

1 October 2015

**Results of a Feasibility Study for a Proposed Natural Science  
Interpretive Facility near the South Entrance of the Shenandoah  
National Park, Downtown Waynesboro**

Item 375

*The Virginia Museum of Natural History shall conduct an assessment of the costs and feasibility of establishing a satellite location in Waynesboro, Virginia and provide this assessment to the Chairmen of House Appropriations and Senate Finance Committees prior to October 1, 2015. In conducting the assessment, the Museum shall identify all operational costs and potential revenue sources in support of this project.*

Authority: Title 10.1, Chapter 20, Code of Virginia

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## PREFACE

This study was conducted by the Virginia Museum of Natural History, led by the executive director Joe Keiper. Deputy Director Ryan Barber, and Director of Science Dr. James Beard also contributed. Staff support came from the exhibits manager, director of education and public programming, and director of administration.

To aid in a feasibility study and a master plan, outside experts were employed. Chmura Analytics conducted the feasibility study while Quatrefoil and Associates developed the master plan.

Citizenry was involved including Waynesboro-area educators, Waynesboro-area business leaders, Waynesboro City Council and city staff, and the not-for-profit Center for Coldwaters Restoration.

The museum also kept close ties with the Department of Game and Inland Fisheries as their efforts to enhance recreational angling in the South River has gone hand-in-hand with our efforts to establish a natural science interpretive facility in Waynesboro. Similarly, as Waynesboro is transforming to a Gateway Community for the Shenandoah National Park, we have done our work in conjunction with the Superintendent of the park.

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**SUMMARY:** VMNH proposes to establish a branch facility in Downtown Waynesboro and draw some 65,000 people to the downtown. This will a) help VMNH reach new and underserved audiences, b) generate a revenue stream, and c) create an economic driver for a rebounding city. At a cost of \$10 million to establish, VMNH will interpret the natural heritage of the Shenandoah Valley and surrounding region and provide important informal public education while creating a science resource for the region's schools. A university-grade research laboratory will promote significant science on the South River. It is estimated the facility will have an annual operation cost of \$242,000, generate \$324,000 in revenue, and therefore have an \$82,000 operating profit each year. The studies conducted show the facility can be established, reach a significant audience, and operate in a sustainable fashion while creating a revenue stream for the agency. The economic impact on Downtown Waynesboro will come in the form of visitors utilizing shops, restaurants, and other cultural amenities. We recommend the establishment of this proposed interpretive facility to act as a cultural anchor and an economic driver for a city that is a Gateway for hundreds of thousands of people to the Shenandoah National Park.

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## INTRODUCTION

The Virginia Museum of Natural History is an agency of the Secretary of Natural Resources. As Virginia's only collections-based research institution, VMNH supports original research into Virginia's natural heritage and resources. It houses 10 million+ inventoried specimens and artifacts, with another 10+ million awaiting inventory. Significant state-wide education and public exhibition programs have blossomed from the museums research and collections.

In an effort to a) reach new audiences, b) generate new revenue, and c) act as an economic driver for a rebounding Virginia city, VMNH aspires to establish its first permanent satellite facility. Working with the city of Waynesboro, VMNH has established a strong relationship with a city strategically located between the dense populations of Charlottesville, Harrisonburg, and Staunton, and is only a short drive from the South Entrance of the Shenandoah National Park and milepost zero of the Blue Ridge Parkway. For Park and Parkway audiences (300,000 travelers traverse this spot annually), there are few amenities available in that heavily traveled area. Further, this region is lacking in public science museum experiences.

The museum has professional research, education, and exhibit staff. Furthermore, it has an enormous number of real specimens and artifacts to share with all citizens of the Commonwealth. VMNH aspires to establish a location to educate new audiences about the unique natural resources of Virginia, to draw people to a dynamic facility and realize a significant tourism economic impact, and generate revenue for the agency.

In this document, the following sections are covered:

- I. A feasibility study that determined that a properly designed facility can be established in Waynesboro, and will generate revenue necessary for its annual operation.
- II. A Master Plan that gives the parameters of the public experience, size of the facility, and estimated costs.
- III. The commitment of the City of Waynesboro to help VMNH.
- IV. An overview of the vision of the museum as it works to serve the Commonwealth using a new facility.
- V. A copy of our proposed campaign summary.

## FEASIBILITY

The museum enlisted the assistance of Chmura Economics and Analytics of Richmond in 2013. The primary question was, “If the museum establishes a satellite facility focusing on public engagement and education, will it operate in a sustainable (at least revenue-neutral) fashion, and will it create a positive economic benefit to Downtown Waynesboro?”

Waynesboro, as the site of the potential branch, was selected because of strong and enduring community support for the development of an entity in the city’s downtown that would become an anchor for economic revitalization by attracting tourists and providing a venue for university-level environmental research and education.

Chmura estimated that in its first five years of operation, annual revenues would average \$324,000. Expenses for the same period would average \$242,000. Net operating income would equal \$82,000 per year.

Revenues are based on attendance of 65,582 per year drawn principally from residents in Augusta and surrounding counties, visitors to Shenandoah National Park and the Blue Ridge Parkway, and motorists traveling Interstates 64 and 81.

### Economic Impacts:

- Construction: \$10 million – 108 jobs
- Annual Operation: \$ 500,000- 10 jobs
- Annual Visitor Spending: \$1.8 million – 20 jobs
- Annual Tax Revenue: Local - \$23,608, State - \$49,576

Furthermore, two separate surveys were conducted at the South Entrance of the national park. It was determined that 13% of the 300,000 visitors would indeed visit a natural science center within a short drive of the park entrance. This equates to 39,000 people driving to the downtown.

An overall estimate of more than 65,000 annual visitors to the facility was calculated. These are visitors who will also visit other amenities including cultural opportunities (Wayne Theater, Waynesboro Cultural Heritage Center, Moss Art Gallery), commercial opportunities (shops and restaurants), and recreational opportunities (Constitution Park and the greenway). Large Festivals (RiverFest, Fly Fishing Festival, and Virginia Fall Foliage Festival) will benefit from the presence of this facility.

Chmura estimated an annual operations cost of \$242,000. This was based on staffing levels and operations at VMNH’s Martinsville facility. Revenue through admissions, shop sales, and activities of the VMNH-Foundation is estimated to be \$324,000. This gives a net-positive revenue stream of \$82,000 annually.

Annual expenses specific to VMNH-Waynesboro site:

Personnel\*:

|                            |           |
|----------------------------|-----------|
| a. 1 FT site manager       | \$65,000  |
| b. 4 PT museum specialists | \$80,000  |
| Total personnel            | \$145,000 |

Operation\*\*:

|                     |          |
|---------------------|----------|
| a. Utilities        | \$32,400 |
| b. Supplies/exhibit | \$28,700 |
| c. Maintenance      | \$12,000 |
| d. Equipment        | \$20,000 |
| e. Vehicle          | \$ 3,900 |

|                 |          |
|-----------------|----------|
| Total operation | \$97,000 |
|-----------------|----------|

|                |           |
|----------------|-----------|
| Total Expenses | \$242,000 |
|----------------|-----------|

\*(Staff replication between Martinsville and Waynesboro will be avoided as existing VMNH staff can handle payroll, HR, marketing, and other areas of operation remotely)

\*\* (Travel, staff training, telephone, mailings, insurance, vehicle maintenance, and agency service charges are part of current VMNH budget)

Annual revenue specific to VMNH-Waynesboro site:

|  |           |
|--|-----------|
| Admissions                               | \$80,000  |
| Rental of facilities                     | \$14,000  |
| Support from City (request)              | \$35,000  |
| Store sales                              | \$12,000  |
| Education programs                       | \$20,000  |
| Grants/sponsorship, education & exhibits | \$25,000  |
| Support from VMNH-Foundation             |           |
| - Annual Fund                            | \$58,000  |
| - Memberships                            | \$41,000  |
| - Corporate Partnerships                 | \$25,000  |
| - Event revenue                          | \$14,000  |
| Total revenue                            | \$324,000 |
| Net revenue                              | \$82,000  |

## MASTER PLAN

In 2014, VMNH enlisted the help of Quatrefoil and Associates from Laurel, Maryland. They are an exhibits design firm that would help the museum determine the scope of the visitor experience, the appropriate size of the facility, and the initial cost estimates.

Exhibits: (See descriptions in the Campaign Summary below).

Facility: Estimated \$10,000,000

- i. Building - \$5.4 million
- ii. Exhibits - \$3.6 million
- iii. Laboratory - \$250,000
- iv. Playscape - \$750,000

The building will support exhibit halls, staff support space, a classroom for school groups, a flexible space for changing exhibits and rentals, a university-grade laboratory specifically to support regional natural resources work, and a “playscape” which is an area specifically for early childhood play-and-learn opportunities. The latter is critical for generating repeat visitation and for serving families.

The exhibits will focus on the Shenandoah Valley and surrounding ecoregions. A community meeting with regional educators determined that educators need help with VA Science SOLs, and that a specific area on the interface of the disciplines of biology, geology, paleontology, and archaeology is needed to help prepare students for further science education. Space for “interactions among disciplines” and an emphasis on SOLs are included in the Master Plan.

The laboratory will be available for use by museum researchers, university researchers, and the South River Science Team, a group of scientists funded by DuPont to study the management, disposition, and effects of historical mercury contamination of the South River from past activity. The lab will have windows providing a public connection to actual science being done. This will parallel the successful use of such windows into the research laboratories at the VMNH Martinsville site.

The classroom, flex space, and even an outdoor garden area will provide a revenue stream for rentals. Currently, there are few rental opportunities for meetings, conferences, dinners, and similar events in Waynesboro. VMNH will offer an affordable but unique opportunity.

VMNH aspires to house the above elements in a practical facility, utilizing a number of methods (e.g., high insulation, efficient materials and equipment, LED lighting) to keep specimens and artifacts safe while making annual operation affordable.

## CITY OF WAYNESBORO

The City of Waynesboro has contributed significantly to the progress of this proposed project.

- a. They committed a 2+ acre lot adjacent to Constitution Park that the museum may use if it will build a new facility in the Downtown.
- b. The city contributed ½ of the full cost for the Chmura study (\$38,000 total).
- c. The city contributed ½ of the full cost for the Quatrefoil plan (\$50,000 total).
- d. The city contributed ½ the cost for the Financial Feasibility Study currently underway (\$42,000 total).
- e. Citizens from the non-profit Center for Coldwaters Restoration received grants to pay for a demonstration facility to show the potential for the museum in Downtown Waynesboro (\$30,000 total).
- f. The city, including their Economic Development Center, has provided significant logistical support for VMNH activity.
- g. On November 15, 2015, Waynesboro will host the VMNH Board of Trustees for their quarterly board meeting.
- h. On March 24, 2016 the VMNH Foundation will hold its annual Thomas Jefferson Awards Ceremony at the Waynesboro Country Club.

These points illustrate the strong local support for the museum's activities.

The museum is currently working with Bob Carter Companies to ascertain the philanthropic potential within Waynesboro to support the establishment of a facility in the Downtown. The report will be completed and presented to the VMNH Board of Trustees on 15 November 2015.

The city of Waynesboro offers a unique opportunity to serve an underserved population. The city is the largest in Virginia that lacks a higher education facility. The national park and its audience is a unique opportunity. However, we are dealing with an area with historic economic hardships and a population of 21,000.

The proposed Campaign summary below conveys the benefits, excitement, and impact that the proposed VMNH natural science interpretive center conveys to this region.



**- Campaign Summary -**

*The history of Virginia and the leadership of Thomas Jefferson are inseparable. While well known for his role in government, education, and architecture, Thomas Jefferson also merits distinction as the father of North American paleontology. Imagine a time when giant ground sloths stood nearly 10 feet tall, giant beavers were the size of modern bears, and mastodons roamed Virginia.*



*These animals transfixed the ever-inquisitive Jefferson. He believed that the American frontier still supported these megafaunal creatures. In fact, during his presidency he directed Lewis & Clark to keep an eye out for them.*

*While Jefferson was genuinely disappointed when the great explorers reported that they did not encounter any of these animals roaming the frontier, we actually have an opportunity to enjoy them today as fossils and wonder what*

*the world must have been like when they lived. The Virginia Museum of Natural History envisions a new center along the South River in Waynesboro that will honor Jefferson’s legacy – and, the rich natural history of Virginia – with reconstructions of the skeletons of animals that Thomas Jefferson studied during his life.*

This is just one example of the exhibits and stories that will come to life in the proposed museum center to be located in heart of the Shenandoah Valley and Blue Ridge region.

The Virginia Museum of Natural History is the place where visitors learn about the Commonwealth’s remarkable natural heritage and the local cultures that are an important part of Virginia’s history. At the Museum, curators assemble and study a vast array of artifacts and specimens to better understand our natural treasures and resources. At the same time, the Museum’s educators and staff create imaginative exhibits to share scientific information in ways that are fascinating and enjoyable.

The Museum first opened its doors to the public in 1984 in a renovated school building in Martinsville. In 2007, it celebrated the opening of its new home, a 21<sup>st</sup> century facility complete with modern exhibits and hi-tech laboratories. In just three decades, the Museum has assembled 10+ million specimens and artifacts in its collections, created academic relationships throughout the Commonwealth, and established itself as a tourism and economic draw in Virginia’s southern tier, attracting tens of thousands of visitors to Martinsville.

*“To interpret Virginia’s natural heritage within a global context in ways that are relevant to all citizens of the Commonwealth.”*  
 - Statement of Mission

This is good news and reflects dedicated work by all involved with the Museum. In looking at our future, we now are preparing to take another exciting step – creating a second home for the

Museum. More than a new place, the new center planned for Waynesboro represents a new way to share the story of Virginia's natural history and bring our interest in the study of the natural sciences to a new level. Its convenient location in Waynesboro means the center will be just a short distance from the South Entrance of the Shenandoah National Park.

With the work of the museum architects and master plan professionals completed, we now are exploring a fundraising initiative to bring our plans to life. We envision a 20,000 square foot natural science interpretive facility in downtown Waynesboro that will serve a regional population of 450,000, including 63,000 K-12 students. In addition, our research has discovered that at least 40,000 Virginians and other visitors per year will come off Skyline Drive and the Blue Ridge Parkway to explore the region. They have a strong interest in a near-by museum experience that would either prepare them to explore the area's natural wonders or help them better understand what they have seen during their adventures along the Appalachian Trail and in the Shenandoah National Park.

Our center will fulfill this desire – and, so much more. It will not only have science-based exhibits, but it will also contain classrooms, meeting space, and a large child-friendly Playscape for our young visitors to participate in creative early childhood learning experiences. The focus throughout the center will be on the balance between entertainment and education. Parents and teachers will appreciate that all the exhibit information will align with the expectations of Virginia's Standards of Learning for Science. Visitors will find the experience one that not only informs, but also inspires.

With Waynesboro currently undergoing a renaissance, we believe this is an optimal time for this initiative. The proposed facility will draw tens of thousands of people to the downtown area annually who otherwise might not visit. Once there, visitors also will have opportunities to visit the Wayne Theater, Constitution Park, the South River, and the area's many shops and restaurants. Our center will anchor an array of cultural and recreational activities to mark Waynesboro's emergence as a destination city.



Simply, this is the right time and place for the Virginia Museum of Natural History to branch out. It's the right time to create a place in Waynesboro that reflects our values, enriches our programs, and meets the needs of Virginia for an expanded focus on nature, the environment and our natural history. To fulfill this aspiration, the Museum aims to raise \$10 million to provide the financial resources for a state-of-the-art natural science interpretive center that sets a new standard for excellence. It will have the kind and quality of facilities needed to best serve the people of Virginia and our visitors from throughout the United States and beyond. It's the right time to take this step.

The Virginia Museum of Natural History operates as an agency of the Commonwealth and – through the Virginia Museum of Natural History Foundation – its operating revenue reflects a combination of philanthropic support and public sector funds. This partnership was evident in 2007 when the Museum's home facility in Martinsville was built, at a cost of \$22 million, with both public sector and charitable contributions funding the construction project.

Looking ahead –

- We have initiated discussions with Commonwealth officials to identify potential funding opportunities for the center, through budget appropriations and an anticipated bond issue.
- We anticipate drawing on our strong track record in attracting grant funds for this project. Over the years, we have raised several million dollars through the National Science Foundation, the Institute for Museum & Library Services, and the National Geographic Society.
- A critically important milestone recently was reached when the City of Waynesboro agreed to provide a parcel of downtown land adjacent to the South River for the center.



We believe that our priorities in this campaign will touch the lives of those who call this region home – and who visit our region – in one way or another. We are looking to build a new natural science interpretive center, add much needed exhibit space and classrooms, enhance our laboratory capacity, and introduce collaborative ventures with local college & universities unlike anything being done

anywhere in the Commonwealth. Here is a brief overview of our plans –

### **- Highlights of Our Campaign Initiatives -**

#### **The Waynesboro Natural Science Interpretive Center \$5,400,000.**

The heart of the campaign is the construction of a 20,000 square-foot facility to serve as a new and permanent second home for the Museum. Within the center, we envision an array of activities that will bring the wonders of our natural history to patrons and the entire region in new and exciting ways.

- When you enter, you'll first see an attractive and dynamic landscape of exhibits. The Museum will use its extensive collections to interpret natural history with a focus on the unique and beautiful resources of the Shenandoah Valley and the Blue Ridge region.
- Exhibits will feature the South River, including the local trout that are popular with anglers.
- The Big-Levels Salamander is a small terrestrial salamander found nowhere else on earth other than a mountaintop 15 miles south of Waynesboro. Its presence at the center will be a testament to the ecological distinctiveness of this part of Virginia.
- Past peoples of the region will be explored, as well as fossils representing ancient life that once lived here.
- In the center's open space, the curators will focus on a steady stream of special exhibits to keep the galleries dynamic and fresh. The open space also will be ideal for private events. Imagine attending a reception or dinner in the presence of the creatures that riveted Jefferson!

With a commitment to forging collaborations in the community, we are exploring strategies to engage scientists and educators from Waynesboro's near-by colleges and universities in joint research and educational sessions for school-age visitors and K-12 classes. Our multi-use year-round facility will offer creative opportunities for local undergraduate students and their faculty mentors to engage in laboratory research and present their discoveries as special exhibits and educational programs.

### **The Exhibits**

**\$3,600,000.**

The center will offer a place for our curators to unveil many artifacts and collections that have not yet been exhibited by the Museum. The creative new exhibits will feature items that represent the local environment and natural history of the Shenandoah Valley and Blue Ridge region.

- The classrooms will support a wide variety of special events and student experiences.
- The Wildlife Center of Virginia will have live animal programs featuring native Virginia fauna.
- School groups will tour the galleries and engage educators.
- Interactive video links back to Martinsville will connect the students in Waynesboro with our exhibits in Martinsville as well as our staff scientists who discover species new to science.

### **The Playscape**

**\$750,000.**

In this 2,000 square foot highly interactive area, children will be encouraged to –

- Dig for fossils.
- Go spelunking in a simulated cave environment.
- Engage water tables that demonstrate hydrology.
- Explore on their own (or with their families) the contents of educational kits on local fauna.



Whatever they choose to do, the Playscape will be a special place for our young visitors to have fun while learning more about the world around them.

### **The Laboratory**

**\$250,000.**

The center will feature publicly viewable laboratory space in which scientists can conduct lab-based work within a short distance of their study sites.

- Curators and university partners will have the opportunity to work on questions pertaining to the South River and the National Park right within our facility.
- As in Martinsville, volunteers and student interns will participate in these studies, which might involve analysis of water chemistry, sorting through samples of amazing insects, or scraping rock away from fossil bones exposing ancient animal life to human eyes for the first time.

We are confident those who visit our new center will see the world around them with new eyes.