

## **REQUEST FOR BOARD ACTION**

### **HENDERSON COUNTY BOARD OF COMMISSIONERS**

**MEETING DATE:** March 16, 2022

**SUBJECT:** Bat Fork Creek and French Broad River State Allocation Request

**PRESENTER:** Kieran Roe, Executive Director of Conserving Carolina

**ATTACHMENTS:** Yes

1. Bat Fork Ecosystem Restoration Project
2. Pleasant Grove Ecosystem Restoration Plan

#### **SUMMARY OF REQUEST:**

Henderson County has received funding through the State of North Carolina for stream restoration projects on Bat Fork Creek and the French Broad River.

Conserving Carolina will overview potential stream restoration projects within those areas.

#### **BOARD ACTION REQUESTED:**

The Board is requested to direct staff to draft the necessary documents to formally accept the funding from the state and allow for a subrecipient of the funding to complete project.

#### **Suggested Motion:**

*I move the Board direct staff to draft the necessary documents to formally accept the funding from the state and an agreement to allow for a subrecipient to complete project, and to bring the necessary documents back for adoption at the next meeting.*

# Bat Fork Creek Ecosystem Restoration



## Project Goals:

1. Restore Water Quality and Natural Habitat along a 2,000-foot section of Bat Fork Creek, tributary to Mud Creek
2. Create a recreational trail and nature preserve for the enjoyment and benefit of residents of Dodd Meadow
3. Reduce Erosion and Sedimentation into the impaired Mud Creek Watershed
4. Convert a Degraded, Weed-Infested Eyesore into a Beautiful Community Amenity
5. Create an Opportunity for Nature Education Programs and Volunteer Involvement for the Children and Families of Dodd Meadows





## **Dodd Meadows on Bat Fork Creek:**

Dodd Meadows is the latest Habitat for Humanity community development in Henderson County. It is located at the corner of Crest Road and East Blue Ridge Road in East Flat Rock, NC, making it close to schools, churches, shopping and community resources.

Dodd Meadows, once completed, will serve as the home for 114 families and an estimated 400 children. Many of these children will be the first generation to grow up in a home owned by their family.

Begun in January, 2013, this community will consist of two, three, and four bedroom homes, and will be open to senior citizens and those with disabilities as well as to families. As is true of all Henderson County Habitat for Humanity homes, Dodd Meadows homes are designed to meet the highest standards of energy efficiency and safety.

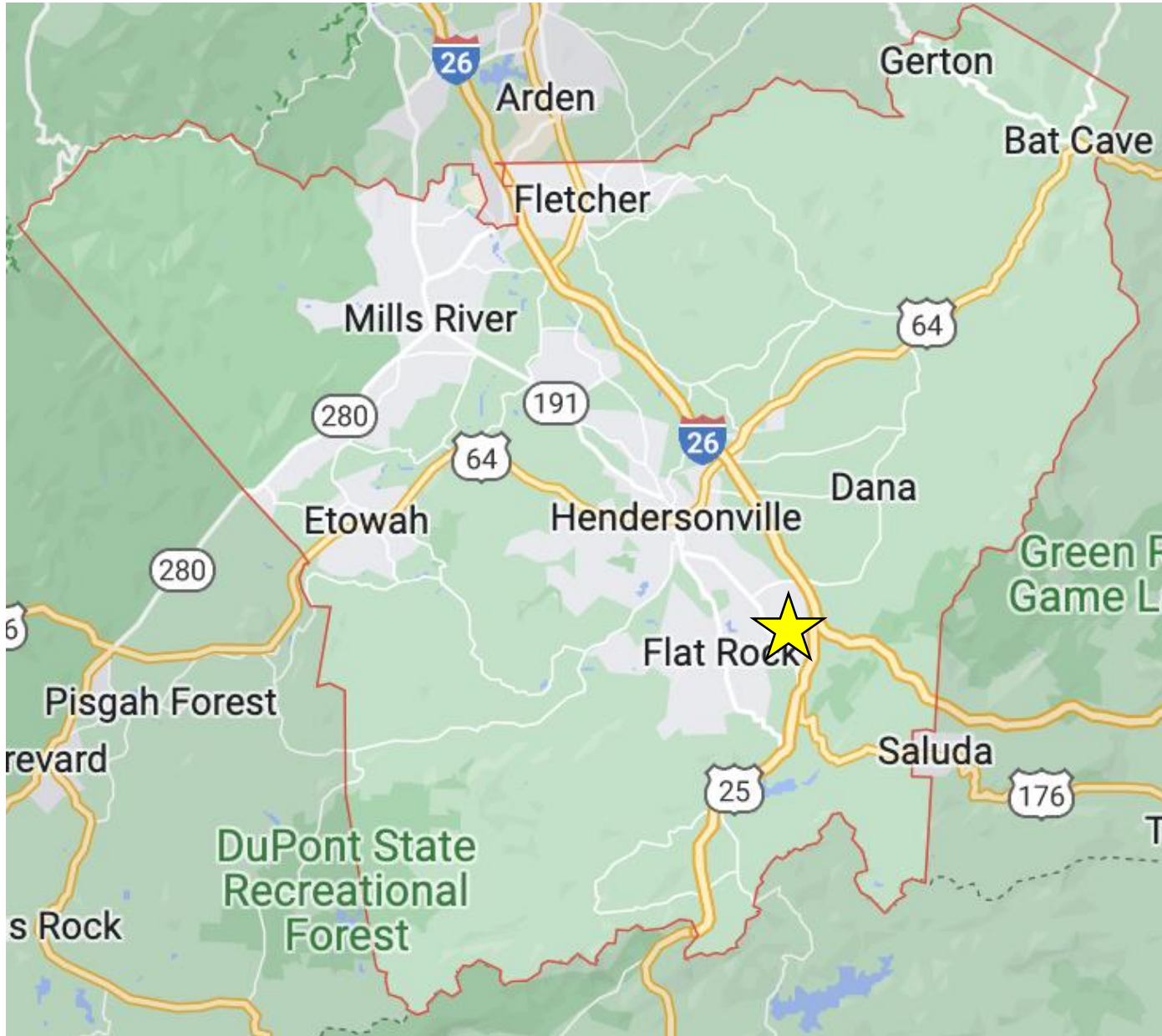
Dodd Meadows will consist of park areas, playgrounds, sidewalks, walking trails, ponds and bright cottage architectural homes.



# Bat Fork Creek Ecosystem Restoration Plan



# Bat Fork Creek Ecosystem Restoration Plan

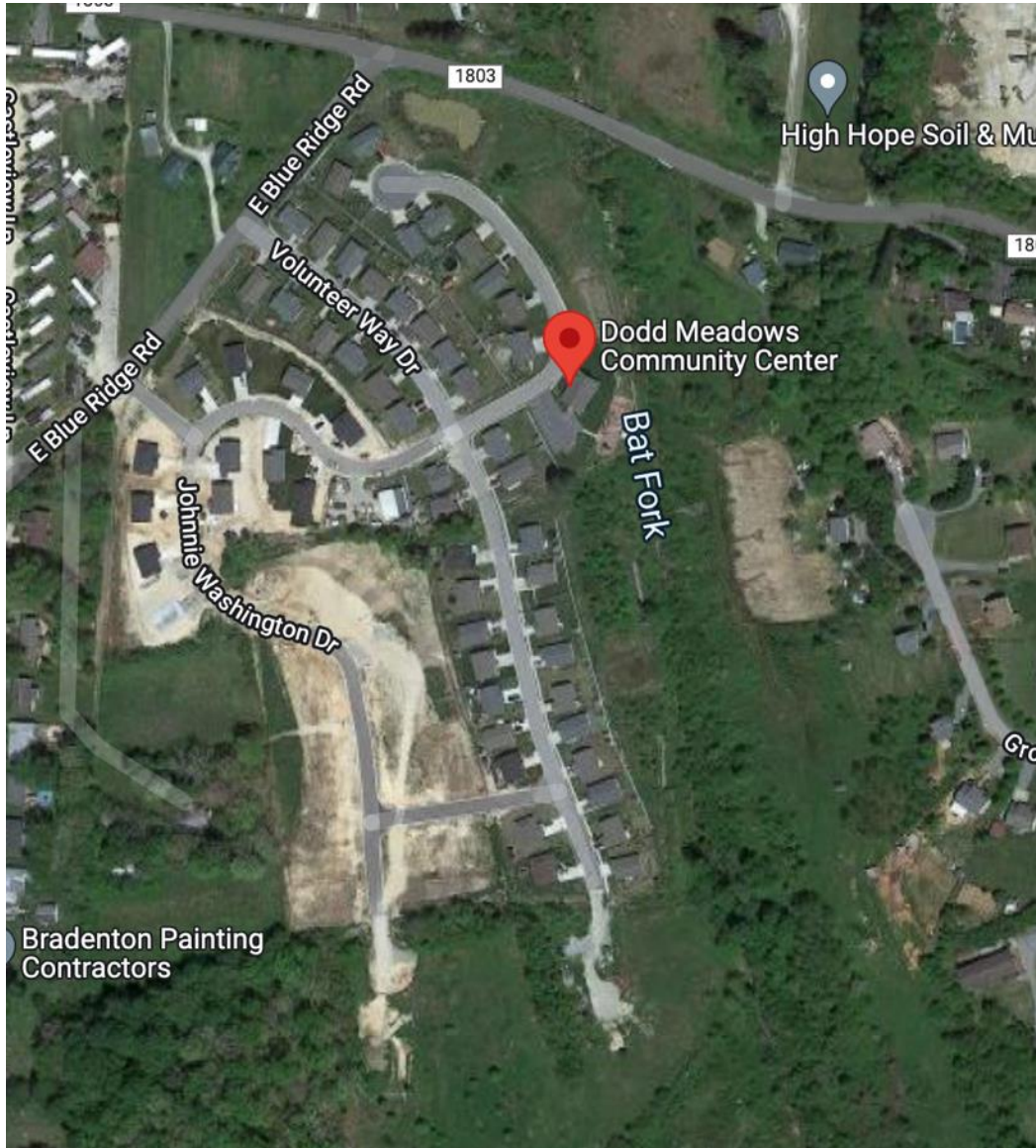




# Bat Fork Creek 2009 Aerial Photo Showing Farm Land



# Bat Fork Creek 2019 Aerial Photo Showing Housing





# Bat Fork Creek 2022 Conditions



Streambank Erosion with No Access for Education and Recreation



# Bat Fork Creek Ecosystem Restoration Plan

- 2000 Feet of Stream Stabilization for Water Quality and Safety
  - Native Plants for Wildlife
  - Educational and Recreational Opportunities





# Pleasant Grove Floodplain Ecosystem Restoration Plan





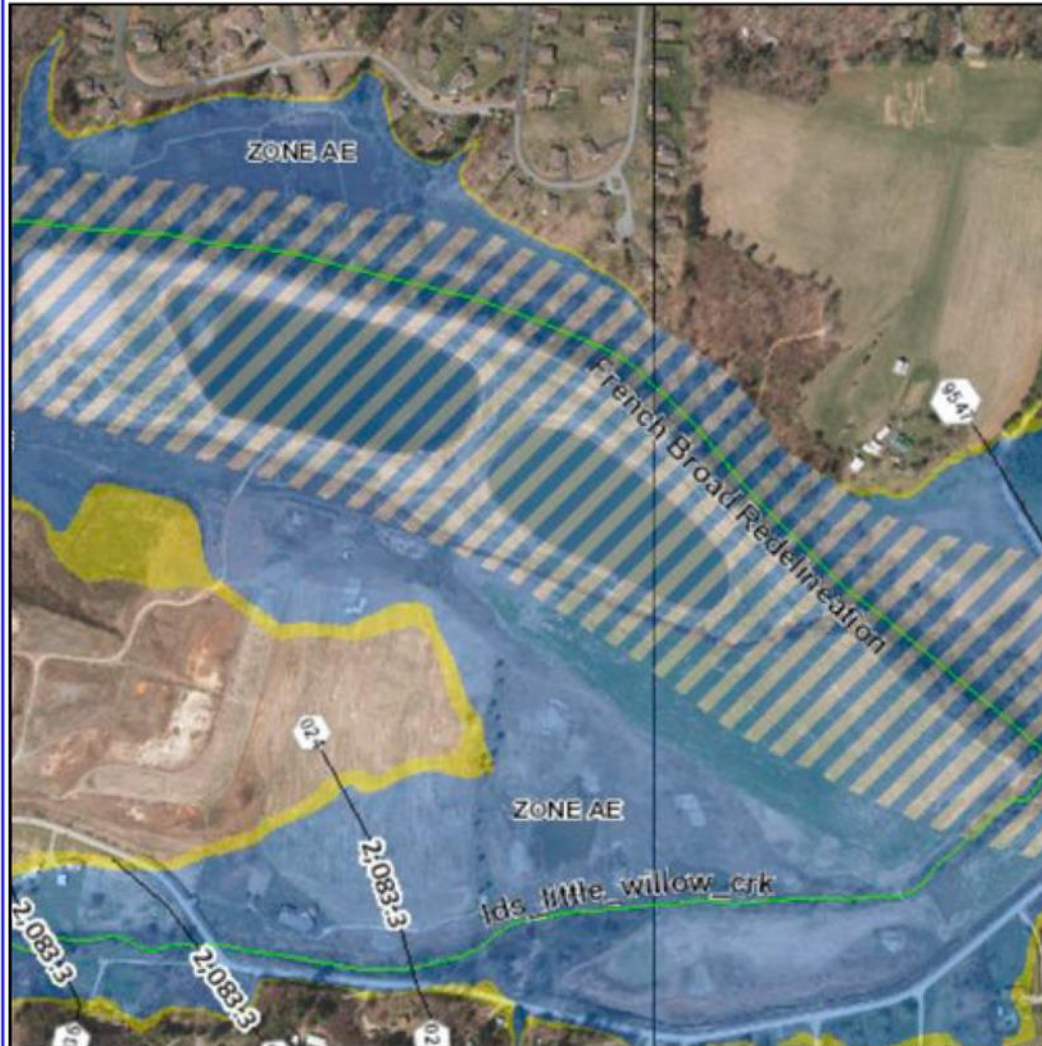
# Pleasant Grove Floodplain



# Pleasant Grove Floodplain FEMA Floodplain Map

Northing: = 584,876, Easting = 927,866

Northing: = 584,876, Easting = 931,334

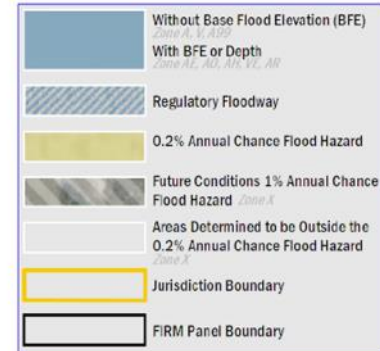


Northing: = 581,407, Easting = 927,866

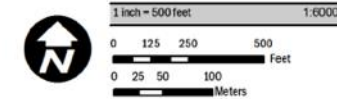
Page 1 of 2

Northing: = 581,407, Easting = 931,334

This is an official copy of a portion of the above referenced flood map. This map incorporates changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov).



North Carolina State Plane Projection Feet (Zone 3200)  
Datum: NAD 1983 (Horizontal), NAVD 1988 (Vertical)



**FEMA National Flood Insurance Program**

**NATIONAL FLOOD INSURANCE PROGRAM  
FLOOD INSURANCE RATE MAP**

**Panel(s): 9538, 9528**



**CONTAINS:**

**COMMUNITY**                      **CID**  
 HENDERSON                      370125  
 COUNTY

**Notice to User: The Map Number(s) shown below should be used when placing map orders; the Community Number(s) shown above should be used on Insurance applications for the subject community.**

**SELECTED PANELS:**

MAP NUMBER	EFFECTIVE DATE
3700953800J	10/2/2008
3700952800K	10/2/2009



# Pleasant Grove Floodplain

## 1956 Aerial Photo Showing Farm Land



# Pleasant Grove Floodplain

## 2008 Aerial Photo Showing Golf Course





# Pleasant Grove Floodplain

## 2022 Conditions



French Broad River Bank Erosion



Linear Ditch Draining Wetlands



Pond on Floodplain

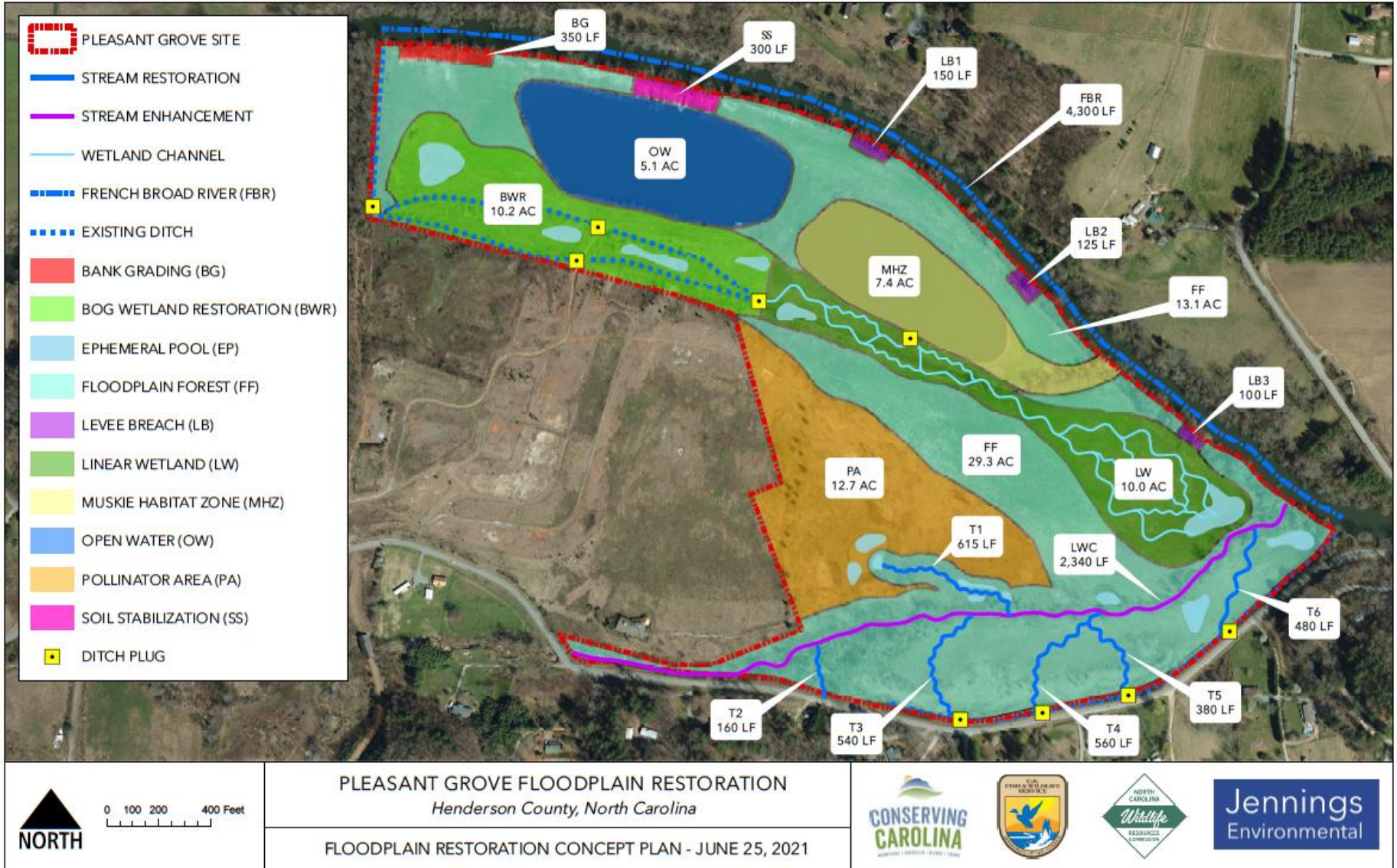


Little Willow Creek with Eroding Banks



# Pleasant Grove Floodplain

## Restoration Concept Plan: *Mosaic of Habitats*



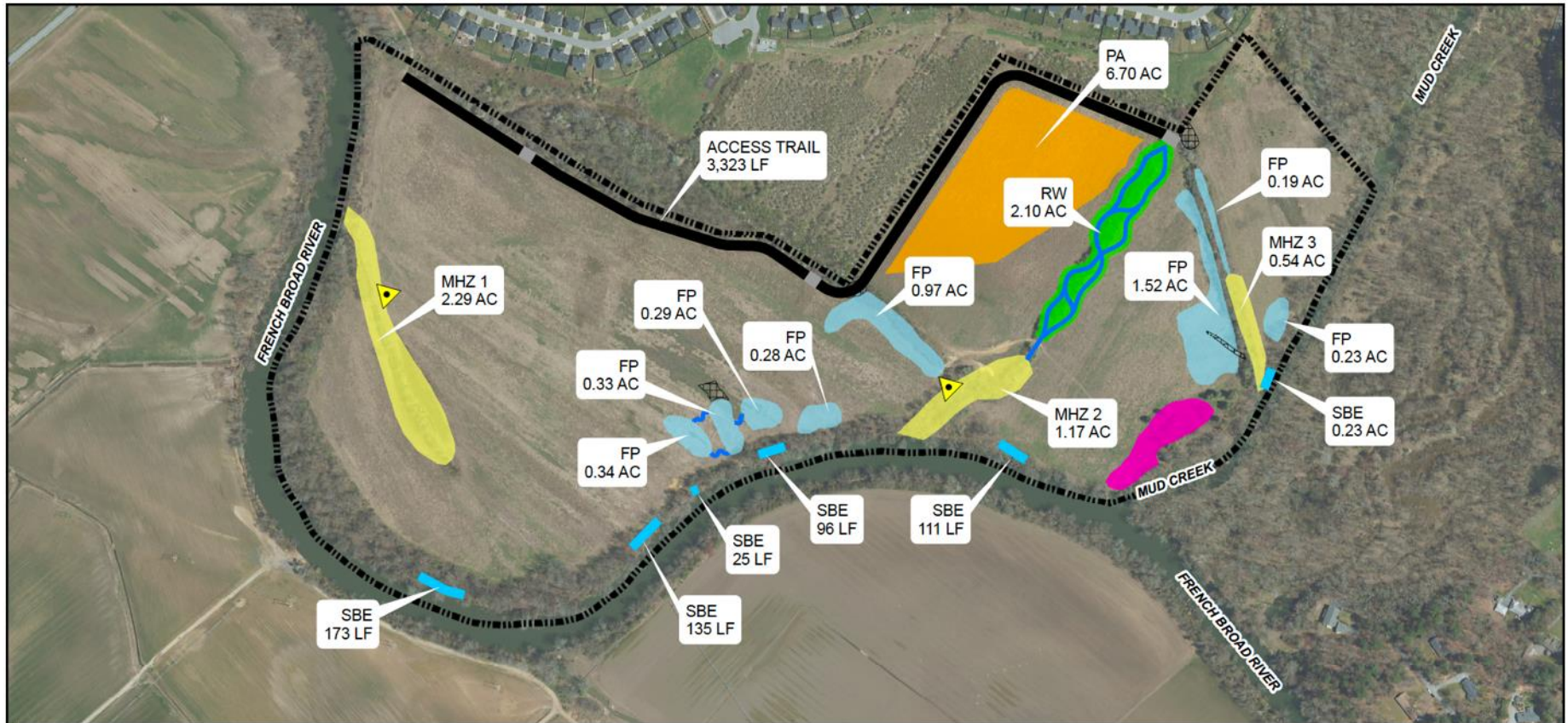


# Pleasant Grove Floodplain Restoration Concept Plan

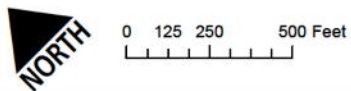
Project Element	Amount	Planning Level Cost Range
Bank Grading on French Broad River (BG)	350 feet	\$70,000 to \$250,000
Bog Wetland Restoration (BWR)	10.2 acres	\$40,000 to \$80,000
Floodplain Forest (FF)	29.3 acres	\$20,000 to \$40,000
Levee Breach (LB)	375 linear feet	\$30,000 to \$50,000
Linear Wetland (LW)	10.0 acres	\$80,000 to \$120,000
Pollinator Zone (PZ)	38 acres	\$50,000 to \$90,000
Muskie Habitat Zone (MHZ)	7.4 acres	\$60,000 to \$100,000
Open Water (OW)	5.1 acres	\$10,000 to \$20,000
Pollinator Area (PA)	12.7 acres	\$30,000 to \$60,000
Soil Stabilization (SS)	300 linear feet	\$40,000 to \$80,000
Stream Enhancement on Little Willow Cr (LWC)	2,340 linear feet	\$180,000 to \$280,000
Stream Restoration on Tributaries (T)	2,735 linear feet	\$200,000 to \$360,000
<b>Total</b>		<b>\$810,000 to \$1,530,000</b>

# Mouth of Mud Creek Floodplain

## 2020 Restoration Outcomes



PARCEL BOUNDARY (108.51 AC)	RIVERINE WETLAND (2.10 AC)	FBR PADDLE TRAIL CAMP AREA	CHANNEL
MUSKIE HABITAT ZONE (4.00 AC)	POLLINATOR AREA (6.70 AC)	SITE ACCESS TRAIL (3,323 LF)	SWALE
FLOODPLAIN POOL (4.12 AC)	DITCH PLUG	STREAMBANK ENHANCEMENT (616 LF)	MUSKIE MONITORING STATION



### MOUTH OF MUD CREEK FLOODPLAIN RESTORATION

Henderson County, North Carolina

AS BUILT CONDITIONS - SEPTEMBER 30, 2020





# Mouth of Mud Creek Floodplain

## 2020 Restoration Outcomes



French Broad River Bank Stabilization



Meandering Linear Wetland



Muskie Habitat Sloughs (3)



Wetland Depression Creation