





Projects



Wancopin Creek Stream Restoration

- Horse & Cattle Farm, Loudoun County, Virginia
- Part MS4, part 404 Mitigation Bank
- 21,000 LF Stream Restoration
- 275 AC Riparian Buffer Preservation/Restoration



Maple Dell Farm Stream Restoration

- Dairy Farm, Howard County, Maryland
- MS4
- 4,191 LF Stream Restoration
- 0.4 AC Wetland Restoration/Creation



Projects



Whispering Hills Nutrient Bank

- Cattle Farm, Loudoun County, Virginia
- Nutrient bank, One of the First Stream
 Restoration Based Nutrient Banks in Virginia.
- 4,070 LF Stream Restoration
- 12.65 AC Easement



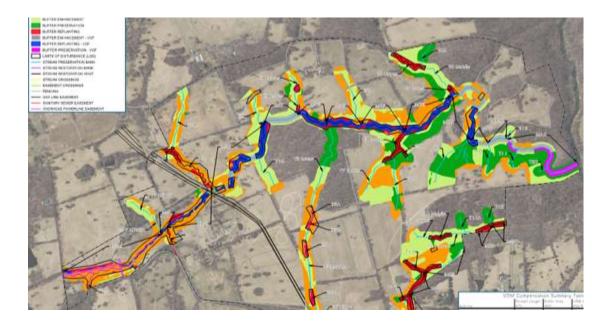
Montgomery County WQ Improvements

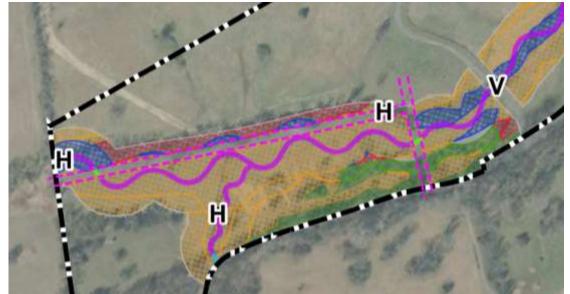
- Corn & Soy Farm, Montgomery County, MD
- MS4
- 10,430 LF of Stream Restoration



Project Planning Considerations

- Maintain Property's Current & Future Agricultural Functionality
 - Livestock vs. Crops
- Maintain Property's Current & Future Recreational/Personal Usage
 - Hunting, fishing, hiking, horseback riding, etc.









Fencing

- Fence Type: Wire, board, electric (Cost Impacts)
- Land Use: Cattle, horse, or crop
- Fence Location: Along Easement or along field/pasture edge
- Sequencing with construction & farm operations
- Crossings / Breaks in fencing (cattle rotation, tractor/equipment access)







Stream Crossings-NRCS

- Communicate with Landowner on crossing location
- Determine appropriate crossing for the location
- Ensure the approach angles are functional for the intended equipment, vehicles, livestock, etc.
- Size the crossing width appropriately
- Ensure footing is livestock and/or horse friendly if appropriate
- Lower cost
- Weather dependent









Stream Crossings-ACB

- More durable
- Higher cost
- Ensure the approach angles work with large/specialty equipment
- Concerns over animal use/slipperiness
- Weather dependent









Stream Crossings-Culvert

- Highest cost
- Regularly accessible
- Hydraulic impact









Horse Crossings

- Hoof friendly Stable bottom / not large cobble/angular rock
- Coir matting & dead blow stakes
- Regulatory concerns on frequency







Maintaining Current Property's Recreation/Personal Use





- Horse jumps
- Man gates
- Trail network
- Hunting schedule



Maintaining Current Agricultural Functionality

<u>Waters</u>

- Location of waterers.
- What type of waterers?
- If gravity fed, is there enough drop on the landscape to maintain it?
- Are there springs on site to use for waterers or are wells needed?

<u>Shade</u>

Sequencing / timing with exclusion fencing









Maintaining Current Agricultural Functionality



- LOD Designed to Maintain the Property's Functionality
- Have construction access roads follow existing farm roads or be along field edges
- Utilize existing gate openings
- Laydown/staging proposed in non-production areas
- Communication with Landowner Regarding Final LOD Design



Maintaining Future Agricultural Functionality

Raised water table saturating adjacent fields.









Farm Improvements

Locations for soil disposal (win-win for excess cut!)



Excess cut was used to fill a barnyard that was previously a large depression



Communication

- Maintain communication throughout all phases of the project
- Communicate Landowner requests with all staff and contractors involved with the project





Questions & Answers

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Stop by booth #20





