is increasingly restricted by the build-up of debris, slowing the conveyance of stormwater and raising peak flood levels) and the potential benefit would be limited to a relatively small segment of only one of the six creeks; however, as part of the 8-step process, the County’s analysis of practicable alternatives included a similar, but much larger scale, solution (Alternative 2), as detailed below.

A copy of the early floodplain notice, as well as the proof of publication, posting and distribution will be included in the ERR as part of the 8-Step Process documentation for this proposed project.

### **Step 3 – Identification and Evaluation of Practicable Alternatives**

In accordance with the process and criteria outlined in 24 CFR 55.20, Montgomery County explored and evaluated practicable alternatives to the proposed San Jacinto Watershed and Tributary Barrier Flood Mitigation Project to measures to minimize adverse impacts and to restore and preserve natural and beneficial functions and intrinsic values of the existing floodplain/wetland:

1. Relocate Residential Units Outside of the Floodplain Via Buyout Program
2. Reduce Stormwater Runoff Volume Through Detention/Retention Basin Construction
3. No Action

#### **Alternative 1 – Relocate Residential Units Outside of the Floodplain Via Buyout Program**

This alternative would require the County to offer an incentive to residents whose property is located within the flood-prone areas adjacent to the proposed creeks. Homeowners would be required to relocate and allow the purchased parcel to be demolished and converted to greenspace. The intent of the buyout would be to reduce future repetitive flood losses by removing structures from areas subject to flooding and restoring those parcels to a non-development use that provides floodplain benefits, such as reduced impervious surfaces and restoration of the parcels to their riparian state enabling natural ecological processes. The buyout program would require identifying eligible properties, offering market-based compensation to willing sellers, completing acquisition and demolition of structures, and implementing post-acquisition land-use changes to ensure the parcel remains free of future residential development. A voluntary buyout program could reduce repetitive loss exposure for participating homeowners and, where implemented at meaningful scale in targeted locations, contribute to long-term floodplain management objectives.

However, the buyout-only alternative presents several fundamental challenges in terms of cost, logistics, and effectiveness that render it impracticable for this program. A substantial portion of residential structures are located in the floodplain adjacent to the approximately 138 miles of combined creeks. Acquiring and demolishing such a large number of properties would result in substantially increased program costs and administrative burden. Available land and homes outside the floodplain would become increasingly limited in the surrounding areas, which would increase market prices for replacement housing and would reduce the likelihood that buyout proceeds would allow homeowners to

remain in their communities. Additionally, this alternative would not address the source of the problem – as more debris accumulates within the creeks, the potential for future flood events would increase and many non-residential parcels, such as businesses and agricultural lands, and homeowners unwilling or unable to relocate would continue to be at risk. For these reasons—high numbers of affected parcels, prohibitive acquisition and demolition costs, limited availability and high cost of replacement land or housing, continued exposure of non-residential uses, and the failure to comprehensively resolve the watershed flood hazards, this alternative has been rejected.

#### Alternative 2 – Reduce Stormwater Runoff Volume Through Detention/Retention Basin Construction

This alternative would involve constructing a network of detention and/or retention basins within the watershed to capture and temporarily store stormwater runoff before it reaches the creek channels. By reducing peak flows and attenuating stormwater volumes delivered to the creeks, detention/retention basins can decrease the frequency and magnitude of bank-overtopping and downstream flooding, provide opportunities for sediment and debris settling, and improve water quality by allowing suspended materials to settle out prior to discharge. Where sized and sited appropriately, basins can also provide ancillary benefits such as creation of greenspace and modest ecological or recreational enhancements while reducing immediate hydraulic stress on vulnerable creek segments.

Although this approach offers localized hydraulic and water-quality benefits, it is not a practicable standalone alternative for this program for several reasons. Implementing detention/retention basins at the scale needed to meaningfully reduce flows to the approximately 138 miles of combined creeks would require acquisition or use of a substantial amount of land within the watershed, which would substantially increase project cost and complexity. Effective basin implementation would also necessitate redesigning existing drainage patterns and conveyance networks to divert runoff to the basins rather than directly to the creeks, creating major engineering, right-of-way, and permitting challenges. Finally, basins would not eliminate the underlying sources of channel obstruction: debris and vegetation accumulation within the creeks would continue to form blockages, and upriver flows and debris contributions from adjacent jurisdictions would continue to enter the creeks and could cause flooding despite basin storage. For these reasons—extensive land requirements and associated acquisition costs, the need to reconfigure drainage to deliver runoff to basins, and the persistent risk of flooding from continued debris accumulation and upstream inflows, this alternative has been rejected.

#### Alternative 3 – No Action

Under this alternative, the County would not take any action, meaning neither the proposed project, nor any alternative project would be implemented. The County would not undertake the proposed creek debris removal, bank stabilization, or any related project activities and existing channel conditions would remain unchanged. The County's objectives to reduce repetitive flood losses, restore channel capacity, and improve community resilience would not be achieved.

As such, flood-prone structures and infrastructure would remain at risk from future storm events and continued debris accumulation in the creeks could increase the probability of future flood events resulting in property damage, displacement, injury, or loss of life. In addition, without active removal of obstructions and stabilization of eroded banks, sedimentation and channel degradation would likely continue, potentially increasing future repair needs and emergency response costs. Over time, continued inaction could result in sustained or worsening flood impacts on residents and critical services and would forego the localized floodplain benefits that could be achieved through the implementation of the proposed activities. As with alternatives 1 and 2, this alternative would not accomplish the objectives of

the County, would not benefit the existing natural and beneficial function of the creeks, may ultimately incur additional costs, and has therefore been rejected.

#### **Step 4 – Potential Direct and Indirect Impacts of the Proposed Action on the Floodplain and Wetlands**

The project activities require temporary access to the floodplain and wetlands to remove debris from the identified waterways; structural and/or permanent alterations of the waterways are not proposed, therefore, impacts to the floodplain and wetlands are anticipated to be temporary and negligible. The project includes debris removal to restore the function and capacity of the channels and is expected to positively impact the floodplain by improving each creek's ability to efficiently convey stormwater downstream. Although the project will not involve dredging, grading, fill or discharge into wetlands or waters of the U.S., project activities may potentially cause minor temporary adverse impacts to wetlands.

Montgomery County identified the following potential direct and indirect impact associated with the proposed action.

##### Direct Impacts

1. Soil Damage
  - Heavy equipment and matting may cause soil compaction
  - Using wheeled equipment (as opposed to tracks) may cause rutting
  - Compaction alters soil saturation patterns and inhibits the absorption of floodwater
2. Vegetation Loss
  - Heavy equipment and matting may crush or uproot native vegetation
  - Exposed soil may contribute to the spread of invasive plants
3. Hydrology
  - Equipment within the creeks may obstruct natural water paths, temporarily redirecting flow
  - Removing obstructions may increase the channel's volume and improve its ability to convey stormwater downstream
4. Habitat Destruction
  - Machinery may flatten the natural bumps and hollows (microtopography) that provide habitat
  - Felled trees and debris being removed may serve as habitat
5. Erosion
  - Disruption of stable root systems could compromise bank stability
  - Soils left exposed by debris removal may be more susceptible to erosion
  - Increased flow through unobstructed channels could cause or exacerbate erosion issues
6. Wildlife
  - Sensitivity to increased noise and human presence may result in the temporary displacement of certain wildlife in active work areas

##### Indirect Impacts

1. Water Quality
  - Siltation from disrupted mud can wash into creeks and redeposit downstream, choking downstream water flow and inundating aquatic habitats
  - If present, hazardous debris could release pollutants, potentially degrading water quality and tainting aquatic habitats
2. Flood Risk
  - Improving the channel's ability to convey stormwater downstream, reduces flood risk within that creek's drainage basin
  - Increasing the volume or rate at which water is conveyed downstream could increase the risk of downstream flooding
3. Hydrological Changes
  - Changing the hydrological characteristics of a channel may alter the volume and/or rate at which water is received by waterbodies downstream

To further identify and evaluate potential environmental impacts resulting from the proposed drainage mitigation project, agencies and stakeholders that may have an interest in, are responsible for the management of, or have regulatory authority over, floodplains, wetlands and other protected natural resources, were contacted specifically, FEMA, the US Army Corps of Engineers, US Fish and Wildlife Service, Texas Water Development Board, Texas Commission on Environmental Quality, Texas Parks and Wildlife Department, San Jacinto River Flood Management Division, and County and City Floodplain Administrators, among others. The feedback and responses received from these agencies included permitting, authorization, certification and approval requirements, recommended BMPs, and measures to avoid, minimize or mitigate potential adverse impacts. As applicable, these items have been incorporated into this 8-step analysis and will be an integral part of the environmental review record up completion.

### **Step 5 – Minimization of Potential Adverse Impacts via Design or Modifications to the Proposed Action**

Through the removal of the accumulated debris within the creeks, the waterways will be restored to their original capacity, and the risk of future flooding will be reduced. With the reduction in flood risk, the residents, homes, businesses and infrastructure within the San Jacinto Drainage Basin will be less prone to damage and loss of life from flooding. The proposed project activities are designed to protect lives and property, and to preserve the natural and beneficial values of the floodplain and wetlands, while having a minimal and temporary impact on the floodplain and wetlands. Impacts to the floodplain, wetlands and riparian areas will be minimized to the extent feasible with BMPs and mitigation measures designed to avoid, minimize or mitigate any potential adverse impacts will be implemented.

The following measures have been identified as effective mechanisms to minimize potential adverse impacts and preserve beneficial wetland and floodplain values:

1. Ensure that all required state and federal permits and approvals are obtained prior to beginning work.
2. Keep all heavy equipment (when not actively in use) and staging areas outside of the riparian zone and above the ordinary high-water mark.
3. Inspect all equipment daily for hydraulic or oil leaks before entering the water. Have spill kits readily available on-site and use biodegradable hydraulic fluids if operating directly over or in the water.
4. Prohibit refueling or performing maintenance within 100 feet of any waterbody to prevent accidental petroleum spills.
5. BMPs will be employed to the extent practicable during implementation to minimize potential ozone causing emissions.
6. Construction noise will be minimized to the extent feasible with BMPs.
7. Work within navigable channels will be performed using barges, launched from existing boat ramps, to minimize impacts due to accessing the channels from the bank.
8. Matting will be laid down in access/extraction areas to prevent rutting from heavy equipment.
9. Access routes for equipment should be selected to minimize disturbance to the floodplain and riparian areas.
10. Establish buffer zones around environmentally sensitive areas to protect them from project implementation activities.
11. Implement erosion and sediment control measures to minimize runoff during construction.
12. Implement appropriate and effective Water Quality Controls to protect aquatic ecosystems from sediment, turbidity, and chemical spills.
13. Dead vegetation removed from the banks will be cut and the root balls will be left in place to prevent erosion.
14. Exercise caution when extracting, transporting and disposing of any potentially hazardous debris to prevent the release of pollutants or hazardous materials into the environment.
15. Exercise caution during the obstruction and vegetation removal process as indigenous or historical watercraft may be present (especially along the creek banks). Halt work and contact the Texas Historical Commission in the event of an unanticipated discovery.

16. After removal of obstructions including vegetation, the channel banks will be revegetated with native plants.
17. Any areas with significant erosion will be addressed utilizing Best Management Practices for erosion control and non-structural measures to stabilize slopes.
18. Ensure that best management practices are used to control runoff from construction sites to prevent detrimental impact to surface and ground water.
19. Commence post-implementation restoration efforts to rehabilitate and preserve wetland areas adversely impacts by project activities, as necessary.
20. Construction and waste disposal activities associated with the project shall be completed in accordance with applicable local, state, and federal environmental permits, statutes, and regulations.
21. Any debris or waste disposal shall be at an appropriately authorized disposal facility.
22. If the project is located in the vicinity of a federal project, approval from the USACE may be required under Section 14 of the Rivers and Harbors Act of 1899 (33 U.S.C. § 408, "Section 408") to alter or occupy a USACE federally authorized project. Project proponents should contact the USACE Galveston District at 409-766-3869 to determine whether Section 408 authorization is required.

Although the proposed project is not anticipated to have a significant impact on the floodplain or wetlands, addressing the potential direct and indirect impacts through careful planning and mitigation measures aims to minimize any potentially adverse effects on floodplains and wetlands, ensuring both compliance with environmental regulations and the protection of natural resources.

The proposed project will incorporate all appropriate mitigation measures and BMPs the greatest extent feasible, obtain all necessary permits and approvals and comply with all applicable permit conditions.

#### **Step 6 – Re-evaluation of the Proposed Action**

Based on a re-evaluation of the alternatives, the proposed action is still the preferred and only truly practicable alternative and is therefore selected for implementation. This determination is made with full knowledge and understanding of the fundamental challenges associated with implementing the alternatives identified in Step 3, the potential direct and indirect impacts associated with the project discussed in Step 4, and the required mitigation measures outlined in Step 5.

In summary, removing the debris from these creeks, which are located in the floodplain and wetlands, is necessary to address one of the root causes of major flood events in Montgomery County. This need outweighs any minimal reduction of impact or cost savings associated with the No Action alternative, and the limited, localized benefit/impact associated with alternatives 1 and 2, especially when factoring in the risk to residents and property. Furthermore, given the cost, logistical timeline, and lack of effectiveness as a far-reaching solution to reduce flooding, associated with implementing a floodplain buyout program (Alternative 1) was determined to not be the best solution to address the issue at hand. Similarly, the cost, logistical timeline, and localized impact, associated with constructing an expansive system of retention/detention basins (Alternative 1) was also determined to not be the best solution to address this specific issue. Therefore, the County has decided to incorporate all appropriate and necessary mitigation measures to minimize potential adverse impacts and proceed with the proposed project to remove vegetative debris and other obstructions from the creeks and restore the full capacity of these channels, as the most efficient and effective way to reduce widespread flood risk and enhance the County's ability to manage stormwater flows during future heavy precipitation events.

#### **Step 7 - Publication of the Final Notice**

Montgomery County has determined that there is no practicable alternative to the proposed action being located in the floodplain and wetlands. Therefore, publication of a Final Floodplain and Wetland Notice explaining the reasons why the proposed action must be in the floodplain and wetlands, describing the alternatives considered, and identifying the mitigation measures to be taken to minimize adverse

impacts and to preserve the natural and beneficial functions and values of floodplains and wetlands, is required.

The Final Floodplain and Wetland Notice has been published to the County's website and distributed to potentially interested agencies and stakeholders. Additionally, the notice was posted to social media streams (Facebook, X, Instagram, Nextdoor) and posted in the Montgomery County Office of Homeland Security and Emergency Management, Judges office and all precinct offices.

A copy of the Final notice, as well as the proof of publication, posting and distribution will be included in the ERR as part of the 8-Step Process documentation for this proposed project.

### **Step 8 – Implementation of the Proposed Action**

Step 8 involves implementation of the proposed action which is estimated to begin in calendar year 2026. Any potentially adverse impacts will be mitigated to the extent feasible, through careful planning and proactive measures to avoid, conserve and protect floodplains and wetlands, ensuring both compliance with environmental regulations and the protection of natural resources. There is a continuing responsibility on Montgomery County to ensure that the mitigating measures identified are implemented.