



- Catawba Sustainability Center 5-Year Land Use Legend**
- Well Infrastructure
 - Property Line: Catawba Sustainability Center
 - Parking
 - Overlook
 - StREAM Lab Research
 - American Chestnut Breeding Orchard
 - Crop Research
 - Demonstration Fruit Orchard
 - Forest Farming
 - Grassfed Beef Partnership: Rotational Grazing
 - Grassfed Beef Partnership-Rotational Grazing-Long Term
 - Long-Term Future Use
 - Multi-Use Agroforestry
 - Mushroom Production
 - Open Land: Future Research and Hay Production
 - Riparian Buffer Corridor, Water Research
 - Silvopasture Research and Demonstration
 - Small Farm Incubator/Crop Research
 - Sustainable Forestry/ Forest Farming/ Recreation
 - Warm Season Grass Demonstration + Grassfed Beef Partnership
 - Wetland Education
 - Trails: Proposed
- 0 0.05 0.1 0.2 Miles

- Roanoke County, VA GIS Data Legend**
- Water Bodies
 - Buildings
 - Parcels
 - Historic Sites
 - Trails: Appalachian Trail
 - Catawba Mountain Fire Access Road
 - Roads
 - Streams

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American Chestnut Breeding Orchard

The Catawba Sustainability Center has teamed up with the American Chestnut Foundation and Catawba Landcare to provide a 300 - 600 tree American chestnut breeding orchard aimed at developing hybrid chestnut trees that are blight resistant, through a backcross breeding process. The hybrid trees will look and grow like pure American chestnut trees, but will be 1/16 Chinese chestnut.



Blue Blaze Trail

The Blue Blaze trail connects the Center and the community directly to the Appalachian Trail, a heavily used hiking trail that spans land from Maine to Georgia. To increase foot traffic on the trail and into the Catawba Sustainability Center, the Blue Blaze trail is being constructed as an interpretive trail that educates and promotes the concept of sustainability and conservation. Future uses of the property may include a hiker campsite/hostel and restroom facility to aid hikers and visitors. A trailhead and parking area is planned near the entrance to serve local hikers.



Educational Wetland

Wetland restorations here at the Catawba Sustainability Center began as a workshop between the agency professionals and local landowners. The initial area chosen to restore sits in pasture where standing water is present during winter and spring months, hinting that the landscape may have been a wetland previously. This restored space offers space for educational opportunities, provides important ecosystem services such as water filtration, and creates habitat for important species such as migrating birds and amphibians. This site serves as a showcase for landowners and others in the community, showing what they can do in order to benefit the watershed. More wetland restorations are planned for implementation in the future and will continue to increase the viability of the landscape.



Multi-use Agroforestry Farm

Agroforestry is the intentional integration of trees into an agricultural landscape. Essential benefits include greater productivity, economic growth, and diversification of available goods. Agroforestry accomplishes this by contributing to biodiversity, preventing soil erosion from wind and water, slowing water runoff, protecting waterways, sequestering carbon, and providing an economic return on lands generally not in production. The Center will develop this area as a agroforestry farm to demonstrate several agroforestry practices that small parcel landowners can integrate into their farm.



Riparian Buffer

Areas of land adjacent to streams are taken out of production and planted in trees and shrubs to reduce the negative impacts of adjoining land use practices on water quality. All land adjacent to Catawba Creek are designated as riparian buffers. Some of these buffer areas are planted with high value fruit and nut trees and woody floral shrubs. Projects such as this demonstrate how landowners can achieve conservation goals without sacrificing financial profit. The riparian buffer along the Catawba Creek can be restored and enhanced to serve as a demonstration and improve the quality of water entering Carvins Cove.



Native Warm Season Grass Demonstration

Warm season grasses are native to Virginia and are generally maintained for wildlife habitat and as summer livestock forage. During winter months, the grasses can be harvested as a form of renewable biofuel to generate energy and reduce carbon emissions. The Catawba Sustainability Center is moving to incorporate 20 acres of this pasture into the rotational grazing system and grassfed beef partnership. The future option to explore renewable biofuel operations will always be open.



Rotational Grazing - Grassfed Beef Partnership

A rotational grazing system with livestock will give a local rancher the opportunity to learn about and manage a rotational grazing operation with Virginia Tech support. Advantages include maximizing pasture productivity, reduced petrochemical use, improved soil quality through organic matter, and reduced erosion. It also provides community benefits by contributing to the local food system and economy.



Rotational Grazing - Grassfed Beef Partnership, Long-Term

The area on the mountainside is a long-term pursuit. All areas require access to water. The area currently does not have a fence and has limited access due to being on the hillside edge of the property.



Silvopasture Research and Demonstration

Silvopasture is the combination of trees and livestock pasture. The trees create myriad benefits to the landowner and animals. They create shade on pastures, prolonging the growth of cool season grasses in the summer and providing grazing animals shelter from the sun. Trees also prevent erosion, slow overland water flow, absorb water and nutrients, and can even provide additional forage, all while creating a future revenue source. This demonstration was designed and developed to create valuable timber products, test tree planting techniques, and benefit the animals in the rotational grazing system.



Small Farm Incubator

The Catawba Sustainability Center's Small Farm Incubator program aims to incubate and grow viable, independent farm businesses and to serve as a model new-farmer program by providing access to land and resources in a low-risk environment. Growers here have access to equipment, educational resources, and technical support. Currently, the Center is working to improve infrastructure that will strengthen the program. In the future, the program can be relocated to another parcel to support additional farmers.



StREAM Lab II: Water Research

This Stream Research Education and Management (StREAM) Lab on Catawba Creek is a sister project to StREAM Lab I on the Virginia Tech campus. This stream monitoring instrumentation monitors the chemical and physical conditions of the water in Catawba Creek every 15 minutes and uploads the information to the web in real-time. The project promotes cross-sector collaboration, provides live data on a public website, collects data to a database for education and research, provides a basis for education programs, and serves as a platform for launching new research proposals to better understand watershed sustainability.



Sustainable Forestry, Forest Farming, Recreation

This area will be for practicing land stewardship that integrates the reforestation, managing, growing, nurturing and harvesting of trees for useful products, while conserving the quality of air, soil, and water and protecting wildlife. The designated area is the most heavily forested area of the Catawba Sustainability Center property and the Blue Blaze Trail, which will connects to the Appalachian Trail, passes through. A future option for this parcel also could include non-timber forest farming, where shade grown crops are produced under the forest canopy.



community design
assistance center

College of Architecture and Urban Studies
Virginia Polytechnic Institute and State University

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Catawba, VA:
Catawba Sustainability Center

5-Year Land Use Plan
March 2019