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# Town of Scottsville

## Van Clief Nature Area

# 2019 Master Plan



# 1 Introduction

The purpose of the Van Clief Nature Area (VCNA) Park Master Plan is to provide guidance and direction for 1) the protection, management, and interpretation of significant natural and cultural resources, 2) the development of recreational facilities with environmental constraints, and 3) phased development and sustainable management of the park, subject to available funding and Town of Scottsville resources. This 2019 Master Plan is intended to set forth a clear vision for the future, based on phased development, over the next 20 years.

*Figure 1. Van Clief Nature Area (Photo by Fred Oesch)*



The planning process and public involvement in VCNA began in 1977, with the Mink Creek Impoundment project, continuing to the present, with extensive community input provided during a community meeting held on November 12, 2013. In addition to the Scottsville Town Council, Albemarle County, and the Thomas Jefferson Planning District (TJPDC), the key partnerships that made this project possible include the Virginia Department of Conservation and Recreation (DCR), the Virginia Department of Game and Inland Fisheries (DGIF), and the James River Association (JRA). In 2018, the Scottsville Town Council updated the town's Comprehensive Plan, the long-range guide for land use planning required by state law. The Comprehensive Plan references this VCNA Master Plan as a supporting document.

# 2 Park

Scottsville's heritage is intimately connected with the James River. Inhabitants' use of the river dates back to the Monacan Native Americans, before the arrival of Europeans. Scottsville was designated as the first county seat of Albemarle County and was a major commercial trading center for river traffic between the Upper James, Lynchburg, Richmond and the Kanawha Canal. Located 18 miles south of Charlottesville, the Town of Scottsville occupies a strategic location on the "horseshoe bend" of the James River and is today enjoying an emerging renaissance as a business and tourist attraction. Scottsville is a destination for water recreation activities, convenient access to the James River, farmer's markets, festivals and year-round ambience as a historic town. The Town of Scottsville retains a small-town character with a strong reliance on citizen involvement to accomplish its community goals.

In 2017, the Town of Scottsville's population was approximately 594 individuals, with a median age of 43 years old. Residents of the Town are primarily Caucasian (90%), with the remaining population composed of African American (6%) and Hispanic (2%) residents. Due to the Town's high concentration of single-family households and its proximity to Scottsville Elementary School, the community seeks recreational development that provides activities for diverse, family-oriented, and wide-ranging age groups. In addition, residents of "Greater Scottsville" (individuals living within approximately 15 miles of the Town of Scottsville, including portions of Albemarle, Fluvanna, and Buckingham Counties) have expressed interest in the project and should benefit from its completion.

The Van Clief Nature Area is a 63.21-acre property that was acquired by the Town of Scottsville, largely as a gift, in 1976. A southern portion of the site is situated within the Scottsville National Historic District, directly adjacent to the Town's central business and residential districts. It is less than half a mile from the James River, the Virginia Department of Game and Inland Fisheries (DGIF) James River Management area, and the canal basin parks. The VCNA is planned as a large, non-vehicular, community park that encompasses the 5.5-acre Scottsville Lake, upland forest, varied wildlife habitat, and currently undeveloped walking/biking trails. The goal of the VCNA is to provide recreational access to the Scottsville community, contribute to the Middle James River Greenway System, and to link the headwaters of Mink Creek to the James River Waterfront in Scottsville. Currently, the access points to the park are 1) vehicular access approximately 0.5 miles from downtown Scottsville on Hardware Street and 2) pedestrian access from downtown via Jefferson Street.

Recommendations for trail development in the Town of Scottsville are included in several existing planning documents, including: the Virginia Outdoors Plan, the Albemarle County and Town of Scottsville Comprehensive Plans, and the Bicycle and Pedestrian Integrated Plan developed by the Town of Scottsville and the Thomas Jefferson Planning District (TJPDC), and the Virginia Department of Transportation's (VDOT) "Reinvesting in Scottsville's Heritage Study (2003)".

Figure 2. Contextual Map of VCNA and Town of Scottsville



Map by Conor Phelan, Chesapeake Conservancy

## **Administrative History**

Daniel and Margaret Van Clief gave the majority of the VCNA property (approximately 51 acres) to the Town of Scottsville in 1976. The remaining core areas of the park were acquired in 1977 from several adjacent property owners. In June 2005, the Town Council adopted an ordinance that formally designated the property as the “Van Clief Nature Area”. According to the Comprehensive Plan, one of the Town’s key goals is to “Encourage the development of tourist attractions that reflect Scottsville’s natural, historical and environmental qualities...Develop public parks, walking paths and recreational and informative attractions”.

In 2014, the Town began negotiations with adjacent landowners to acquire additional land easements for a park entrance and creek protection at the Jefferson Street public terminus. These negotiations culminated in land donations from Doug and Kelly Golder and Joan Anderson as well as a lawsuit with Albemarle Properties LLC, owners of a parcel along Jefferson Street. This lawsuit was settled in favor of the Town of Scottsville with the requested easement granted. The easements from Golder and Albemarle Properties LLC enhance the VCNA Jefferson Street entrance. The Anderson easement protects the eastern bank of Mink Creek and provides access to the Overlook Trail. Additional information about previous ownership of the property is included in the “Historical Use” section of this document.

## **Park and Recreation Needs**

Van Clief Nature Area (VCNA) is proposed to be developed as a large community park, providing non-motorized access to natural areas, trails and Scottsville Lake. According to the Virginia Outdoors Plan, the VCNA is designated as a small portion of the James River Heritage Trail (85). The Virginia Outdoors Plan notes the role of the VCNA in providing an additional destination along the James River, contributing to a historic, natural, and ecologically diverse regional trail network.

Specific community needs were determined after an extensive community meeting in late 2013. On November 12, 2013, a community meeting was attended by approximately 65 Scottsville residents who met in small groups to share their ideas and priorities for recreational development in the VCNA. The top priorities for recreational development expressed by participants were 1) trails, 2) maintaining the natural character of the park, 3) improved access for all park patrons, 4) well-maintained grounds and facilities, and 5) lake access for fishing. Other potential recreational activities identified were swimming, a dog park, and a meditation garden. Participants suggested occasional interactive programming, including star gazing, geo-caching, birding, Water Rescue Training, Boys & Girls Club projects, and local running races.

More than 90 percent of respondents stated that recreational development of the VCNA was either very important or moderately important to Scottsville's economic prosperity because it should bring people to the area, further solidify the Town as a destination, increase use of local businesses, increase residential property values, promote partnerships within the Town, and be a valuable component of the Town's Marketing Plan. Participants envisioned the VCNA legacy to be a place for families to play together, preserve open space while the Town expands, promote healthy lifestyles, and increase awareness of environmental stewardship.

Throughout the Scottsville Comprehensive Plan, pedestrian safety and access recurs as a means of community health and economic development. VCNA is centrally located in town with paths and trails that can expand to connect downtown to uptown and the residential areas for practical, recreational, and tourist uses. This trail network, referred to as the emerald necklace, should be expanded within the town limits and in the greater Scottsville region. Accessible VCNA improvements are all the more important because of these community-wide benefits.



## **Adjacent Development**

The VCNA is directly adjacent to several historic properties. Small World World War II cottages border the entrance easement to the west; and two properties on the National Register of Historic Places overlook the park on the east: Mt. Walla (1790) and Riverview (1812.) The Paulett Town/Stony Point subdivision is located north of the park.

## **Nearby Recreational Facilities**

The VCNA is located in close proximity to downtown Scottsville (surrounded by Valley Street, Jefferson Street, and Jackson Street) and is approximately two miles south of Scottsville Elementary School. As a large Community Park, the VCNA complements other nearby Albemarle County Parks and Recreation system (ACPR) parks including Dorrier, Totier and Walnut Creek Parks. Dorrier Park is a small (2-acre) park located within Town limits, less than a quarter mile southwest of VCNA with several athletic fields, a playground and a picnic shelter. Totier Park is a rural, large recreational area (209 acres, with 69 water acres) with boating permitted. Finally, Walnut Creek is a 525-acre park that allows boating, swimming, and fishing, with several amenities including bike trails, picnic tables, grills, and an 18-hole disc golf course. Due to the close proximity of the VCNA to these key commercial assets and recreational areas, the VCNA is planned to provide low-impact access to natural areas.

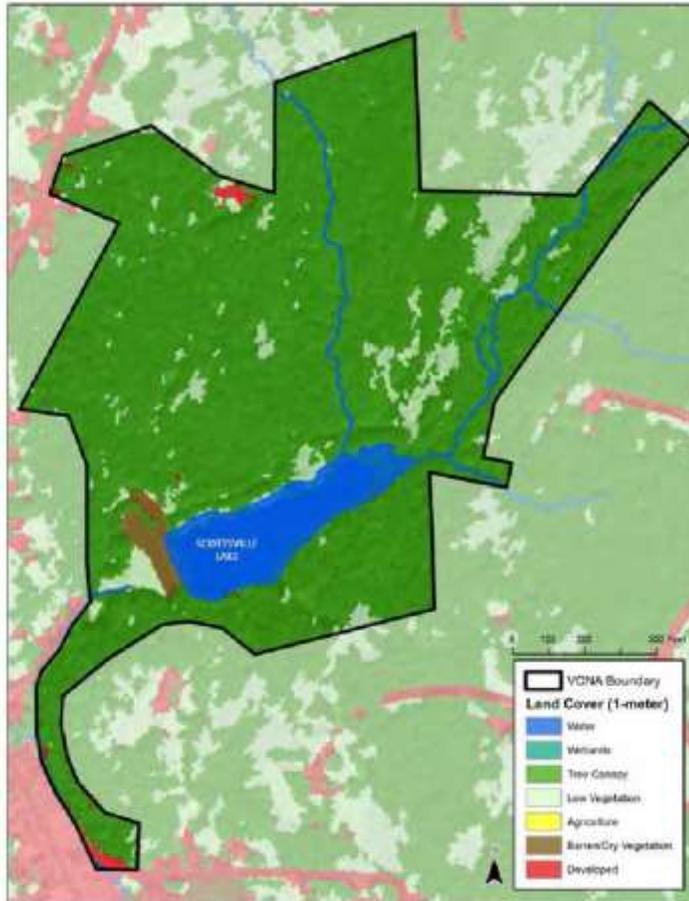
## **Regional Context**

Additionally, the VCNA is located within the Virginia Department of Conservation and Recreation's (DCR) James River Heritage and Recreation Corridor. The "Envision the James" Initiative was a collaboration between the James River Association (JRA), Chesapeake Conservancy and National Geographic. The goal of the James River Heritage and Recreation Corridor's Initiative to "Envision the James" was to support the development and enhancement of heritage sites and recreational amenities, allowing communities to reap the benefits of increased tourism and improved quality of life. As such, VCNA received ample support from DCR as well as the James River Association in creating a destination along the proposed braided trail network envisioned along the James River.

# 3 Existing Conditions

## Existing Site Conditions

Figure 3. VCNA Land Cover, Map by Conor Phelan, Chesapeake Conservancy



## Natural Resources

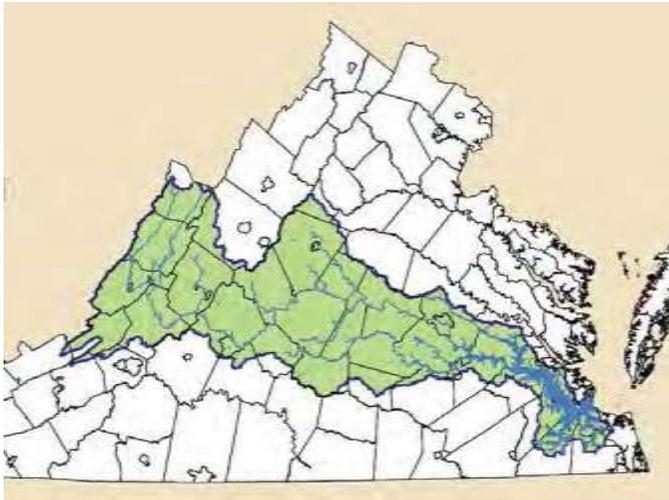
The Van Clief Nature Area is a largely undeveloped area, characterized by a varied landscape and terrain, a central water feature, second growth forest with typical eastern deciduous species and successional areas, steep slope and numerous small streams. The VCNA also serves a critical flood protection function for the Town of Scottsville.

### I. Hydrology

The James River Watershed encompasses approximately 10,000 square miles, which makes up almost 25 percent of the Commonwealth of Virginia. The James River Watershed is comprised of three sections (Lower, Middle and Upper) – the Town of Scottsville is located in the Middle James portion of the watershed, which runs from Lynchburg to the Fall Line in Richmond.

Mink Creek runs south through the Town of Scottsville and empties into this James River basin. It drains a 600-acre watershed to the west and a 300-acre watershed to the east. After a heavy rain, the west watershed typically carries about four to five times the capacity of the east watershed. Historically, the Town of Scottsville has dealt with substantial flooding when the James River has reached its maximum capacity and there is a heavy rain on the east watershed. Mink Creek Dam is a constructed flood control project that was completed on Mink Creek in 1977 to cope with this issue, discussed further in the “Existing Infrastructure” portion of this document.

Figure 4. James River Watershed



## II. Vegetation

The VCNA is composed of both second-growth upland forest and upper marsh/wetlands. The US Environmental Protection Agency (EPA) defines a forested upland as areas characterized by tree cover (natural or semi-natural woody vegetation, generally greater than six meters tall) with tree canopy accounting for 25 to 100 percent of the cover. A portion of the tree species shed foliage simultaneously in response to seasonal change.

The EPA defines upper marsh and wetlands as areas where the soil or substrate is periodically saturated with or covered with water.

The northeast quadrant is characterized by moderately steep slopes, and beech/oak/maple forest cover. Mountain laurel, Solomon seal, blueberry and (perhaps) wild ginger are found on the slopes. Ferns cling to the eroding stream banks in this area. A transitional edge interspersed with several species of pine and an open area mark the location where soil was removed to create the dam. An interesting variety of mosses spread across this area and into the adjoining woods.

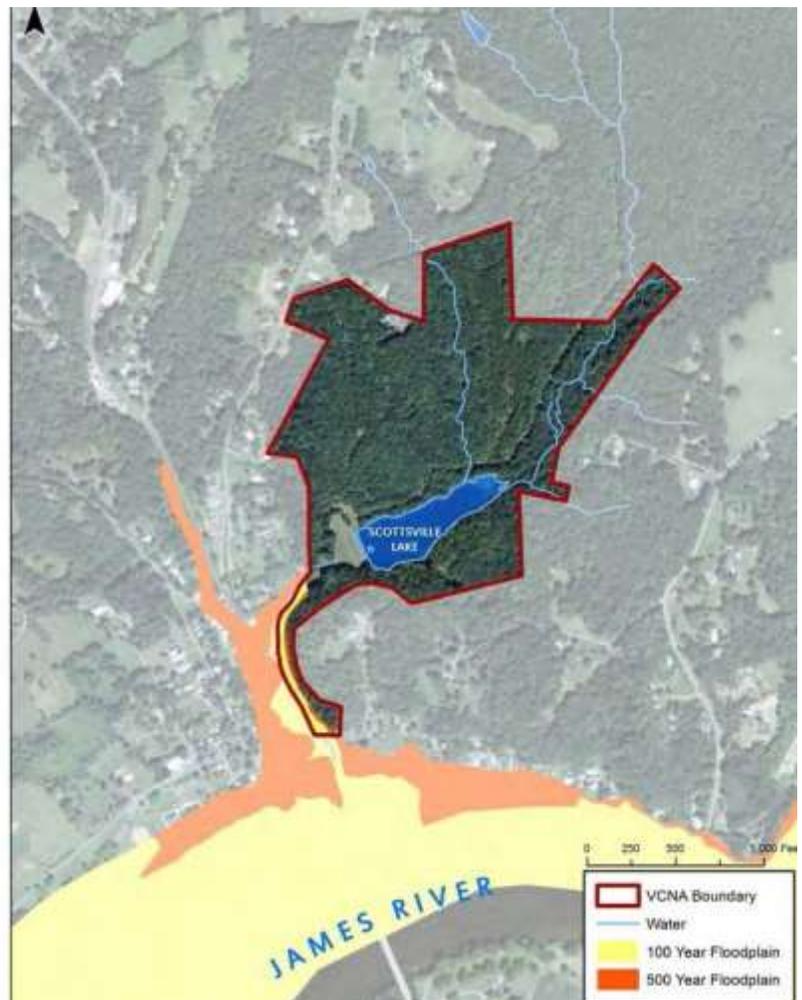
The upper end of the lake is a marshy area with typical wetland species including cattails, jewelweed, and arrow arum. Small patches of cattails and jewelweed identify intermittent wet areas along the RSWA sewer line. The dam structure, spillway and “meadow” area below the dam are grassed areas regularly mowed for flood control management.

## III. Wildlife

Wildlife sightings within the VCNA include species such as blue heron, bald eagle, otter and several turtles (including Eastern painted turtle and spotted turtle). A yearlong seasonal survey of vegetation and wildlife should be undertaken to identify species of special concern and interpretive interest.

According to a Virginia Fish and Wildlife Service Report compiled by the Virginia Department of Game and

Figure 5: VCNA Hydrology and Floodplains



Map by Conor Phelan, Chesapeake Conservancy

Inland Fisheries, there are 27 species with Federal or State Status, Tier I (Critical Conservation Need) or Tier II (Very High Conservation Need) status concern for conservation located within a 3-mile radius around the Town of Scottsville. These species are listed in Appendix I.

In addition, VA DCR's Division of Natural Heritage searched its Biotics Data System for occurrences of national heritage resources for the VCNA defined area. National heritage resources include habitats of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities and significant geological formations. The Biotics Data Systems found that the Yellow lance (*Elliptio lanceolata*), a freshwater mussel, has been historically documented on the VCNA site. As a result, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws or regulations to minimize adverse impacts to the aquatic system.

#### **IV. Soils and Topography**

According to the United States Geological Survey (USGS)'s 1993 Geologic Map of Virginia, the VCNA exists over metagraywacke, quartzose schist, and mélange bedrock. Metagraywackes are quartzose chlorite or biotite schists containing very fine to coarse granules of blue quartz. Primary graded laminations are visible on the rock due to geologic shearing that gives it a distinctive pinstriped appearance in weather surfaces, especially perpendicular to schistosity.

On December 11, 2013, the US Department of Agriculture's (USDA) National Resources Conservation Service (NRCS) collected soil survey data for Albemarle County and Fluvanna County, Virginia. This survey found that the majority of the VCNA is made up of Manteo channery silt loam.

### **Cultural Resources**

#### **I. Archaeology**

On May 4, 1985, members of the Department of Anthropology at University of Virginia surveyed the VCNA area for archaeological resources. This "Phase 1/Reconnaissance" found a prehistoric Native American Monacan artifact scatter, dated prior to the arrival of Europeans in the United States. This artifact scatter included artifacts such as quartz point fragments and historic shards, which indicate Monacan use of the area for tool making prior to the arrival of Europeans. Where the artifact scatter was found, the surface of the ridge top had been exposed after suffering from slight erosion and may have been transported by water.

Architectural Historian Andrea Kampinen at the Virginia Department of Historic Resources (DHR) found that, as of October 2012, the historic properties within the VCNA should not be adversely affected by the proposed VCNA project undertaking.

#### **II. Historical Use**

Prior to the establishment of the Town of Scottsville, the Monacans inhabited the Virginia piedmont region for over 10,000 years. For much of that time, they lived in small groups that moved seasonally, hunting and gathering for subsistence. The nearby river supplied the Native Americans with fish and edible riparian plants.

Over time, the Monacans adopted a more agricultural lifestyle, and by 900 AD they had begun to establish permanent villages along the James River. They grew beans, maize, squash and tobacco in the fertile soil deposited in the floodplain of the James. Even at this time, the James River was a major trade and transportation artery. It was used by the Monacans to trade crops, soapstone, and other goods with area tribes.

In 1732, Edward Scott, the Burgess, Magistrate, and Sheriff of Goochland, patented 550 acres of land on the upper northwest curve of the James River's "horseshoe bend". Due to the area's fertile lowlands and proximity to the James River, a community known as Scott's Landing flourished in this location. Scott's Landing was incorporated as Scottsville in 1818 and came to play a central role in the region's development. The present day VCNA was likely a portion of a 50,000-acre joint land venture between Peter Jefferson and his friend William Randolph. This land venture was located along the Rivanna River, on the north side of the James River, where Jefferson began to settle in Albemarle County.

Following the establishment of Albemarle County in 1744, this settlement was selected as the Albemarle County seat due to its centralized location. Edward Scott's house, easily accessible by ferry, served as the county's first meeting place and its courthouse for at least a year. In 1762, the county seat was moved to Charlottesville. Although this move did much to diminish the prestige and influence of Scott's Landing, the town remained an important port, as its location on a natural ford continued to make it ideal for shipping. Scott's Landing depended on oxen and dugout canoes for trade, as farmers used oxen to roll hogsheads of tobacco to market.

During the Revolutionary War, Scott's Landing, like the nearby Point of Fork, was used to store Virginia's military supplies, including guns, gunpowder, and troop provisions. The events that occurred at Scott's Landing are often referred to as the turning point of the American Revolution. In 1781, British General Charles Cornwallis made his way to Scott's Landing to seize Virginia's military resources. The Marquis de Lafayette was assigned to protect the town's military stores, located in the old Albemarle Courthouse. Lafayette set up camp at an unconquerable site on Mechunk Creek, between the British Army and its desired war provisions. General Cornwallis was unable to advance, was forced to change his front and retreated to the Eastern Coast. This helped to set the stage for Cornwallis' surrender at Yorktown.

By 1830, as many as 500 batteaux (long, light, flat-bottomed boats with sharply pointed bows and sterns) traveled from Lynchburg to Richmond. Traders would transport tobacco to Richmond and return to Scottsville with European imports, furniture, dishes and clothing. With the help of the batteaux, Scottsville became one of the busiest trading centers on the James River. In 1832, the James River and Kanawha Canal Company (JR&KC) began building a new canal. The canal was completed in 1840, linking Richmond to Lynchburg and seemed to assure Scottsville a prosperous future. At the same time, a national debate existed over whether canals or railroads would be the most useful as a transportation technology for the country. When the Civil War began, a contract for a French company to purchase the canal remained unsigned and left the canal's future uncertain.

During the Civil War, Union Generals Wesley Merritt and Thomas C. Devin led the destruction of Scottsville's section of the Canal. Merritt's troops burned the Woolen Factory, Beal's Flour Mill, the old brick Candle

Factory on the Canal Basin, a tobacco warehouse, a machine shop, and a number of the town's stables. The JR&KC could not overcome the years of financial hardship incurred by the war, a series of devastating floods, and the growing dominance of the railroads. In 1880, the company conceded defeat and turned over the entire canal to the Richmond and Allegheny Railroad Company (later the C&O and CSX). The railroad company laid its tracks on the old canal path and used the canal boats to transport railroad ties. Canal service ended in August 1881, bringing the "golden era" of the canal to an end.

It took Scottsville nearly four decades to recover from the Civil War. The area's farms, businesses, and the canal suffered extensive damage at the hands of the Union Army. The Union victory brought a labor shortage (due to the death of many local Confederate soldiers and the freedom of the enslaved, who sought employment elsewhere). It wasn't until the 1940s that a new industry brought new jobs and, as an extension, new homes. Tourism is now a growing part of Scottsville's economy and resources.

Due to the Town's close proximity to the James River, Scottsville has been the victim of 21 floods (defined as water levels of 20 feet or more above the average low water level). The record and height of the historic floods that have devastated Scottsville are depicted on the pylon located at Canal Basin Square. Following the destruction in the region from Hurricane Camille (1969) and Hurricane Agnes (1972), Mayor Raymon Thacker secured Scottsville's declaration as a federal disaster area and obtained federal funding to build a dam on Mink Creek and a flood levee. Additionally, in 1972, Daniel and Margaret Van Clief gave the majority of the VCNA property (approximately 51 acres) to the Town of Scottsville. Prior to the donation of the Van Clief property, the present-day VCNA was likely used for agriculture as a part of larger estate. In June 2005, the Town Council adopted an ordinance that formally designated the property as the "Van Clief Nature Area."



Figure 5. "Horseshoe Bend" and Valley Street

## Existing Infrastructure

### I Mink Creek Dam/Flood Impoundment Area

Scottsville Lake is part of a critical flood control project protecting the Town of Scottsville. Mink Creek Dam is a constructed flood control project on Mink Creek, completed in 1977. The Scottsville Lake acts as a surge tank during heavy rainfall, and the outflow is regulated by an outlet structure at the downstream toe of the dam. Mink Creek runs south through the Town and empties into the James River, continuing to flow naturally during normal water conditions. When the levee gates are shut to prevent high water entering from the James, the Mink Creek outflow is pumped through the levee. The Mink Creek outflow must be carefully regulated by manual operation of the outlet structure valve so as not to overwhelm the pumps.

The local flood protection system in the Town of Scottsville consists of a partially ripped earthen levee, a concrete floodwall, two roadway closures, a gated outlet structure, a pumping station and two designated ponding areas. The levee was completed in 1989 and is approximately 3,635 feet long with a height varying between 0 and 21 feet, a top width of ten feet, and a bottom width varying between 0 to 100 feet.



Figure 6. Ice Skating on Moore's Pond

The line of protection extends from the Albe-

marle-Fluvanna County line westward paralleling the James River, just north of the railroad tracks to a point upstream of the Town's former school. This levee is a reinforcement and augmentation of the existing levee with an extension on the eastern end.

Due to the presence of Mink Creek Dam and the Flood Impoundment Area, DCR's Dam Safety Regulations that are applicable to the VCNA must be considered in design and management plans. This flood protection system is designed to provide 100-year flood protection to areas behind the line of protection in the Town of Scottsville. The Federal Emergency Management Agency (FEMA) Floodway Restrictions prohibits any encroachment that will result in a rise in the 100-year flood elevation. FEMA defines an "encroachment" as any floodplain development that could obstruct flood flows – examples include fill, a bridge, or a building. The development standards for a floodplain encroachment depend on both the project location and the amount of information provided on flood hazard maps. No new development is permitted within the regulatory floodway unless a licensed professional engineer demonstrates that the proposed encroachment shall not result in any rise in the 100-year flood elevation. There are some situations (such as dams, bridges or rivers) in which a project in the floodway must be justifiable even though it would cause a rise in the flood elevation. To justify a project, the applicant must apply to FEMA for 1) conditional map revision before development occurs and 2) a final letter of map revision after development has been completed.



Figure 7. Scottsville Flood of August 20, 1969  
(Hurricane Camille)



Figure 8. Construction of Scottsville's Levee, 1985

## II Access and Circulation

Since 1977, and to date, the Town has used Jefferson Street Extended to gain access to the VCNA for the purpose of building the flood control project, regular maintenance of the dam and the outlet structure, and for operation of the outlet structure valve during high water. In 2015, the Town secured an easement over the adjacent property to provide pedestrian access to the park from the terminus of Jefferson Street to the existing concrete bridge over Mink Creek and to guarantee the maintenance access to the VCNA property line at the end of the private street.

Currently, the only vehicular access point to the park is approximately 0.5 miles from downtown Scottsville from Hardware Street, with temporary parking located outside the VCNA gate entrance. Additional undeveloped pedestrian access is available from the Stony Point/ Paulett Town subdivision along the existing sewer line.

An additional pedestrian access is planned from the Paulett Town/Stony Point subdivision when the Mink Creek Trail is fully developed along the RSWA sewer line. An easement has also been granted by the adjacent landowner to route the trail around an existing home-owner's property.

## Utility Access

The Albemarle County Service Authority (ACSA) maintains a sewer line, constructed from 2001-2002, managed by the Rivanna Water and Sewer Authority (RSWA) for the Stony Point (known as Paulett Town) subdivision to the north. ACSA also has a water line easement where the VCNA property adjoins Hardware Street. In addition, a cell tower lease area is located within the VCNA property. The cell tower is currently owned by the American Tower Corporation and carries equipment for Verizon Wireless and NTELOS. The site is serviced monthly by a technician. Verizon Wireless and NTELOS have access rights to this lease area at all times.



Figure 9. Public Infrastructure Map Map by Conor Phelan, Chesapeake Conservancy

# 4 Park

The Van Clief Nature Area is planned as a large Community Park in accordance with the Virginia Outdoors Plan park classification. The park is intended primarily for use by Scottsville residents, including families, youth organizations, local business customers, fisherfolk and others seeking a close-to-home outdoor recreation experience. As the Town continues to grow as a tourist attraction, the VCNA's proximity to the Downtown area, with walking connections to the James River waterfront, as well as the trout stocking of Scottsville Lake by the Virginia Department of Game and Inland Fisheries can be expected to draw visitors from Charlottesville and the surrounding Albemarle and Fluvanna counties as the park is developed. As a component of the state-designated James River Heritage Recreation Corridor, with access to the John Smith National Historic Water Trail on the James and increased visibility through regional outdoors marketing efforts, the value of the Van Clief Nature Area's natural and cultural resources will become increasingly prominent.

## **I. Desired Visitor Experience and Community Recreation Needs**

According to the VCNA Community Meeting held on November 12, 2013, attendees determined that the top priorities for the park are:

- Trails
- Protection of the park's natural character
- Improved visitor access
- Well-maintained grounds and facilities
- Lake access for fishing
- Environmental stewardship

This reflects the community's desire for a public space that provides accessible trails, fishing, and well-maintained park amenities, while conserving the natural character of the VCNA. Participants communicated the need for a place for families to recreate together, preserve open space while the town expands, promote healthy lifestyles, and increase awareness of environmental stewardship.

## **II. Management Objectives**

### **a. Town Asset**

VCNA is a vital asset for the Scottsville community. Town Council and staff are responsible for implementing this plan. Philanthropy and grants will match the budget commitments of Town Council to the greatest extent possible. Likewise, volunteer efforts will supplement the management and maintenance work of Town staff. State and local agencies are vital partners in this effort.

**b. Low Impact Development (LID)**

The Greater Scottsville community and those invested in the VCNA’s future desire a visitor experience that provides access and recreational opportunities while maintaining the park’s natural scenic beauty and character. This desire and community need call for low-impact development (LID) management schemes and techniques, highlighted by non-vehicular access to the park.

According to the American Planning Association (APA), LID is “an ecologically friendly approach to site development and storm water management.” With the goal of using multiple on-site techniques to avoid generating runoff and increase the landscape’s ability to detain rainwater and capture pollutants, it relies on the cumulative benefits of small-scale prevention and treatment techniques to encourage sustainability and limit development impacts to the land, water and air. LID techniques are considered an important component of the Town of Scottsville’s strategy to advance environmental sustainability and resilience in the area.

The 2007 Virginia Outdoors Plan contains a Recreational Opportunity Spectrum (ROS) Setting Characterization. The VCNA is characterized by predominantly “natural appearing” environments, with moderate evidence of the appearances, sights, and sounds of man. These moderate evidences usually harmonize with the environment and conventional motorized use is very limited.

**c. Lake Management and Carrying Capacity**

The 2007 Virginia Outdoors Plan cites the benefit of allocating large, undeveloped tracts of land, like the VCNA, that provide nature access for visitors. This type of land ensures that public space is available for future generations, especially as the population grows. This benefit is planned for consideration in all aspects of resource and site management for the VCNA.

In the Town’s Community Meeting in 2013, residents reported recreational fishing on Scottsville Lake as one of the primary desires for recreational activity in the VCNA. As a result, Scottsville Lake was first stocked with trout on October 24, 2014, following approval by Virginia Department of Game and Inland Fisheries (DGIF). The Virginia DGIF designates Scottsville Lake as a “Priority A” water body. Due to this designation, the lake will be stocked eight times between October 1st and May 30th each year, with 150 trout (an annual total of 1,200 trout). Additionally, the lake will be stocked each summer with 300 channel catfish. At this time, all other fish species are self-sustaining and do not need stocking.

The Town plans a handicap accessible entrance and limited parking off of the Hardware Street park entrance road, in accordance with the Americans with Disabilities Act (ADA), a fishing pier, and stocking fish year-round with trout and catfish (seasonally), subject to plan approval. DGIF enforcement agents will play an instrumental role in monitoring fishing on the Lake by ensuring visitor compliance with state regulations. Due to the lake’s proximity to Charlottesville and the greater Richmond Metropolitan Area, moderate usage is expected (ie. 10-20 anglers fishing per day during the trout stocking season).

#### d. **Natural Resource Management**

Wetlands, critical slopes, mature forests, successional pine/deciduous forest areas and managed open grassed areas are all physically present within the VCNA. These distinct natural resources should be managed according to their variable needs.

#### **Wetland/Marsh Areas**

Wetlands are defined by the U.S. Fish and Wildlife Service (USFWS) as “land that has a pre-dominance of hydric soils and that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support...hydrophytic vegetation adapted for saturated soil conditions.” The predominate wetland area is found at the headwaters of the lake; portions of the low lying shoreline on the western edge of the lake are seasonally flooded and subject to degradation from small craft launching and fisher folk. A small stream also flows into the lake at this point. Since both the planned Mink Creek and Arrowhead trails converge within view of the lake at this point, considerable visitor use of this area can be expected and the area should be monitored for erosion, stream silting and shoreline degradation. Care should also be taken in developing a lakeside trail around the headwaters of the lake to the eastern side of the lake to ensure that these wetlands are not adversely impacted.

#### **Critical Slopes**

Critical slopes require protection in order to maintain the existing balance between soils, geology and vegetation. Critical slopes are defined herein as slopes of 25 percent or greater.

Concerns regarding disturbance of steep land become pronounced in forested areas due to generally shallow soils and the length of grade on slopes, as soil erosion, surface runoff and septic system contamination are amplified in these areas. Aesthetic concerns center on the disruption of relatively pristine wooded character, which provides a sense of continuity, natural beauty, and wilderness, and the resultant impact on visitor experiences

The Monacan Trail traverses some moderately steep slopes descending to the stream crossing; where possible the trail should avoid close proximity to the stream banks. Where this trail descends to meet the Mink Creek Trail, some water diversion bars may be needed for user safety, although at this point the trail is essentially on bedrock.

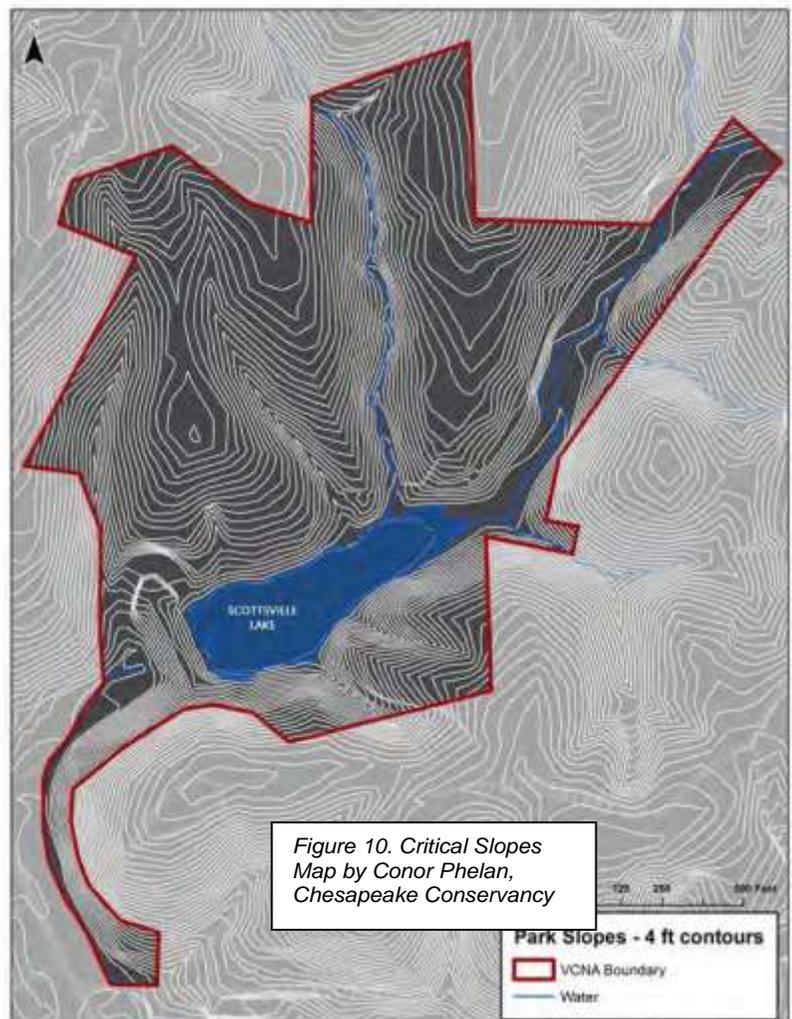


Figure 10. Critical Slopes Map by Conor Phelan, Chesapeake Conservancy

Two proposed trails could have the potential to adversely impact the critical slopes on the eastern side of the park. The Overlook is planned to be accessed from the Victory Hall parking lot and traverse the steep terrain to a confluence with the dam breast above the “groin” area. A future connection to a trail along the eastern lake shoreline will also encounter steep slopes.

### **Cultural Resource Management**

Due to the deeply entrenched cultural heritage of the surrounding landscape of greater Scottsville, cultural and historic resources should be considered in site design, recreational planning, and programming for the VCNA. Historic and cultural resources should be integrated as a viable part of the VCNA for the benefit of the surrounding community, organizations and agencies well into the future. Good stewardship of historic and cultural resources are planned to be practiced within VCNA through the potential use of historic markers, interactive exhibits, and recreational programs highlighting the Native American Monacan archeology site, pedestrian access from downtown Scottsville, and Mink Creek ecology, among other areas.

### **Site Considerations and Potential User Conflicts**

Developing a well-planned trail system within the VCNA requires meeting diverse and expanding demographic needs. The trails within the VCNA are planned to largely service the needs of walkers and hikers seeking a nearly pristine nature experience, while bicycle accommodations should be incorporated to address transportation needs, especially from the Paulett Town subdivision. Additionally, a balance needs to be established between the development of trails and maintenance of their culturally appropriate primitive nature. Trails should be accessible for the diverse array of users visiting the VCNA, yet their development should fulfill low-impact development (LID) standards and maintain a respect for the natural environment and its character. Therefore, the design and planning process for the VCNA must consider the potential conflict of needs between walkers, hikers, fishermen, and bicyclists as well as the location of restroom facilities and parking, and their potential conflict with user’s recreational experience.

Given its close proximity to the Mink Creek Trail, the vehicle turnaround for handicapped and canoe/kayak drop off will require particular attention in the development phase. This area is planned to also accommodate restrooms, emergency/ maintenance vehicle access to lake and handicapped access to the lake and fishing dock. Although the volume of vehicular traffic will be limited, there is still a significant potential for user conflicts between vehicles (some with boat trailers) returning to the parking lot and trail users both mobile and handicapped) heading to the restrooms, picnic area and parking lot. A clearly delineated separation between the vehicle turnaround and the Mink Creek Trail is also needed, either in the form of fencing or substantial shrubbery.

# 5 Conceptual Development

## **Introduction**

The proposed conceptual development plan for the Van Clief Nature Area (VCNA) consists of hiking trails, picnic areas, an ADA-compliant fishing pier, limited seasonal canoe and kayak access and restrooms. The proposed trail project is a component of a larger network of trails located within the James River Heritage Trail Corridor and the Middle James Greenway System. The VCNA trail system is planned to provide direct pedestrian, non-vehicular access from the Scottsville Downtown Business District to the park. In addition to offering daily recreational opportunities for park visitors, developing the VCNA is a key preliminary step in creating a walkable community for the Town of Scottsville. It is envisioned to link existing and planned residential neighborhoods to the Downtown Historic District and the James River Waterfront, while providing invaluable recreational and educational opportunities for the community.

## **Design Concerns**

The planning and design of the VCNA must address several key concerns: 1) sensitivity of the dam structure, 2) handicapped accessibility, 3) vehicular access control, 4) stream protection, and 5) shoreline protection.

### **1. Sensitivity of Dam Structure**

The design of the Mink Creek Trail incorporates a pedestrian bridge behind the outfall structure at the base of the dam. As the Mink Creek Trail is planned to be one of the most highly used routes within the park, users must be made aware that walking up the face of the dam is strictly prohibited. Adequate educational signage must be installed along this trail to inform users about the purpose of the dam and to prevent them from accessing the dam structure. In addition, the dam structure will be frequently monitored.

### **2. Handicapped Accessibility**

Due to the topographic constraints within the VCNA and the proposed design of switchbacks surrounding the dam, the park cannot be designed in an entirely ADA compliant manner. However, park areas highly desired by the Town's constituents and those areas/trails expected to have the highest foot traffic should be built in a way that provides appropriate accessibility, given environmental constraints, to the majority of people, with particular attention paid to groups with special needs, such as the elderly and children. The importance of improving accessibility remains in all parts of the nature area. The highest priorities for improving accessibility are the fishing area and its connection to parking, and the Mink Creek Trail from Pine Street to the handicapped parking area.

### **3. Vehicular Access Control**

No vehicular traffic, except for maintenance and emergency crews will be permitted beyond the designated handicapped parking and drop off for access to the Mink Creek Trail and future fishing pier. Therefore, monitoring vehicular traffic within the VCNA is vital to preserving the natural character of the park and maintaining a pedestrian-friendly recreational environment. Although not prohibited, creating or improving boating access is not a for the lake.

### **4. Stream Protection**

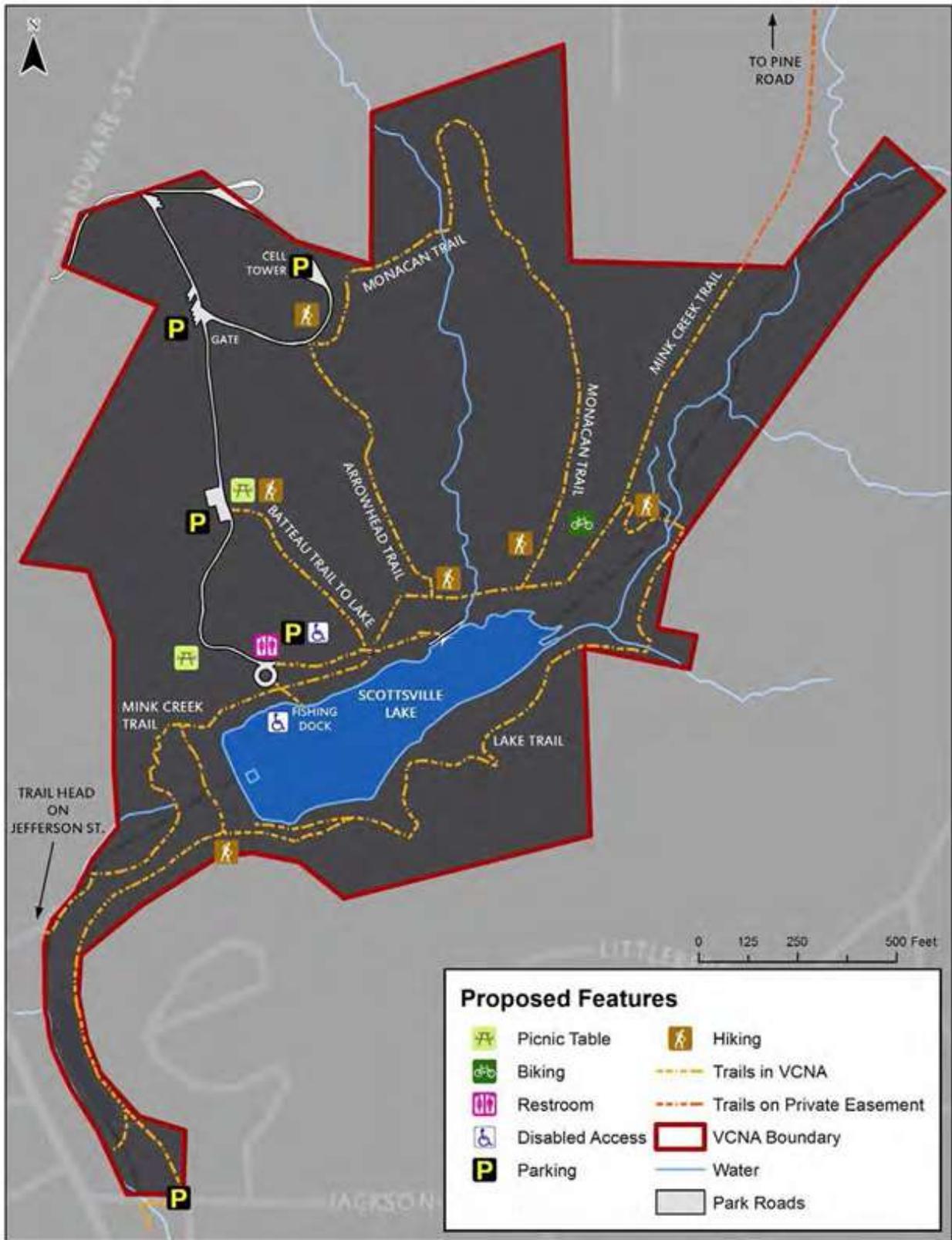
The proposed trail network is planned to parallel Mink Creek and the greater stream network within the VCNA. If designed as planned, this would allow park users to access sensitive water bodies. This risk requires ample and consistent education about water protection through park signage, consistent park maintenance, adherence to Low Impact Development standards, visitor compliance with usage of designated trails, and the use of riparian buffers.

The James River Association obtained a grant from the Chesapeake Bay Foundation to install a riparian buffer at the VCNA below the dam. This riparian buffer protects the south bank of Mink Creek as well as provide visual screening from directly adjacent residential buildings. These riparian buffers were installed in November 2015.

### **5. Shoreline Protection and Access**

Designated fishing spots should be identified along the shoreline to minimize impact on the adjacent slopes and wetland areas. A proposed "Lakeside Trail" would also bridge the wetland headwaters to connect with the Mink Creek Trail. The feasibility of developing this trail will depend on careful design, engineering, and consistent monitoring for environmental degradation to the shoreline and adjacent steep slopes as well as trail user safety. Research, careful design, and technologically advanced bridge concepts will be considered in this planning.

Figure 11. VCNA Conceptual Design Map by Conor Phelan, Chesapeake Conservancy



# **Facility Development**

## **1. Mink Creek Trail**

The proposed Mink Creek Trail is planned to provide pedestrian, non-motorized access to the Van Clief Nature Area (VCNA) directly from the Scottsville downtown business district via Jefferson Street and an easement over private property to the existing bridge over Mink Creek. The bridge accesses a small “Meadow” area below the dam (Figure 10) with the trail proceeding along the wooded perimeter up to the dam face. A foot bridge located behind the outfall structure leads up the curtain wall, across the spillway and to the waterfront and park interior. The aforementioned DCR/Federal Recreational Trails grant was obtained to fund trail development and ancillary facilities in the Meadow area below the dam. When fully developed, the Mink Creek Trail will serve as a key pedestrian connector between the Paulett Town subdivision to the northeast and the Historic Downtown District. In the future, a limited number of parking spaces at the Pine Street entrance should be developed to alleviate blockage of neighboring driveways.

Since the trail is largely located over the RSWA sewer line, minimal grading will be required, making it available for bicycle use as well between the northern terminus and dam spillway. Bicycles cannot be permitted on the dam breast, curtain wall or outfall bridge. Appropriate signage and bicycle racks should be installed when the trail is fully developed and users encouraged to park their bikes and walk to the downtown area attractions.

Due to topographic constraints, the trail is required to be routed in close proximity to Mink Creek. The Jefferson Street entrance to the Meadow area will be wheelchair accessible. An ADA-compliant short “connector” from the designated handicapped parking slots below the picnic area will provide access to the trail and future fishing pier. However, the Mink Creek Trail should be built in a way that has appropriate accessibility, given environmental constraints, with particular attention paid to groups with special needs.

## **2. “The Meadow”**

The proposed Mink Creek Trail will lead primarily to a large, open, grassed area below the Mink Creek dam. This is an ideal location for a picnic area and a memorial garden to serve park visitors on a daily basis (Figure 9). This area will also provide park and trail information and contain trailhead markers, directing visitors to other areas of the park.

### **3. Arrowhead Trail/Woodland Walk**

The Arrowhead Trail/Woodland Walk is planned to provide visitor access to the treasured natural areas within the VCNA. This trail starts at the cell tower and connects with the Mink Creek Trail and the lakefront. The Arrowhead/Woodland Walk is planned to undulate throughout the northwest corner of the VCNA, adjacent to the VCNA entrance drive. Although this trail should not experience the same level of foot traffic as the other primary trails, the Arrowhead Trail/Woodland Walk is planned to be an easy level of difficulty, so that it will be appropriately accessible to the most number of people.

### **4. Monacan Trail**

As planned, the Monacan Trail is the most extensive trail located through the ecologically sensitive areas of the park, winding along a stream bed, across moderately steep slopes, through mature forest areas and successional pine/forest areas to its juncture with the Mink Creek Trail paralleling the lake edge. The Monacan Trail shares its trailhead with the Arrowhead Trail, located near the cell towers. A short distance from this point, visitors can choose to walk to the lake edge, reconnect with the Arrowhead Trail to return to the trailhead parking area, or proceed along the Mink Creek Trail to the Downtown district or north to the Pine Street entrance.

### **5. Batteau Trail**

The Batteau Trail is an easy trail, traveling from the future Picnic/Fishing parking area down to the Scottsville Lake. Although this trail is already in use, it parallels a swale/ run-off from the parking "plateau." Therefore, this trail should be clearly delineated to avoid crossing the swale and degrading seasonally wet areas.

### **6. Overlook Trail**

The Overlook Trail creates a new, barrier-free entrance at Valley Street, behind Victory Hall and leading to Scottsville Lake. A future portion of the Overlook Trail may continue alongside Scottsville Lake and connect to the Mink Creek Trail. Due to its trailhead location in the center of the historic district, the Overlook Trail will provide the accessibility and convenience to a wide array of residents and visitors.

This trail creates access from the historic district to the nature area. This is an important connection from the park to downtown, with ample parking at Victory Hall and the park's closest connection to the James River. It also provides a direct path from the dam to the pump station which remains clear of the flash flood area, an emergency management priority. Widening this trail and making it more accessible, for diverse users, as an active entrance is a Phase 2 priority for implementation.

The Overlook trail will provide barrier-free access that will traverse hillsides with excellent views of the historic downtown and Scottsville Lake. An elevated walkway design offers the greatest accessibility and least environmental impact, though possibly at a higher cost than an excavated gravel trail. A preliminary engineering report will specify the route, materials, cost, and permitting requirements. Funding will likely be a diverse mix of state and federal grants and loans, Town general funds, and philanthropic donations.



## **Signage**

Ample signage should be used throughout the VCNA to educate and direct park users (at both primary park entrances, at trailheads, throughout the trails, at information kiosks, and surrounding the dam).

Prominent park entrance and welcome signs are planned for the VCNA's primary entrances

– Jefferson Street and Hardware Street. In addition, park information signage is planned for placement at the main park entrances and the picnic/fishing parking area. This information signage is intended to provide visitors with an overview and map of the VCNA and its trail network, display interactive programming opportunities and special events, and highlight dam safety rules.

Sufficient directional and informational signage is planned for placement at the designated trailheads and throughout the trail network. This signage is aimed to direct users throughout the park, designate bikeable routes, and highlight areas of interpretive interest. In addition, "Saving Scottsville" and dam safety signage will be placed around the Scottsville Lake, especially in areas where users walk adjacent to the dam breast. These signs should explain the Town's history of destructive floods, the dam's importance in managing the flow of water downtown, and safety instructions and rules for park visitors.

There is the opportunity to implement directional signage in the future via a smart phone application that can be freely downloaded by users. This application may direct users along the trails as well as highlight key assets and areas of interest during their visit.

## **Picnic Areas**

There are two proposed picnic areas: 1) "Meadow", a large, open grassed area below the dam at the end of the Mink Creek Trail and 2) "Woodland", adjacent to the proposed restrooms and parking on the VCNA Entrance Drive. These picnic areas are planned to primarily feature picnic tables and green space with the opportunity to construct a pavilion/rain shelter, barbeque pit, and educational demonstration landscaping projects (such as a storm water catchment system) in the future.

## **Fishing Areas**

The Virginia Department of Game and Inland Fisheries (DGIF) stock Scottsville Lake with 150 trout eight times between October 1st and May 30th each year (an annual total of 1,200 trout). Additionally, the lake will be stocked each summer with 300 channel catfish. At present, all other fish species are self-sustaining and do not need stocking. All users are required to hold Virginia Fishing licenses and a Virginia driver's license for visitors 16 and older, between October 1st and June 15th. Users are permitted to keep up to six trout per day. Catch limits for other species are designated according to the regulations set forth by the Commonwealth of Virginia.

A handicap accessible fishing pier is planned adjacent to the Mink Creek Trail at the dam end of the lake. Direct vehicular access to the dock is not possible due to environmental constraints. However, an ADA compliant short trail from the handicap parking area will provide access to the lake.

Since fishing will be the priority use of the lake, boating by canoe or kayak may be limited to the May – October season to avoid conflicts with trout fishing enthusiasts. Canoes or kayaks will have to be carried from the VCNA Drive turnaround area to the lakeside put-in. Careful monitoring of this area may determine the future need for a small dock to minimize shoreline degradation.

## **Roads and Parking**

Vehicular access to the Van Clief Nature Area will be strictly limited to protect the sensitive ecological nature of the resource and the expressed priorities of Scottsville citizens. The Hardware Street entrance is the only vehicular entrance to the park. Since park boundary and environmental constraints will limit this roadway to one lane, a vehicle "turnout" is currently developed at the first road curve to permit safe ingress and egress on this road.

Two small parking areas are planned:

1. Trailhead Parking off the Hardware Street entrance will provide parking for trail users utilizing the Arrowhead and Monacan Trails. This parking is currently developed with 5 spaces. Limited additional trailhead parking can be developed at the cell tower location, provided that it does not interfere with communication operations.
2. Picnic and Fishing Parking, limited to 6-8 spaces, will be accommodated at a relatively flat site midway between the Trailhead parking and the Mink Creek Trail.

## **Restrooms**

Two restroom areas are planned for construction along the VCNA Entrance Drive: 1) adjacent to the “Woodland” picnic area and 2) adjacent to the Mink Creek Trail and handicap parking drop off area. These restrooms should be designed stylistically with the natural aesthetic of the park, with the potential to improve in the future with available funding and resources. Improvements may include installing solar powered aspects.

## **Hours**

The park is planned to be open during daylight hours only. Vehicular traffic beyond the interior parking lot will be strictly limited to handicapped parking, drop off turnaround, and emergency/maintenance access to lake. Appropriate signage and vigilant monitoring will be necessary to ensure the safety of park users and protection of the natural and cultural resources.

## **Park Maintenance**

The management, operation and maintenance of the VCNA will be the responsibility of the Town’s Maintenance Committee, coordinated by the Town Council and assisted by a team of four to six volunteers, who will monitor the trail conditions regularly and report any conditions needing attending to the Committee.

## **Opportunities for Interpretation**

There are several exciting opportunities for park interpretation due to the VCNA's direct adjacency to the Scottsville Downtown Historic District, the unique natural aesthetic of the park's ecology, and the presence of a Monacan archaeological site. These opportunities include educational programming for children; youth fishing days, and birding and wildlife trail walks.

Through creative and educational programming, the Town of Scottsville can encourage children to visit and enjoy the nature trails and park areas at the VCNA. In an effort to inspire a new generation of Americans passionate about public lands and waters, several educational resources are available from the federal government that can be used within the VCNA. For example, the National Park Service recently launched a revised education portal that features more than 1,000 materials developed for K-12 teachers, including science labs, lesson plans, and field trip guides. In addition, fun, interactive exhibits can be built along the trail network and designed for special events, such as Earth Day and National Public Lands Day.

Due to the Town's interest in expanding the fishing opportunities on Scottsville Lake, youth fishing days can be scheduled on an annual, bi-annual, or monthly basis to encourage a family-friendly and community-oriented atmosphere.

Lastly, the VCNA trails may be geared towards highlighting the area's wildlife and native plant species. This programming can be accomplished through the use of signage and interpretation guides available at the park information areas and on a Smart Phone mobile application.

# 6 Proposed Implementation

## **Phase 1 Development (Completed 2015-2017)**

- Completion of DCR Recreational Trails Grant Project
  - Develop trail from Jefferson Street Bridge across dam breast to lake including footbridge behind outfall structure, paving of curtain wall and across spillway, and chain/fence at foot of dam
- Installation of bollards at all designated locations to control vehicular and pedestrian traffic
- Installation of riparian buffer
- Completion of identified “Meadow” Picnic Area amenities
- Design and install key trail and dam safety signage & pet waste facilities
- Install gate to block vehicular access to lake and Mink Creek trail at future handicapped parking site

## **Phase 2 Development (Target for 2019-2021)**

- Upgrade existing picnic/fishing parking area
- Begin design and development of Overlook Trail to dam breast (including pavement across the dam breast)
- Complete Mink Creek Trail to northern park boundary
- Complete Arrowhead Trail
- Complete Monocan Trail
- Construct ADA compliant fishing dock and associated trail access
- Install “Woodland” picnic area facilities
- Plan, design, and install trailheads and trail signage
- Research and develop interpretive signage and educational programs

## **Phase 3 Development (Target for 2022-2025)**

- Install lower bathrooms near Mink Creek Trail
- Evaluate design and development of Lake trail from dam breast to Mink Creek trail on eastern side of lake, subject to environmental constraints
- Installation of remaining trails and interpretive signage

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# 8 Appendices

## APPENDIX 1:

**Species with Federal or State Status, Tier I (Critical Conservation Need) or Tier II (Very High Conservation Need) status concern for conservation**

Status	Tier	Common Name	Scientific Name
FESE	I	Spiny mussel, James	<i>Pleurobema collina</i>
SE	II	Floater, brook	<i>Alasmidonta varicosa</i>
ST	I	Falcon, peregrine	<i>Falco peregrinus</i>
ST	I	Sandpiper, upland	<i>Bartramia longicauda</i>
ST	I	Shrike, loggerhead	<i>Lanius ludovicianus</i>
FSST	I	Skipper, Appalachian grizzled	<i>Pyrgus wyandot</i>
ST	II	Floater, green	<i>Lasmigona subviridis</i>
FSST	II	Pigtoe, Atlantic	<i>Fusconaia masoni</i>
ST		Shrike, migrant loggerhead	<i>Lanius ludovicianus migrans</i>
FP		Bat, northern long-eared	<i>Myotis septentrionalis</i>
FS	I	Fritillary, regal	<i>Speyeria idalia idalia</i>
FS	II	Eagle, bald	<i>Haliaeetus leucocephalus</i>
FS	III	Lance, yellow	<i>Elliptio lanceolata</i>
CC	III	Turtle, spotted	<i>Clemmys guttata</i>
CC	IV	Rattlesnake, timber	<i>Crotalus horridus</i>
	I	Sapsucker, yellow-bellied	<i>Sphyrapicus varius</i>
	I	Warbler, black throated green	<i>Dendroica virens</i>
	I	Warbler, golden-winged	<i>Vermivora chrysoptera</i>
	I	Pigtoe, Virginia	<i>Lexingtonia subplana</i>
	II	Madtom, spotted-margin	<i>Noturus insignis ssp 1</i>
	II	Salamander, mole	<i>Ambystoma talpoideum</i>
	II	Bittern, American	<i>Botaurus lentiginosus</i>
	II	Duck, American black	<i>Anas rubripes</i>
	II	Rail, king	<i>Rallus elegans</i>
	II	Warbler, cerulean	<i>Dendroica cerulea</i>
	II	Warbler, Swainson's	<i>Limnothlypis swainsonii</i>
	II	Wren, winter	<i>Troglodytes troglodytes</i>