

CENTER *for*  
COLDWATERS  
RESTORATION



STRATEGIC PLAN

March 2017

# Center for Coldwaters Restoration – Strategic Plan

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## Board of Directors

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## Executive Summary

Water. The single natural resource for which no synthetic alternative exists. Its abundance in Waynesboro and the Shenandoah Valley region was the stimulus for the community's agriculture roots and led to the industrial success beginning in the 1700s and tourist activity in the late 1800s. Major corporations were drawn to Waynesboro to take advantage of the water, either as a power source or be used in the manufacturing process. The early successes generated the need for a quality workforce and robust transportation network, which laid the ground work for the economy today. The industrial landscape has changed much over the last 300 years, but the base is strong. Sustaining the momentum will be a key to the community's future.

Natural resource-based economic development will play a key role in the future Waynesboro economy. Since its inception in 2008 as a committee under the auspices of the Waynesboro Downtown Development Inc. (WDDI), The Center for Coldwater Restoration (CCR) has been an advocate for advancing programs and projects that foster economic development and environmental vitality in the watershed of the Upper South River.

Now a standalone, all-volunteer, non-profit, community-based corporation, CCR has laid a strong foundation for continued success. A few examples of successful projects include

- Convened distinguished higher education professionals, state and federal agencies, and industries to explore the possible synergy between the South River, spring water, and manufacturing
- Leveraged \$128,000 of grant and public funds with \$68,065 of private funds to raise awareness, conduct research, and advocate for legislation
- Initiated important partnerships for future success such as the strong relationship with the Virginia Museum of Natural History (VMNH) and the anticipated construction of a VMNH Waynesboro campus

As CCR looks to the future and the further development of its four anchor initiatives (see sidebar) that will serve as a catalyst for natural resource based economic growth, the articulation of this strategic plan is an important foundation. As further expressed in the plan, six key goals will define the work for the next three to five years.

### Anchor Initiatives

Interpretive Center  
Research/Industry  
Agency Campus  
Trout Facility

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## Vision

Be a catalyst for implementation of natural resource-based economic development that will substantially accelerate and sustain the Waynesboro economy for generations to come.

## Mission

CCR will envision and advocate for programs, policies, and plans that foster long-term and sustainable natural resource-based economic development for the greater Waynesboro community.

## Goals

- Enhance CCR as a credible resource for information and a catalyst for implementation of sustainable natural resource-based economic and community development
- Support the creation of a Virginia Museum of Natural History campus in Waynesboro, VA
- Facilitate a partnership among the higher education community and commercial enterprises to develop and foster environmentally sound practices, technologies, and policies with innovative water resources
- Incubate a campus for the co-location of state and federal natural resource-related agencies to physically locate resources in Waynesboro, VA
- Champion the creation of a trout grow-out facility
- Explore the development of Aquaculture Industry, leveraging the abundant cold water, agriculture, transportation, and market proximity resources in the Waynesboro and surrounding area

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## Organization Background

A non-profit community-based corporation located in Waynesboro, VA, the Center for Coldwater Restoration (CCR) is dedicated to advocating and advancing programs and projects that foster economic and environmental vitality in the watershed of the Upper South River through the wise stewardship of fresh water. CCR accomplishes its mission by collaboration with stakeholder partners in the region to establish initiatives through vision, education and advocacy. Established in 2008, CCR is led by a board of community leaders who rely on the best science, reliable research, and sound financial principles. It is an outgrowth of the Waynesboro Downtown Development Inc., Virginia Main Street organization, and is a Virginia Corporation with IRS 501 c 3 status.

In 2010, the CCR petitioned senators Webb and Warner who jointly sponsored a \$1 million earmark for the initial funding of a trout grow-out facility in Waynesboro. Although the earmark did not make the final version of the 2011 budget, this effort confirmed the strength of the CCR comprehensive project model and the potential economic impact on the community while demonstrating CCR's ability to advance its initiatives.

Also in 2010, CCR was the recipient of a \$10,000 National Fish and Wildlife grant that funded a University of Virginia (UVA) research group who facilitated a headwaters cold water summit and study with participation of community leaders, local government, local industry, university representatives and State government natural resources agencies.

In 2011, CCR facilitated the partnership between the City of Waynesboro and the Virginia Museum of Natural History to locate a campus in the central business district to help spur continued renaissance. This partnership was the catalyst for assessment of prospective tourism potential, economic feasibility, and preliminary design of the VMNH Campus. CCR raised \$46,000 in private contributions to leverage \$93,000 in grant and public funds to execute those initiatives.

In April 2013, CCR opened a "demonstration center" creating a three-dimensional "brochure" of CCR's comprehensive vision with the goal of creating a focal point within the community to demonstrate to potential funding partners, commercial interests and community members the synergy of natural resource-based economic development and how success can be a major contributor to the future regional economy. The Main Street site features artifacts from the Virginia Museum of Natural History, a trout rearing tank, and displays on the history of Waynesboro and each of the anchor initiatives of CCR: interpretive center, research, agency campus, and trout grow-out facility. CCR successfully funded the construction of the center with an award of a \$25,000 Virginia Main Street Downtown Improvement Grant leveraged with over \$22,000 of private donations and 1,300 hours of volunteer labor. The center is open to the public by appointment and for special occasions.

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With the objective of effectively articulating the anchor initiatives of the CCR to a wider audience and building the capacity to communicate initiatives, successes and calls-to-action, a website including a self-maintaining electronic mailing list was created and published. “CCRWaynesboro.com” describes the initiatives, provides illustrations, a depository of media coverage, contact information, and a self-subscribing mailing list feature.

## Situation Background

Water. The single natural resource for which no synthetic alternative exists. Precipitation falling on the Blue Ridge Mountains and in the upper Shenandoah Valley feeds the aquifers that sustain residential, commercial, and industrial enterprises in the region. The South River and nearby natural springs became the focal point for industry and a center for transportation beginning in the mid-1700s. From the early days of agriculture, timber, mining and manufacturing to the mid-20th century of artificial fiber manufacturing and textile finishing, water was the key. The availability of water and other natural resources attracted industry which demanded qualified workers and transportation infrastructure. As history evolved, Waynesboro became a manufacturing hub of a variety of products and home to major corporations including DuPont, Crompton, and GE, plus a crossroads of transportation with the intersection of two rail lines, multiple by-ways, and interstate highways.

Similarly, today’s tourism industry began with water – summer resorts and the promise that the “famous basic Lithia Water” was effective in the treatment of various ailments. Numerous hotels sprang up in Waynesboro, Basic City, and other parts of the Valley to take advantage of the “healing waters” and visitor demand. Residents of the Tidewater could easily take the train to the “Spas of the Shenandoah Valley.”

The 12-mile run of the South River at Waynesboro is Virginia’s largest spring-fed creek. Certainly a source of food for the early settlers, the South River was noted in 1888 as having 16 species of fish. The US Fish Commission (now USFWS) expedition to collect fishes from the South River was led by David Starr Jordan who described the river conditions as “...near its source, the river is clear, flowing over a rocky or gravelly bottom. The water is cold, most of it coming from a few large springs, some of them near Waynesborough, all within 4 or 5 miles of town.”

Today the South River is a large trout stream for Virginia, with Waynesboro one of two urban fisheries in the Commonwealth. The very popular greenway follows the river for just over one mile and the riverfront Constitution Park is home to a number of festivals and activities.

Just as industry has evolved over the last 300 years, it will continue to change, but water will remain the cornerstone. If the city and region is to remain viable, alternative uses for river

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front industrial sites must be developed, water quality issues must be dealt with, and new innovative industries developed.

## Vision

Be a catalyst for implementation of natural resource-based economic development that will substantially accelerate and sustain the Waynesboro economy for generations to come.

## Mission

CCR will envision and advocate for programs, policies, and plans that foster long-term and sustainable natural resource-based economic development for the greater Waynesboro community.

## Goals Summary

- Enhance CCR as a credible resource for information and a catalyst for implementation of sustainable natural resource-based economic and community development
- Support the creation of a Virginia Museum of Natural History campus in Waynesboro, VA
- Facilitate a partnership among the higher education community and commercial enterprises to develop and foster environmentally sound practices, technologies, and policies with innovative water resources
- Incubate a campus for the co-location of state and federal natural resource related agencies to physically locate resources in Waynesboro, VA
- Champion the creation of a trout grow-out facility
- Explore the development of Aquaculture Industry, leveraging the abundant cold water, agriculture, transportation, and market proximity resources in the Waynesboro and surrounding area



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## Goals, Objectives, and Action Steps

Enhance CCR as a credible resource for information and a catalyst for implementation of sustainable natural resource-based economic and community development

### Accomplishments

- Established community awareness and appreciation of the fact that the South River and the watershed's aquatic resources provide the foundation for the region's community and economic development
- Developed and built a Demonstration Center to facilitate awareness and provide a focal point for information
- Raised more than \$68,000 in private funds to leverage \$128,000 in public and grant funds to support accomplishment of its goals
- Attracted partnership between the city and the Virginia Museum of Natural History to initiate a campaign to locate a \$10 million campus downtown
- Established a board of community leaders and sought and received IRS 501 (c) 3 status so that it could receive grants and private funding
- Coordinated and financially partnered with Waynesboro school system to deliver VMNH webcast
- Developed capacity to effectively communicate relevant information to stakeholders

### Objectives and Action Steps

- Deepen and broaden relationships with public and private entities whose support will facilitate CCR goals
  - Identify organizations, groups, news media, and individuals whose commitment is essential
  - Refine message to resonate with each key audience
  - Establish personal relationships with leaders of essential constituencies
  - Utilize web and social media, as well as print publications, to maintain top-of-mind awareness with key audiences
  - Create and execute quarterly newsletter
  - Attend and participate in meetings of influential groups
  - Maintain email database via Constant Contact
- Operate the Demonstration Center as a focal point for initiatives and information
  - Maintain up-to-date displays and information
  - Utilize the center for meetings with partners
- Provide active leadership to the region to establish mutual benefit in areas of expertise

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- Expand collaboration with area schools to facilitate achievement of STEM and environmental Standards of Learning
- Establish an annual action plan and budget to support it
- Raise funds from private and public sources to support CCR goals, objectives, and action plan

### Support the creation of a Virginia Museum of Natural History campus in Waynesboro VA

#### Background

The Virginia Museum of Natural History (VMNH) is truly a museum without walls. Its mission is to interpret the Commonwealth's flora, fauna, and physical environment to Virginia's 8.3 million residents and millions more who visit the state, among them 2 million who come to Shenandoah National Park. Located in Martinsville in south-central Virginia near the North Carolina line, VMNH achieves its vision through exhibits and programs at the central museum, through traveling displays, and through educational outreach to students and teachers helping enhance school curriculum in science, technology, engineering, and math.

CCR initiated with VMNH in 2011 the prospect to establish a Waynesboro campus. Waynesboro was selected as a prime location due to its central location in the Shenandoah Valley and proximity to Harrisonburg, Charlottesville, the Blue Ridge Parkway, and Shenandoah National Park. The Waynesboro location would serve a population of close to 450,000, an additional 300,000 visitors to nearby Shenandoah National Park, and 63,000 K-12 students.

The process to provide the museum with a location near the heart of the Commonwealth has been deliberate and raised nearly \$140,000 in support, including \$46,000 in private donations generated through CCR led initiatives.

- 2013 – Chmura Economic and Analytics was retained to conduct a Tourism Market Analysis and a Museum Feasibility Study. The results indicate that a location in Waynesboro could not only sustain itself but generate revenue for operations in Martinsville. The economic benefits include:
  - \$1.8 million added to greater Waynesboro economy annually
  - 65,000 new visitors annually to downtown
  - 20 new jobs
  - \$24,000 in new tax revenue in the region and \$50,000 in new state tax revenue per year
  - Positive cash flow which will provide additional revenue for the main location

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- 2014 – Quatrefoil and Associates were retained to produce an Exhibit Master Plan and Strategic Design. The design calls for a facility of approximately 20,000 square feet at a cost of \$10 million. Several sites within the central business district were evaluated and a strong preference for a new building located near the South River was indicated.
- 2015 – Bob Carter & Associates was retained to undertake a feasibility study of the potential to raise corporate and private funds to support the museum. The philanthropic nature of the Waynesboro area was positive to raising necessary funds provided that a major donor, such as the state, commit to the project first.
- 2015 – Waynesboro City Council committed \$1 million in incentives for the Waynesboro location assuming the Commonwealth would provide \$6.5 million. This resolution was re-adopted by a new City Council in 2016.

### Accomplishments

- Developed partnership with the VMNH, including local residents serving on the Board of Trustees, Foundation Board, and Waynesboro Advisory Committee
- Assisted with fundraising for professional feasibility studies related to the economic impact and philanthropic opportunities
- Assisted with philanthropic consultant by organizing meetings and contacts
- Gave regular updates to General Assembly Sportsman Caucus on status of CCR initiatives including the Waynesboro location of VMNH
- Supported City resolution to provide \$1 million towards construction of VMNH in downtown

### Objectives and Action Steps

- Support the \$10 million Waynesboro VMNH project which will support the ongoing renaissance of downtown and promote awareness of the unique ecology of the Blue Ridge Mountains and Shenandoah Valley
- Advocate for \$6.5 million of state funding to create the Waynesboro VMNH location
  - Work with VMNH and City of Waynesboro staff to advocate funding from the state budget
  - Actively support General Assembly bills and budget amendments that provide funding for the Waynesboro VMNH
- Facilitate the development of a capital campaign to raise a minimum of \$2.5 million to create the Waynesboro VMNH location
  - Work with the VMNH Foundation Board to solicit public and corporate donations
  - Create a Waynesboro-based advisory board to oversee the capital fundraising campaign as well as ongoing operations funding campaigns

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Facilitate a partnership among the higher education community and commercial enterprises to develop and foster environmentally sound practices, technologies, and policies with the innovative water resources

## Background

There are a number of examples of how collaboration has inspired innovation: The Palo Alto Research Center (PARC), a wholly owned Xerox company that offers open innovation to solve technology issues; The North Carolina Research Campus (NCRC), a public-private research center occupying a 350-acre former textile manufacturing campus in Kannapolis, NC focusing on human health, food, nutrition and agriculture; Research Triangle Park in North Carolina, founded by a committee of government, university, and business leaders as a model for research, innovation, and economic development; and Virginia's own Commonwealth Center for Advanced Manufacturing (CCAM), which provides production-ready advanced manufacturing solutions to member companies by pooling R&D efforts.

The Shenandoah Valley institutions of higher education have demonstrated a strong collaboration in the field of natural resources. By building on that collaboration and by enlisting industry, we can create an environment for the innovation of next-century commercial and scientific technologies. A focus on incubating technologies and best conservation practices—combined with practical applications from higher education and commercial partnerships—will build sustainability through workforce development, skilled labor training, and improved public policy.

## Accomplishments

- Convened stakeholders from higher education, state and federal agencies, industry, and conservation groups to explore the possible synergy between the South River, abundant spring water, and former manufacturing space in downtown Waynesboro
- Discussed higher education needs, resources, and opportunities with State Council of Higher Education for Virginia (SHEV) leadership
- Fostered partnership with James Madison University to hold a Mountain Streams Symposium where universities and agency scientist shared research on the status of cold water resources and native aquatic species in the watershed

## Objectives and Action Steps

- Conduct two focus group discussions regarding University Environmental Research and Education Consortium to include National Fish and Wildlife Foundation (NFWF)—one with university groups (reprise of earlier meeting); one with business and agricultural representatives
- Expand conversations with the State Council of Higher Education for Virginia to explore potential opportunities

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- Identify potential research partners (commercial, non-profit, etc.)
- Continue to support the university consortium program
- Adapt “PARC” (Palo Alto Research Center) model to freshwater resources and ecological restoration for the 21<sup>st</sup> century

Incubate a campus for the co-location of state and federal natural resource-related agencies to physically locate resources in Waynesboro, VA

## Background

There are a number of state and federal agencies, including but not limited to Forestry; Game and Inland Fisheries; Mines, Minerals and Energy; Outdoors Foundation; Conservation and Recreation; and Environmental Quality that have locations in the region. Physically centralizing these agencies, whose missions are natural resource-based, in Waynesboro will foster a collaborative environment becoming catalytic in the launching of technologies, restoration practices, and new century industries.

## Accomplishments

- Supported 2011 House Budget Amendment Item 349 #2h, which directed the Secretary of Natural Resources to evaluate expiring leases and if operation could be relocated to Waynesboro

## Objectives and Action Steps

- Articulate a compelling reason for agencies to consider locating in Waynesboro
- Develop and implement a CCR communications plan
- As agency opportunities arise, continue to work with Department of Government Internal Services (DGIS), the specific agencies and elected officials to insure that Waynesboro is included in the decision components
- Develop a key agency target list and create a conceptual layout of how these agencies would be collocated

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## Champion the creation of a trout grow-out facility

### Background

The 12-mile run of the South River at Waynesboro is Virginia's largest spring creek. Numerous large limestone springs above and within the city limits of Waynesboro collectively discharge more than 15,000 gallons per minute of high-quality water at a steady 56 degrees F. The removal of an impoundment in Waynesboro on the river that warmed the water above temperatures for optimum trout survival and growth has turned the river into excellent year round trout habitat. Extensive water temperature studies have also documented that the stream maintains suitable year-round conditions for trout survival and growth. Recent electrofishing surveys of the river conducted by the Virginia Department of Game and Inland Fisheries (VDGIF) have found trout up to 27 inches and 8 pounds, proving the South River holds the potential of becoming a true trophy trout fishery and destination for anglers.

The South River is a large trout stream for Virginia with Waynesboro one of two urban fisheries in the Commonwealth. With as much as 12 miles of stream suitable for various trout stocking and fishery management options, a large number of fish will be needed to maintain quality angling. Trout production in state trout hatcheries is limited and all the additional fish needed to fully develop the South River fishery to its full potential may not be available.

Stocking the South River will support the fishery and attract traveling anglers. The grow-out facility will grow trout fingerlings in artificial environments to an optimum size suitable for stocking at locations in the river managed under catch-and-release, trophy-trout and put-and-take regulations. Fish culture techniques pioneered by the Freshwater Institute and Conservation Fisheries, Inc. will be adapted.

### Accomplishments

- Collaborated with the Department of Game and Inland Fisheries and the U.S. Fish and Wildlife Service to develop final plans for proof-of-concept facility

### Objectives and Action Steps

- Identify partners and establish need and justification for grow-out facility
  - Collaborate with staff from the Virginia Department of Game and Inland Fisheries (VDGIF)
  - Seek advice by a team of university and natural resource agency fisheries scientists
  - Develop economic impact study
- Develop plans for grow-out facility
  - Identify a short list of locations
  - Identify sources of funding

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- Identify construction partner to implement construction plans
- Identify and contract the provider for fertilized eggs and or fry
- Use the facility to demonstrate the most modern and cutting-edge fish culture techniques pioneered by The Freshwater Institute and Conservation Fisheries, Inc.
  - Design / construct facility to grow trout fingerlings in artificial environments to an optimum size suitable for stocking at locations in the river managed under catch-and-release, trophy-trout and put-and-take regulations
  - Demonstrate innovative technology for potential commercial purposes
- Leverage the facility through creative design to serve as a commercial ecotourism and public educational facility for fish culture interpretation and promotion of the sport of trout fishing throughout Virginia
- Engage science educators/local schools to use the facility and South River as part of their science curriculum
- Provide trout to support a trophy trout fishery in the South River above and through Waynesboro

Explore the development of Aquaculture Industry, leveraging the abundant cold water, agriculture, transportation, and market proximity resources in the Waynesboro and surrounding area

### Background

Aquaculture is the production of aquatic animals and plants under controlled conditions for all or parts of their lifecycles. Interest in aquaculture production is on the rise because restrictions on the wild harvest of many seafood species may diminish wild harvest seafood supplies. The 2013 Census of Aquaculture estimated sales at \$1.37 billion.

U.S. aquaculture production comprises the production of food fish, ornamental fish, baitfish, mollusks, crustaceans, aquatic plants and algae, and some reptiles such as alligators and turtles. These organisms are grown in a wide variety of climates, in either fresh or salt water, and use a number of different production systems. Production can be regionally based on species habitat, i.e. catfish in Deep South, alligators in Louisiana.

The catfish industry is the largest sector in U.S. aquaculture. Other major food fish species grown in the United States are trout, salmon, tilapia, hybrid striped bass, sturgeon, walleye, and yellow perch. With the exception of salmon, these fish are normally grown in open freshwater production systems. Salmon differ somewhat from other species, as they are hatched in fresh water and then later transferred to saltwater net-pens for final grow out.

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Aquatic plant production includes edible varieties, as well as plants for use in wetland restoration projects. The best known algae produced in the United States is spirulina, which serves as a nutritional supplement and food additive and also as a feed component for pets and ornamental fish.

The United States is one of the world's largest exporters of seafood products and its second largest seafood importer. Although the United States is a major seafood exporter, its exports of aquaculture products are relatively small: some farm-raised trout and salmon, chiefly to Canada and Mexico, and oysters and clams to Canada. On the other hand, the United States is a major importer of farm-raised seafood products. The largest categories of imported aquaculture products are shrimp, salmon, and tilapia.<sup>1</sup>

According to the “Aquaculture Facility Planning For Mill at South River” report from the Freshwater Institute in 2013, Waynesboro, and in particular the Mill at South River and Baker Spring, provide the possibility of large-scale aquaculture operation.

## Accomplishments

- Engaged Freshwater Institute for technical assistance
- Visited Freshwater Institute to view aquaculture techniques
- In conjunction with the Waynesboro EDA, commissioned “Aquaculture Facility Planning for Mill at South River” complex

## Objectives and Action Steps

- Create and implement a strategic plan to define the potential for the development of an aquaculture-based industry in Waynesboro
  - Re-engage the Freshwater Institute
  - Identify infrastructure enablers such as high-volume spring water and possible prohibitory issues such as waste and or storm water
  - Outline enablers required for the development of the industry and publish an analysis of the economic impact for the city
  - Create a “Benefits of Locating in Waynesboro” package
  - Identify /justify target species and market
  - Publish industrial recruitment plan and identify potential industry partners
- Engage local agriculture partners, such as Fields of Gold and Farm Bureau

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<sup>1</sup> Information obtained from United States Department of Agriculture Economic Research Service website