Mission Planning - Hunnicutt Creek Reach 1

Mission Planning

Hunnicutt Creek – Reach 1
Goal: Get (1) sinuosity and (2) valley type, then (3) Identify stream stressors.

1) Sinuosity in Google Earth (Historical Imagery)

Open **Google Earth Pro** → go to **Hunnicutt Creek Reach 1** → turn on **Historical Imagery** and pick an older date where the channel is clear.

Use the **Path** tool to measure:

- $L_{meandering}$: trace the creek centerline through the reach
- L_{direct}: straight line from reach start to end

Calculate:

$$\text{Sinuosity} = \frac{L_{\text{meandering}}}{L_{\text{direct}}}$$

Turn in: the two lengths, the sinuosity value, and one screenshot showing both paths.

2) Valley Type (Rosgen Module in Canvas)

Go to the **Rosgen module in Canvas** and use the provided files/process to assess **valley type.** Use topography data for Hunnicutt (LiDAR/contours/DEM).

Turn in: 2–3 sentences: Use Appendix B (Table B-3) to select the **Valley Type (I–XII)** for Reach 1, based on valley-wall steepness, valley-floor slope, and valley width (confined vs unconfined characteristics). Plus any quick supporting screenshot/map if you have it.

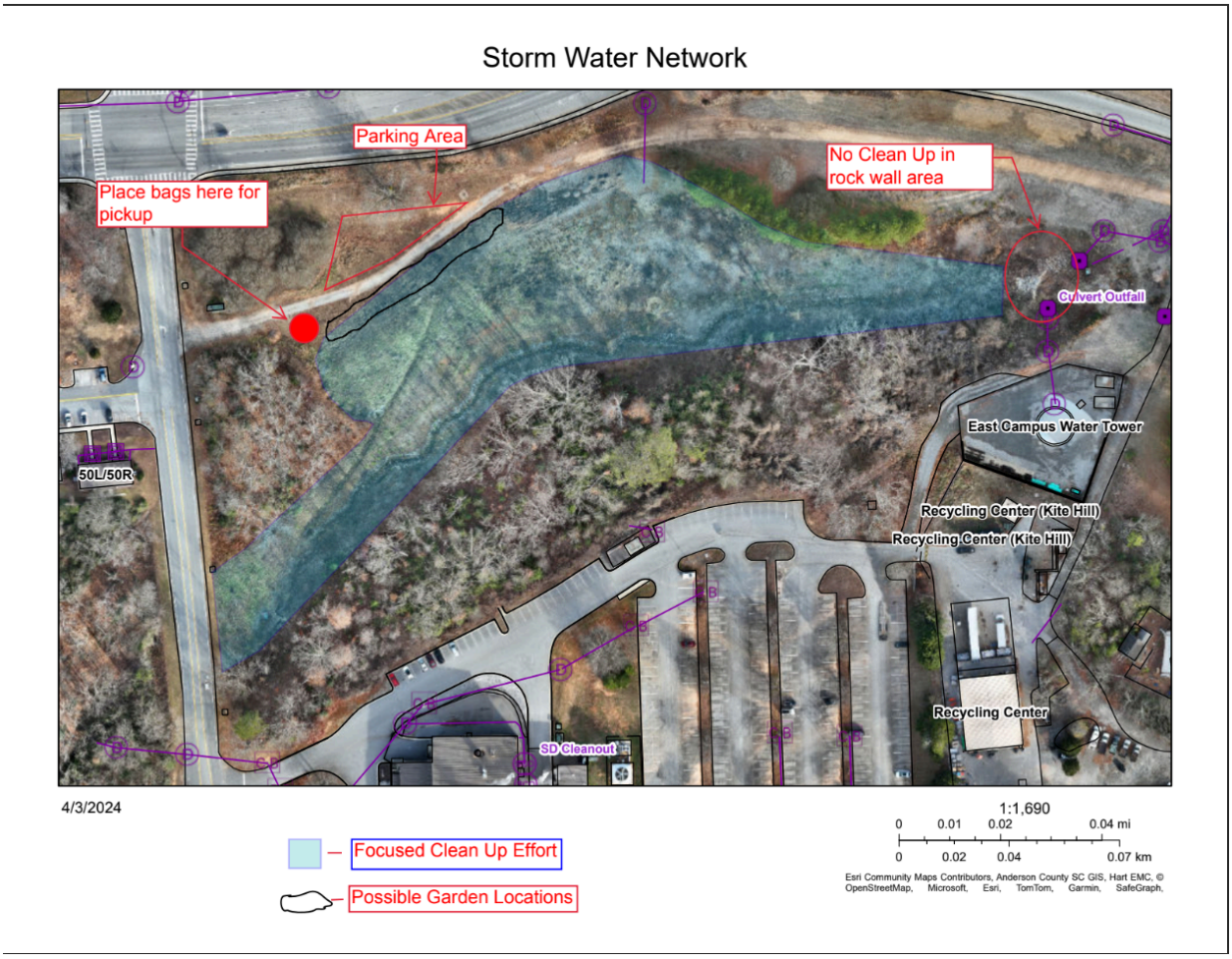
3) Damage

Write a quick paragraph covering:

- Likely sources of damage: flashy runoff, incision/bank erosion, sediment/nutrients, trash/hydrocarbons, habitat simplification, possible infrastructure constraints

- one restoration approach that fits: riparian buffer + bank stabilization + grade control/energy dissipation + stormwater source control

- find **one reference project** that looks similar (urban stream restoration) and paste the link + 2–3 bullets on what it shows.



Two go-to resources

- **Hunnicutt Creek Info you can Find online**
    - Please Find and Download Clemson Riparian Master Plan 2006

- **Clemson Long Range Framework Plan**

- **Clemson Wiki - Hunnicutt Creek**
    - https://clemsonwiki.com/wiki/Hunnicutt_Creek

- **Clemson Hunnicutt Creek Webpage (Dated / Broken)**
    - https://blogs.clemson.edu/hunnicutt/