

Strategic Plan
(2012-2014 Version 1)

Virginia Museum of Natural History (942)
Agency Plan

Mission Statement

The mission of the Virginia Museum of Natural History is to interpret Virginia's natural heritage within a global context in ways that are relevant to all citizens of the Commonwealth.

Vision Statement

The vision of the Virginia Museum of Natural History's Scientific Research and Collections division is to ensure that the collections held in trust for the Commonwealth of Virginia are handled in a professional manner, are preserved for future research, are provided state-of-the-art care and management, and are accessible in appropriate ways to a variety of constituents. This division also ensures that scientific expertise guides appropriate development of the collections, uses those collections to investigate the natural history of Virginia in a global context, and communicates the findings of those investigations to popular and technical audiences via publications, programs, exhibits, and the VMNH website. Collections care involves developing and implementing policies and procedures to protect the long-term integrity of specimens and artifacts as well as their associated data and documentation. The Museum is committed to providing a professional research and collections staff trained in the method and theory of preparing specimens, managing collections and their data, and conducting and reporting specimen-based research to ensure that this vision is met. The vision for the Administration and Services Division is to ensure excellence in financial services, procurement, payroll and human resource services, and operations of the facility. The division endeavors to keep abreast of and adhere to all state rules and regulations. With a well-trained staff and effective communication, the division delivers the highest quality services to the Museum staff. The agency's vision for technology is to ensure that the overall quality of service provided to the community is not compromised because of inadequate technology. The Museum's charter mandate will be supported by up-to-date infrastructures and staff who are well-trained in technology and information systems. The agency pursues, where appropriate and sustainable, technology tools that increase its capacity to educate the public, get vital information to those who need it most, measure and evaluate its work, enable staff to do their work efficiently, and effectively communicate with the Commonwealth. The vision of the agency's division of Education and Extension Services is to further the interpretation of Virginia's natural heritage in ways that are relevant to all citizens of the Commonwealth. To achieve this vision, the division will ensure an inclusive educational program for all people in a welcoming, supportive, and visitor-oriented environment; will collaborate with and lend departmental expertise to other functional areas of the Museum, community organizations, and other state agencies; will serve as a professional center for life-long learning programs; and will pursue the appropriate use of technology to expand interactive learning opportunities for the citizens of Virginia and beyond. The vision of the agency's Marketing and Development division is to have a broad and deepening awareness of all of the Museum's programs and services and how to increase awareness of these offerings to the Museum's constituencies. Increased awareness will result in increased Museum attendance, participation in special events and programs, increased membership and increased financial support.

Values

Professionalism- The Museum staff will conduct themselves in a professional manner and apply their knowledge, skills, and abilities to offer services, exhibits, research, and programs of the highest quality.

Responsiveness- The Museum staff will respond to customer needs quickly, thoroughly, and courteously while always seeking to improve service.

Performance- The Museum will strive to improve performance in achieving our mission.

Information Technology

Current Operational IT Investments

The services of the Virginia Information Technologies Agency (VITA) in planning and establishing information technology systems in the new building has progressed well while service to the old building has been discontinued. The refresh has greatly improved performance including the areas of software standardization, compatibility, security, and delivery of services. In addition, more Museum applications and hardware are available for public use for education and public programs.

Factors Impacting the Current Agency IT

Continued changes and increases in rates have caused a great impact on the agency's budget. In FY2011, the total VITA charges for IT services increased to \$295,000 and the Museum was forced to eliminate services to reduce the cost. Also, security and compliance requirements, continuous reporting and requests for information have caused an increase in workload for a limited staff.

Proposed IT Solutions

In the Services to Citizens business area, the agency is engaged in the education line of business. In education, the agency intends to improve the elementary, secondary, and vocational education function that provides educational programming at the Museum and through outreach programs to local and regional K-12 schools. The agency will accomplish this through a Non-major IT Project called Adventure Classroom. The project is scheduled to install a state of the arts videoconferencing science classroom at the Museum. The videoconferencing science classroom will serve as a distance-learning laboratory connected to the local and Virginia IT network where science education at-a-distance can be delivered, studied, and improved.

Adventure Classroom will promote opportunities for citizens to expand their knowledge, skills and cultural awareness through science, art, music, drama, literature, dance, and other educational services and to assist the Governor in statewide management of state activities. This initiative is also directly related to the Commonwealth Business Strategies to meet the access needs of citizens, improve efficiency and effectiveness of government services, and support Virginia's Economic Development. In addition, the initiative will be in line with the No Child Left Behind Act of 2001 in which professional development is supported by: 1. Bringing "mathematics and science teachers in

elementary schools and secondary schools together with scientists ... to increase the subject matter knowledge of mathematics and science teachers and improve such teachers' teaching skills through the use of sophisticated laboratory equipment and work space"; 2. Promoting "...strong teaching skills for ... science teachers and teacher educators, including integrating reliable scientifically based research teaching methods and technology-based teaching methods into the curriculum," and 3. Establishing "...distance learning programs for mathematics and science teachers using curricula that are innovative, content-based, and based on scientifically based research that is current as of the date of the program involved." (No Child Left Behind, 2001. Available at: <http://www.ed.gov/legislation/ESEA02/pg26.html>)

Financial Overview

The Museum's budget is comprised of general fund (81%) and nongeneral fund (special funds and federal funds) appropriation (19%). Special funds are generated from miscellaneous sources such as admissions to the Museum, events, field trips, sale of Museum publications, memberships, education programs, gift shop sales, and grants from private foundations. The Museum also receives funds from the city and county and the Museum's Foundation. Federal funds are received from National Science Foundation (NSF) grants, and pass-through grants from other state agencies.

The Museum will receive an additional appropriation of \$183,509 in FY2014 to fund equipment to operate the Museum's Distance Learning Classroom. This will increase the total general fund appropriation for FY2014 to \$2,765,050.

Budget Component	2013 GF	2013 NGF	2014 GF	2014 NGF
Base	2,433,032	811,900	2,433,032	811,900
Changes to Base	148,472	-179,995	332,018	-179,995
Total	2,581,504	631,905	2,765,050	631,905

Agency Goals

- Create and deliver life-long learning opportunities for the citizens of the Commonwealth of Virginia as well as its visitors through programs, exhibits, and publications based on scientific and educational research.

Goal Summary and Alignment

1. Be the premier resource in understanding and interpreting Virginia's natural heritage within a global context in ways such as programs, exhibits and publications that are relevant to all the citizens of the Commonwealth. 2. Develop meaningful education programs that are aligned with state and national education standards and reform initiatives. 3. Develop well-designed and maintained exhibits which are emotionally charged, immersive, well-paced, dramatic, social, and grounded in content. 4. Make the Museum into an attraction that draws visitors to Martinsville, VA, from as far as 250 miles away. 5. Develop and support external exhibits in conjunction with Museum affiliates and promote Museum programs that are informative and memorable. 6. Retain existing volunteers and recruit new volunteers. 7. Raise awareness of current and upcoming exhibits and programs resulting in increased attendance. 8. Continue to enhance existing web site to include functionality enhancements including database development, eCommerce integration, and content management systems.

Long Term Goal

Elevate the levels of educational preparedness and attainment of our citizens.

Societal Indicator: Lifelong Learning

- Conduct and disseminate research relevant to the stewardship of Virginia's natural environment, leading to enhanced appreciation of these resources for improving the quality of life for our citizens and contributing to the global reservoir of knowledge.

Goal Summary and Alignment

1. Build collections through appropriate research. 2. Operate scientific labs that are visitor friendly and provide public education by encouraging interaction with Museum visitors. 3. Develop a web-accessible collections and scientific library database that enables scientists and educators to find information and perform research. 4. Provide collections management, preservation, care, and accessibility to protect the long-term integrity of specimens and artifacts, as well as their associated data documentation.

Long Term Goal

Elevate the levels of educational preparedness and attainment of our citizens.

Societal Indicator: Lifelong Learning

- Develop visitor experiences that are interesting, emotionally charged, immersive, well-paced, dramatic, social and grounded in content which result in multiple visits per person.

Goal Summary and Alignment

1. Develop meaningful education programs that are aligned with state and national education standards and reform initiatives and promote repeat visits. Create ongoing learning opportunities with educators. 2. Improve communication with schools, education-related organizations, and the public to increase visibility of new and ongoing programming. 3. Increase collaboration with other museums and agencies. 4. Implement effective methods of gallery interpretation. Create multiple levels of interpretation to enhance learning opportunities to enable a full family learning experience. 5. Provide Museum experiences that are engaging, educational, memorable and visitor friendly. 6. Provide a high level of customer focus that enhances the visitor experience. 7. Provide a safe and secure environment for the Museum visitor.

Long Term Goal

Elevate the levels of educational preparedness and attainment of our citizens.

Societal Indicator: Lifelong Learning

- Generate operating revenue through increased grants and other voluntary contributions from the public and private sectors and through cooperative arrangements with other museums, state agencies and organizations.

Goal Summary and Alignment

1. Increase corporate support for the Museum. 2. Increase Foundation/corporate grants for education and research programs. 3. Increase contracts and contacts for the Museum. 4. Increase upper level memberships. 5. Obtain sponsorships for exhibits and programs. 6. Increase membership base annually. 7. Develop quality and popular fee-based programs. 8. Develop a strong retail environment that encourages visitor purchases.

Long Term Goal

Be recognized as the best-managed state in the nation.

Societal Indicator: Government Operations

- Preserve and maintain the record of the Commonwealth's natural history - the library of our natural heritage - for present and future generations.

Goal Summary and Alignment

Protect, conserve and wisely develop our natural, historical and cultural resources.

Long Term Goal

Protect, conserve and wisely develop our natural, historical and cultural resources.

Societal Indicator: Historic Resources

- Maintain existing and expand outreach education programs to more areas of the state, reaching more Virginians.

Goal Summary and Alignment

1. Be the premier resource in understanding and interpreting Virginia's natural heritage within a global context in ways such as programs, exhibits and publications that are relevant to all the citizens of the Commonwealth. 2. Develop meaningful education programs that are aligned with state and national education standards and reform initiatives. 3. Maintain and improve existing outreach programs offices including Southside, Central, and Eastern Virginia outreach programs. 4. Explore new opportunities to strategically identify and cultivate new outreach programs in different regions of the state. 5. Explore existing and emerging technologies to reach more areas the state. 6. Raise awareness and appreciation of the important work of the Museum throughout the state.

Long Term Goal

Elevate the levels of educational preparedness and attainment of our citizens.

Societal Indicator: Lifelong Learning

- Provide the highest quality administrative support services and financial management for the Museum to protect its fiscal integrity.

Goal Summary and Alignment

Accomplishment of this goal will protect the agency's fiscal reputation and align with the Commonwealth's standing as the best-managed state in the nation.

Long Term Goal

Be recognized as the best-managed state in the nation.

Societal Indicator: Government Operations

Programs and Service Areas for Agency

- 14501: Collections Management and Curatorial Services
- 14503: Education and Extension Services
- 14507: Operational and Support Services
- 14508: Scientific Research

Customers

Pre-Defined Customer Group	User Specified Customer Group	Customers Served Annually	Potential Annual Customers	Projected Trend in # of Customers
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Student	Elementary and secondary school teachers and students	22,000	35,000	Increase
Families	Children and their families	10,000	20,000	Increase
Higher Education Institutions	Scientists and Researchers	667	1,200	Increase
Natural Resources and Earth Science	Natural history enthusiasts including Tourists and Eco-tourists	25,000	50,000	Increase
Student	Virtual Visitors	200,000	250,000	Increase
Aged	Seniors and adults with disabilities (over the age of 18) and their families	1,500	4,000	Increase
Post-Secondary Student	Career Development Post-Secondary and Graduate Students	7	15	Increase
Families	Exhibits and Visitation off-site	222,631	253,102	Increase

Key Risk Factors

Several factors will have a significant impact on the agency over the next four years.

Budget constraints- Adaptation to necessary budget constraints placed added emphasis on drawing outside dollars to the museum's programs. Personnel have made greater use of competitive grant activities.

Research and Collections- Curators are the caretakers of the state's only centralized repository of collections representing extensive natural and cultural heritage. Staff vacancies have impacted the Museum's ability to conduct biological and paleontological programs.

Economy- A high unemployment rate has negatively impacted visitation. As a consequence, the admission fees were reduced and visitation remained constant, but the museum has not had an increase in revenue.

Products and Services

The Museum serves as the State's natural history museum and its duties include the following: 1) investigating, preserving and exhibiting the various elements of natural history found in Virginia and other parts of the United States and the world; 2) fostering an understanding and appreciation of how man and the earth have evolved; 3) encouraging and promoting research in the varied natural heritage of Virginia and other parts of the world; 4) encouraging individuals and scholars to study our natural history and to apply this understanding of the past to the challenge of the future; 5) establishing a state museum of natural history in Virginia where specimens of natural history, especially those of Virginia origin, can be properly housed, cared for, cataloged and studied, and to ensure a permanent repository of our natural heritage; and 6) coordinating an efficient network in Virginia where researchers and the public can readily use the natural history material of the Museum, its affiliates, Virginia's institutions of higher education and other museums.

Trends

Rankings & Customer Trends

The key customers served by the Museum are students, teachers, children and families, scientists and researchers, tourists and eco-tourists, website visitors, and senior citizens. The Museum also serves the community by providing volunteer activity, including juniors and approximately 75 senior citizens. At present, the Museum has the capacity to serve a broad array of interested customers through programs, lectures, exhibits, the website, and special events. The programs, exhibits, events, publications, and website of the Museum are designed to appeal to a broad audience.

Trend Name	Trend Area
Displaying great exhibits	Increase
Visitors and Collaborations	Increase
SOL Education programs	Increase

Performance Highlights: Service Performance & Productivity Initiatives

One of the best measures of the Museum's performance is the number of customers reached by various programs. In FY2013, the Museum reached over 30,000 visitors in-house and over 220,000 visitors at 18 off-site partnering organizations, state parks, schools, and visitor centers throughout the state. Educators reached over 15,000 people through 680 educational programs, all of which were correlated to standards of learning, served 66 school divisions, with 400 programs at the Museum and 280 programs through outreach offices.

Museum scientists produced 7 publications. They served 2,403 people through lectures, identifications, and peer review. The Paleontology Blog was updated 71 times and received over 28,000 hits world-wide. Scientists were key to the development of 2 new major exhibits, loaned almost 300 specimens to 8 different institutions, and made 4,150 new collections database entries representing 12,319 specimens.

The Museum delivers valuable services to the Commonwealth via original collections-based research on our natural heritage, dynamic exhibits, in-house and at offsite areas that focus on enhancing the public's science literacy and children's comprehension of Virginia SOLs, and providing educational opportunities that benefit families, students, and teachers. The Museum is increasing multiple visits per person by maintaining up-to-date and interesting programming. Staff continually improve operating revenue. Ultimately, the museum preserves and maintains the Commonwealth's natural history--the library of our natural heritage--for future generations.

Future Direction, Expectations, and Priorities

As the museum's extensive collections continue to grow and further benefit our education, exhibit, and research efforts, the Museum offers exciting opportunities for all Virginia citizens to be engaged in furthering their science literacy. This unique benefit generates tourism, with half of our onsite visitation coming from outside our area code, and over a quarter million people visiting our 18 offsite exhibits. Our modern facility in Martinsville, built in 2007, continues to protect and house the state's collections effectively. Highlights of collections growth include new specimens (including fossil species new to Virginia) from Carmel Church located in Caroline County, mammals from throughout the state, marine specimens from coastal habitats, and archaeological specimens from statewide locations will be the focus of current collections growth.

Research supports a Virginia science SOL-based curriculum of programs for school groups and homeschoolers. These programs are delivered by experts in early childhood education. In addition, surveys show that teachers who go through museum teacher professional development programs come out of these week-long immersive programs with a greater understanding of science instruction methods, and are more comfortable handling STEM-based topics. Due to the museum's draw (approximately one half of all visitors are from areas outside of Martinsville/Henry County), it is an important focal point for area tourism efforts. Visitors spend time at the Museum then shop and/or eat in local establishments. Museum staff purchase much of their supplies and equipment, or contract specialized workers, from local Small, Women, and Minority (SWAM) businesses, thus providing hundreds of thousands of dollars flowing through the local economy. The Museum is one of the larger employers in the area, thus supplying steady jobs.

14501: Collections Management and Curatorial Services

Description

Collections Care and Management: Develop, maintain, and preserve the state's natural history collections held by the Virginia Museum of Natural History (the Museum); make them available to scientists and the public; utilize them in research projects, exhibits, and education programs; and preserve them in perpetuity as a record of Virginia's natural history.

Mission Alignment and Authority

This service area supports the mission of the Museum by preserving the various elements of natural history found in Virginia and other parts of the United States and the world, where specimens of natural history, especially those of Virginia origin, can be properly housed, cared for, cataloged, and studied to ensure a permanent repository of the state's natural heritage.

Customers for this Service Area

Anticipated Changes to Customers Base

Scientists and Researchers: Continue to respond to information requests and host visits to the collections, including groups attending conferences held at the Museum or nearby locations. Currently, this customer base is being served by a reduced collections and curatorial staff. Additional staff would allow us to reach more customers.

Virtual Visitors: Have a web-accessible version of the collections catalog available. This will allow scientists, researchers, and curious site visitors to access information about the over 10 million specimens managed by this service area.

Elementary and Secondary School Teachers and Students and Post-Secondary and Graduate Students: Currently, this customer base is being served by a reduced collections and curatorial staff. Additional staff would allow us to reach more customers.

Current Customer Base

Pre-Defined Customer Group	User Specified Customer Group	Customers Served Annually	Potential Annual Customers	Projected Trend in # of Customers
Student	High school student interns and volunteers	35	40	Increase
Student	K-12 school groups who go on special tours of the collections	49	250	Stable
Adult	Scientists and researchers from various universities, agencies, and organizations worldwide	185	300	Stable
Adult	Nature enthusiasts who go on special tours of the collections	23	75	Stable
Adult	Visitors to website accessing an online collections database	0	1,600	Increase
Higher Education Students	Interns and volunteers at a college or graduate school level	2	6	Stable

Partners for this Service Area

Partner	Description
Department of Conservation and Recreation, Division of Natural Heritage	The Museum serves as the repository for Recent invertebrate specimens acquired through systematic survey conducted by the Division of Natural Heritage.
Department of Game and Inland Fisheries	The Museum is the repository for vertebrate specimens that serve as vouchers to document distribution and occurrence.
Radford University	Exhibit loans to Geology Museum.
Smithsonian Institution	Through collaborations with staff of the National Museum of Natural History, facilitate use of specimens and their preservation in joint programming. Through the Smithsonian Affiliates Program, participate with almost two hundred other program members as an affiliate member to share information and potentially develop joint collections-based programming, exhibits, and research.
U.S. Bureau of Land Management (BLM)	The Museum curates and houses vertebrate fossils from federal lands and BLM provides access to these vertebrate fossils.
University of Virginia	In partnership with the Virginia Coast Reserve Long-Term Ecological Research (VCR/LTER) program at the University of Virginia, Department of Environmental Sciences, which is funded by the National Science Foundation, the Museum serves as the repository for specimens recovered by project members.
Virginia Department of Transportation	The Museum serves as a repository for archaeological materials generated by transportation projects.
Virginia Tech	Accepts from time to time geological and biological collections developed in the course of university research.

Products and Services

Factors Impacting the Products and/or Services

Constraints related to budgets and staffing levels.

Anticipated Changes to the Products and/or Services

Specimen acquisition and accessibility cannot increase much beyond current levels without additional staff.

Listing of Products and / or Services

Natural History Collections: 1) Scientific specimens used for research and as a record of the natural history of the Commonwealth, including preservation of specimens collected from sites or areas that no longer exist. 2) Exhibit quality specimens. 3) Educational program specimens: Specimens appropriate for use in educational programming where objects can be handled by students and visitors.

Specimen Information: Information such as the presence and distribution of certain species or other natural resources in various geographic areas, the effects of varying preservation practices upon specimens, and historical information about the collection and acquisition of some of our older 19th century collections.

Ongoing preservation of, and accessibility to, collections.

Preservation of at-risk collections obtained from other state agencies and universities.

Financial Overview

Budget Component	2013 GF	2013 NGF	2014 GF	2014 NGF
Base	152,869	141	152,869	141
Changes to Base	0	0	0	0
Total	152,869	141	152,869	141

Objectives for this Service Area

Objectives for this Service Area

Objective

Provide collections management, preservation, care, and accessibility to protect the long-term integrity of specimens and artifacts, as well as their associated data documentation.

Description

Collections staff will provide appropriate collections management, preservation, care, and accessibility for the natural history collections of the Commonwealth held in trust by the Museum.

Objective Strategies

- Catalogue specimens as numbers are requested by research workers both from inside and outside the institution.
- Continue pest management program by monitoring pest traps. Staff will identify and record presence of pests observed in traps, will enter data into existing spreadsheet. Will make recommendations to be implemented in conjunction with Building and Grounds staff.
- Maintain collecting permits and submit all reports associated with the permits.
- Monitor fluid levels for fluid-preserved specimens and adjust as needed.
- Undertake accessions and any necessary deaccessions of specimens.

Alignment to Agency Goals

- Preserve and maintain the record of the Commonwealth's natural history - the library of our natural heritage - for present and future generations.

Measures

- Percentage of specimens monitored for pest infestation and excessive heat and humidity fluctuations.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Data are collected during the year and recorded in Collections' records.

Objective

Develop a web-accessible collections and scientific library database that enables scientists and educators to find information and perform research.

Description

The Museum is developing a web-accessible database for collections and library holdings to permit all citizens of the Commonwealth some access to the collections that are not on exhibit.

Objective Strategies

- Add specimens to the database as they are accessioned into the Museum's collections.
- Make part of the database accessible to the public via the Museum's website.

Alignment to Agency Goals

- Conduct and disseminate research relevant to the stewardship of Virginia's natural environment, leading to enhanced appreciation of these resources for improving

the quality of life for our citizens and contributing to the global reservoir of knowledge.

- Preserve and maintain the record of the Commonwealth's natural history - the library of our natural heritage - for present and future generations.

Measures

- Percentage of time public access to the Museum's online collections database is available.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The public will be able to access a subset of the collections database (object name and state/country of origin) through the Museum's website. The calculation is made by using Google Analytics, which is integrated into the Museum's website. If the Museum's website is operational, then the collections database is accessible.

14503: Education and Extension Services

Description

Develop meaningful education programs that are aligned with state and national education standards and reform initiatives; provide Museum experiences that are engaging, educational, safe, memorable and visitor friendly by implementing effective methods of interpretation to provide a full range of learning experiences. Provide scientifically informed and accurate natural history and related educational programs for students, teachers and the public; and develop awareness of Virginia's natural heritage among all citizens through a variety of learning experiences, including programs, presentations, exhibits, electronic media, and publications.

Mission Alignment and Authority

This service area supports the agency's mission to exhibit the various elements of natural history found in Virginia and other parts of the United States and the world, and to foster an understanding and appreciation of how man and the earth have evolved. This service area also supports the Museum's mission to encourage and promote research in the varied natural heritage of Virginia and other parts of the world while encouraging individuals and scholars to study Virginia's natural history and to apply this understanding of the past to the challenges of the future.

Customers for this Service Area

Anticipated Changes to Customers Base

The family festivals draw a considerable visitation along with the need for educational programs, staffing, and volunteer services. Since moving to the new building in 2007, we have seen an increase in demand for some programs and a decrease in demand for others. School and tour group visits to the Museum, children's birthday parties, group sleepovers, and adult naturalists have leveled out, while the demand for out-of-school, home school, scouting, summer camps, professional development and outreach programs has increased. There is need for increased program offerings for seniors and for high school aged children.

Current Customer Base

Pre-Defined Customer Group	User Specified Customer Group	Customers Served Annually	Potential Annual Customers	Projected Trend in # of Customers
Student	Elementary and secondary school teachers and students	22,000	35,000	Increase
Families	Children and their families	10,000	20,000	Increase
Natural Resources and Earth Science	Natural history enthusiasts including tourists and eco-tourists	25,000	50,000	Increase
Student	Virtual visitors	50	2,000	Increase
Aged	Seniors and adults with disabilities (over the age of 18) and their families	100	500	Increase

Partners for this Service Area

Partner	Description
Clean Virginia Waterways	Through the Clean Virginia Waterways program, administered by Longwood University, and in collaboration with the City of Martinsville, the Museum has adopted neighboring Wilson Park to monitor water quality, provide educational experiences, and to improve and maintain water quality.
Fort Monroe Authority	Serve in an advisory capacity toward program development and interpretive design in planning for Fort Monroe and Old Point Comfort as a future property of the Commonwealth.
Global Learning and Observation to Benefit the Environment (GLOBE)	The Museum serves as a state Global Learning and Observation to Benefit the Environment (GLOBE) partner, providing training and support for teachers participating in the GLOBE program. The department director delivered two GLOBE workshops focused on hydrology at Glenvar High School in Roanoke County.
Hollins University	Since its inception, the education and public program director has been involved in planning and content delivery of the Hollins Elementary Science Institute for Teachers, a professional development opportunity, summer institute with academic year seminars for elementary teachers in Southwestern Virginia addressing content in life, physical, and earth-space science specified in the Virginia Standards of Learning (SOL).
Martinsville-Henry County (MHC) After 3	The MHC After 3 program is a local, community cooperative youth development program administered by Patrick Henry Community College between after school service providers and local education and civic agencies with support provided by The Harvest Foundation of the Piedmont. The program provides after-school programming for middle and high school students.
Rockfish Valley Foundation (RVF)	The Museum entered in an affiliate agreement with RVF. The RVF Nature Center has some Museum exhibit components now and discussions are underway to develop educational programming to benefit each other's mission toward natural history-related programming in Nelson County.
Science Museum of Virginia (SMV)	In collaboration with SMV and other state agencies, the Museum coordinates professional development opportunities supporting the Virginia Standards of Learning.
Smithsonian Institution	Through the Smithsonian Affiliates Program, participate with almost two hundred other program members as an affiliate member to share information and potentially develop joint educational programming, exhibits, and research programs.
Virginia Association of Science Teachers (VAST)	The department director is VAST webmaster; serves on the board of directors; and, serves on the editorial review board of the Journal of Virginia Science Education. The Museum provides free admission to VAST members and delivers presentations and exhibits at the annual VAST Professional Development Institute.
Virginia Commonwealth University (VCU)	The department director teaches graduate level courses related to science education as adjunct faculty in the VCU School of Education.
Virginia Department of Forestry, Game and	Operate a joint Virginia Master Naturalist program related to natural resource outreach, education and stewardship. The goals of this joint

Inland Fisheries, Recreation and Conservation, Environmental Quality, Virginia Master Naturalist Program, Virginia Tech	effort are: to enhance existing natural resources stewardship, education, and outreach activities by providing natural resources training at the local level, thereby developing a supply of dedicated, informed and certified "Master Naturalist" volunteers and provide leadership, guidance and oversight to a largely self-sufficient network of local Master Naturalist chapters that adhere to a set of objectives, procedures, and minimum requirements set at the state level.
Virginia Department of Education, Virginia Department of Game and Inland Fisheries, Virginia Department of Forestry	In collaboration with other state museums and natural resource agencies, the Museum coordinates periodic teacher training opportunities supporting the Virginia Standards of Learning. The Museum also provides support for these agency initiatives including the Science Standards of Learning and other state educational initiatives.
Virginia Department of Recreation and Conservation, State Parks	Work with the parks to promote programs of mutual interest including "Virginia's State Parks: Your Backyard Classrooms."
Virginia Master Naturalist Program	The Museum staff serve on the state steering and executive committees and as volunteer members of local chapters.
Virginia Resource Use Education Council (VRUEC)	Education staff are members of the VRUEC. The Governor's charge for VRUEC is to coordinate the development and consistent delivery of environmental education programs in the Commonwealth by linking current environmental education efforts to creative, innovative approaches; nurture and promote alternative methods of reaching and educating our citizens from all sectors of the public; and, promote sustained life-long learning and professional development based on Virginia's academic standards.
Girls RISE Net	Girls RISEnet is strengthening the professional capacity of informal science educators to engage and motivate minority girls in grades 6-12 to explore and pursue science and engineering careers.
COPUS	COPUS is a grassroots effort that builds connections that support a better understanding of the nature of science and its value to society. COPUS is built around three values: community, celebration, and promotion.
Deep Earth Academy (DEA)	The education program of the Integrated Ocean Drilling Program (IODP), DEA's mission is to promote education as related to the IODP. The Museum education staff are currently working on a Ship-to-Shore programming for girl scouts.

Products and Services

Factors Impacting the Products and/or Services

Depending on the nature of the program, economic factors have impacted, to some degree, most products or services.

Outreach education programs have seen an increase in demand likely affected by school system budget decreases for expenses that are associated with field trips.

Anticipated Changes to the Products and/or Services

Outreach education programs will likely continue to increase.

Listing of Products and / or Services

Education programs and presentations.

Instructional technology services and products.

Outreach education programming from centers in Martinsville/Southside, Charlottesville/Central, and Newport News/Eastern regions.

Financial Overview

Budget Component	2013 GF	2013 NGF	2014 GF	2014 NGF
Base	328,817	484,344	328,817	484,344
Changes to Base	78,622	-144,033	256,890	-109,213
Total	407,439	340,311	585,707	375,131

Objectives for this Service Area

Objectives for this Service Area

Objective

Provide meaningful education programs that are aligned with state and national education standards and reform initiatives.

Description

Education staff design, produce, deliver, evaluate, analyze, and modify educational programs to ensure a high level of quality and customer satisfaction in correlation to state and national education standards.

Objective Strategies

- Analyze all existing, modified, and new programs for the associated academic content. Keep abreast of existing and new national, Virginia, and North Carolina learning standards.
- Provide professional development opportunities for museum staff and volunteers in program design, delivery, evaluation, and improvement. Share results with staff as a means of providing feedback and make program adjustments as needed.

Alignment to Agency Goals

- Create and deliver life-long learning opportunities for the citizens of the Commonwealth of Virginia as well as its visitors through programs, exhibits, and publications based on scientific and educational research.

Measures

- Percentage of educational program evaluations with overall rating of good or better.

Measure Class **Other Agency** Measure Type **Outcome** Preferred Trend **Stable** Frequency **Annually**

Data Source and Calculation

Collect and analyze both formative and summative evaluations of all relevant programs. Percentage based on statistical analysis of program evaluations with overall approval rating of 90% or better.

- Percentage of educational programs correlated to learning standards.

Measure Class **Other Agency** Measure Type **Outcome** Preferred Trend **Stable** Frequency **Annually**

Data Source and Calculation

Each program will be reviewed for standards correlation, recorded daily, and percentage calculated at year-end.

Objective

Provide technical and security management expertise and support for instructional and information technology services to enhance Museum programs.

Description

Staff design, produce, evaluate, analyze, and modify instructional and informational technologies to ensure appropriate use and a high level of quality and customer satisfaction.

Objective Strategies

- Offer online training opportunities through the Commonwealth of Virginia Knowledge Center and other instructional resources.
- Provide overall planning, content design, and administrative guidance for 2013 state appropriation for distance learning project "VMNH Adventure Classroom."
- Provide periodic staff training opportunities in the use of instructional technologies, information systems, security, and applications.

Alignment to Agency Goals

- Create and deliver life-long learning opportunities for the citizens of the Commonwealth of Virginia as well as its visitors through programs, exhibits, and publications based on scientific and educational research.

Measures

- Number of technology-based trainings offered to employees.

Measure Class **Other Agency** Measure Type **Outcome** Preferred Trend **Increase** Frequency **Annually**

Data Source and Calculation

Number of trainings offered for employees. Trainings included technology, nonprofit, and Knowledge Center trainings.

Objective

Maintain and seek new strategic partnerships with individuals, agencies, and formal and informal educational organizations that seek to serve more areas of the state.

Description

Museum staff will maintain and seek new strategic partnerships with individuals, agencies, and formal and informal educational organizations that seek to serve more areas of the state through outreach education programs and services.

Objective Strategies

- Identify, cultivate, and develop new relationships with individuals, agencies, and formal and informal educational organizations that may be able to further the objective.
- Maintain and strengthen existing outreach programs and locations.

Alignment to Agency Goals

- Create and deliver life-long learning opportunities for the citizens of the Commonwealth of Virginia as well as its visitors through programs, exhibits, and publications based on scientific and educational research.

Measures

- Number of outreach education programs and services delivered.

Measure Class **Agency Key** Measure Type **Output** Preferred Trend **Increase** Frequency **Annually**

Data Source and Calculation

Determine number of existing outreach programs and services in locations currently being delivered. Calculate difference each year with a targeted increase of 5% over 3 years (by 2016).

14507: Operational and Support Services

Description

The Operational and Support service area provides overall direction and management of the Museum, ensuring adherence to applicable state laws, rules and regulations. This service area is comprised of three major divisions:

1. Administration and Services. This area provides management of the Museum's cash flow, internal controls, cost effectiveness, and overall operations of facilities and resources. It ensures that the Museum continues to be well-managed and cost-efficient, using its resources effectively to advance its mission. It provides policies and procedures and ensures that the Museum has an efficient and diverse workforce; provides efficient facility operations, maintenance, protection, and improvement of the Museum facility; supports the Museum in providing goods and services for operations and programs; and manages capital outlay and maintenance reserve projects.
2. Marketing and External Affairs. This division raises awareness of the Museum, resulting in increased attendance; provides information to the public on the Museum's programs and services; and supports the Museum's programs by generating revenue from admissions and retail sales.
3. Development. This division promotes an active membership base, resulting in increased membership retention and increased levels of membership; provides increased individual, foundation, corporate, and range of government support for exhibits, events, education, research, and public programs; and expands the Museum's fundraising efforts to a broad audience across the Commonwealth.

Mission Alignment and Authority

This service area directly aligns with the Museum's mission to "interpret Virginia's natural heritage within a global context in ways that are relevant to all citizens of the Commonwealth" as it seeks to build awareness of the Museum, and increase attendance, participation, and support.

Customers for this Service Area

Anticipated Changes to Customers Base

While Museum staff will continue to promote the Museum's exhibits and programs statewide and beyond, there will be an increased emphasis on the development and promotion of outreach programs such as remote exhibits, public online resources, and remote programs. The Museum's increased focus on the development and promotion of remote programs will generate opportunities to reach new and larger audiences.

Current Customer Base

Pre-Defined Customer Group	User Specified Customer Group	Customers Served Annually	Potential Annual Customers	Projected Trend in # of Customers
Elementary Student	Teachers	25,000	60,000	Increase
Families	Children and their families	14,000	28,000	Increase
Natural Resources and Earth Science	Scientists and researchers	887	1,206	Increase
Families	Tourists and eco-tourists	31,000	91,000	Increase
Communication	Website visitors	50,000	60,000	Increase
Physically-Disabled	Senior citizens	3,000	7,000	Increase

Partners for this Service Area

Partner	Description
Danville Science Center	Both the Museum and the Danville Science Center regularly partner for joint promotions of exhibits and programs. This partnership provides the Museum with a strong presence in the nearby Danville-Pittsylvania County region.
Martinsville-Henry County Historical Society	The Museum is currently partnering with Piedmont Arts Association (PAA) on a joint marketing grant to promote area museums.
Martinsville-Henry County Office of Tourism	The Museum's Division of Marketing and External Affairs staff work closely with staff of the Martinsville-Henry County Office of Tourism to maximize marketing efforts for both the Museum and entire region. A strong working relationship ensures that marketing resources are used to their fullest potential. Specially, the Museum recently partnered with the tourism office on a joint marketing grant.
Patrick Henry Community College (PHCC)	As an underwriter of educational programs, like the Jefferson Awards and scientific symposium, PHCC is able to strengthen its regional identity among the scientific community and students desiring a career in the sciences.
Piedmont Arts Association (PAA)	The Museum is currently partnering with PAA on a joint marketing grant to promote area museums.
Piedmont Regional Governor's School for Math, Science & Technology	Students are receiving valuable experience in the sciences by year-long placement in labs and other areas of the Museum.
Southern Virginia Route 58 Tourism Partnership	The Southern Virginia Route 58 Tourism Partnership is a newly formed 501(c)3 organization that exists to promote the many tourism destinations in the newly formed Southern Virginia tourism region. The Museum's Director of Marketing and External Affairs is a member of the board of directors for the organization.
Virginia Tourism Corporation (VTC)	With the opening of the new Museum facility, efforts were made to strengthen the Museum's partnership with the VTC. The VTC's relatively abundant marketing resources are vital to the Museum's ongoing efforts to reach potential visitors from a wide radius.
Residential Governor's School Program in Mathematics, Science, and Technology	The Residential Governor's School Program in Mathematics, Science, and Technology based at Lynchburg College partners with the Museum each year to provide a museum visit and programs to the participants.

Products and Services

Factors Impacting the Products and/or Services

Because many programs, events, and exhibits are dependent on nonstate funds for both marketing and implementation, the scheduling of particular programs, events, and exhibits will depend on the availability of necessary funding from outside sources.

Exhibits and educational programs are mainly based on the science produced by the Museum and other scientific researchers. The exhibits themselves are rich with selected specimens and artifacts from our vast collections; visitors get the unique experience of seeing/touching real objects representing Virginia's natural heritage.

Special exhibits can be very costly depending on the type of exhibit (rented exhibits vs. exhibits developed in-house by Museum staff). Funding for special exhibits comes primarily from donated funds, including sponsorships, grants, and other support. Particularly in the past two to three years, Museum staff members have greatly increased the number of exhibits produced in-house, while significantly decreasing the amount of funds spent on outside rentals. However, while exhibit costs have been drastically reduced, the workload for exhibits staff members has increased significantly.

Due to a decreased operating budget and the associated costs of producing hard copies, several Museum publications, both scientific and general, are being produced, either in-part or entirely, electronically. In addition to reduced or eliminated printing costs, electronic publications can be distributed more widely through a variety of web, email, and social media outlets.

Largely due to limited staff, the traveling exhibit program has been drastically reduced in offerings with some key exceptions.

Festivals and special events rely on external funding sources for support.

Anticipated Changes to the Products and/or Services

Because of the Museum's increased focus on outreach programming through remote exhibits, programs, and events, the number of events, programs, and events held at remote locations will likely increase.

With significant increases in the density of exhibits on display at the Museum, the agency has greatly enhanced visitor experiences, which is expected to result in increased repeat visits and increased memberships.

While many of the Museum's recent and upcoming exhibits will be developed in-house, the agency will continue to identify selected exhibits for rental in order to enhance visitor experiences while generating new sponsorship opportunities.

The agency will likely continue to produce publications electronically.

Listing of Products and / or Services

Development of contributed income from individuals, corporations, and foundations through the Museum's Foundation; provides income to the Museum for education, exhibits, research and public programs.

Communications: Marketing and External Affairs staff will continue to provide information to broad and specialized audiences through the monthly e-newsletter, the website, calendar and events listings in a variety of media and other organization's literature, press featuring coverage in newspapers, periodicals, radio and television, and social media.

Advertising and Promotions: Marketing and External Affairs staff will continue to promote programs and events for the different areas within the Museum through paid advertising, brochures, coupons and other incentives and discounts as budget allows.

Special Events: Development and Special Events staff and Marketing and External Affairs staff will continue to create and implement major special events, family festivals, exhibit openings, guest lectures and performers to provide additional enhancements to visitors' Museum experiences.

Membership Development: Provide membership value and opportunities for increased engagement to Museum visitors and supporters through the cultivation of new members and nurturing of existing members. Provide increased revenue to the Museum.

Financial Overview

Budget Component	2013 GF	2013 NGF	2014 GF	2014 NGF
Base	1,505,181	179,396	1,505,181	179,396
Changes to Base	-55,659	5,099	-46,463	-7,774
Total	1,449,522	184,495	1,458,718	171,622

Objectives for this Service Area

Objectives for this Service Area

Objective

Retain existing volunteers and recruit new volunteers.

Description

Support Museum programs by providing volunteers and assigning them in appropriate areas where needed.

Objective Strategies

- Offer incentives for individuals and groups to increase their participation in the Museum and its programs.
- Recognize the contributions of volunteers and their respective service hours at annual volunteer appreciation events.

Alignment to Agency Goals

- Conduct and disseminate research relevant to the stewardship of Virginia's natural environment, leading to enhanced appreciation of these resources for improving the quality of life for our citizens and contributing to the global reservoir of knowledge.

Measures

- Number of active Museum volunteers.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Number of volunteers supporting Museum programs and recorded in the volunteer database.

Objective

Provide a safe and secure environment for the Museum visitors and staff.

Description

Provides efficient facility operations, protection, maintenance, and improvements to the facility to ensure comfort and safety of visitors and staff.

Objective Strategies

- Assure proper operation, protection, improvement, and maintenance of the facility to ensure comfort and safety of visitors and staff.

Alignment to Agency Goals

- Develop visitor experiences that are interesting, emotionally charged, immersive, well-paced, dramatic, social and grounded in content which result in multiple visits per person.

Measures

- Percentage of operating days that the Museum operates accident-free for visitors and staff.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Calculation will be based on the number of accidents reported in the fiscal year.

Objective

Stimulate use of the Museum by increasing individual and corporate memberships and expanding benefits and cost-benefit to members.

Description

Members are informal marketers for the Museum through their social networks, and their level of engagement ensures that the Museum and its programs are used to the benefit of natural history and learning.

Objective Strategies

- Evaluate Development staff to enable the Department to effectively meet and exceed its goals. Additional part-time and/or contract staff members will be added as needed.
- Increase and refine membership benefits.
- Reflect the specific needs of businesses through corporate membership benefits and pricing.

Alignment to Agency Goals

- Create and deliver life-long learning opportunities for the citizens of the Commonwealth of Virginia as well as its visitors through programs, exhibits, and publications based on scientific and educational research.

Measures

- Number of Museum members.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Membership records from Blackbaud.

Objective

Increase revenue from contributed or grant support from individuals, corporations, foundations and range of public sector sources and rental of Museum facilities.

Description

Increase funding for Museum programs through: (1) increased memberships, (2) fundraising events, (3) sale of sponsorships for programs and exhibits, (4) completion and submission of grant proposals, (5) ongoing prospect identification, cultivation, and solicitation, and (6) increased donations to the Annual Discovery Fund.

Objective Strategies

- Largely due to past decreases in staffing, the Museum's traveling exhibit program has been reduced in recent years, with some exceptions. However, the Museum is committed to growing the traveling the traveling exhibits program to generate greater awareness of the Museum across the region while generating new revenue through exhibit rentals.

- The Museum Foundation recently completed a \$4 million capital campaign to raise funds for new permanent exhibits in the new facility. The Foundation will continue to raise funds for the Discovery Fund, the Legacy Endowment, event sponsorships, the planned giving program, and individual and corporate memberships.

Alignment to Agency Goals

- Generate operating revenue through increased grants and other voluntary contributions from the public and private sectors and through cooperative arrangements with other museums, state agencies and organizations.

Measures

- Amount of contributed support.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Total of all contributions from the Museum's Foundation for exhibits, special event sponsorships, payroll, and education programs and income from Museum room rentals.

Objective

Ensure that resources are used efficiently and programs are managed effectively, and in a manner consistent with applicable state and federal requirements.

Description

Ensure that all resources are used efficiently and programs are managed according to state rules and regulations.

Objective Strategies

- Provide adequate management to support programs.

Alignment to Agency Goals

- Provide the highest quality administrative support services and financial management for the Museum to protect its fiscal integrity.

Measures

- Number of non-compliant issues listed in the Statewide Financial Management and Compliance quarterly report.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The results will be recorded from the quarterly Report on Statewide Financial Management and Compliance published by DOA. Non-compliant issues are listed quarterly during the fiscal year for each agency.

Objective

Provide natural history-related retail products to customers in the Museum Store and PALEO Cafe, both onsite and online.

Description

Provide natural history related products in the Museum Store and PALEO Cafe to help develop a more interesting visitor experience.

Objective Strategies

- Evaluate and modify merchandise in both the Museum Store and PALEO Cafe to best meet the demands and interests of customers and the mission of the Museum.
- Promote merchandise in the Museum Store and PALEO Cafe to onsite and online visitors.

Alignment to Agency Goals

- Create and deliver life-long learning opportunities for the citizens of the Commonwealth of Virginia as well as its visitors through programs, exhibits, and publications based on scientific and educational research.

Measures

- Amount of revenue generated through retail sales.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Total revenue deposits from retail sales during year.

Objective

Increase Museum attendance annually; both at the Museum and at remote Museum exhibit sites.

Description

Promote the Museum and its programs, exhibits, and events, as a visitor destination to a wide range of potential visitors across the region. Ensure that visitors have a positive experience at the Museum and at off-site exhibits to increase repeat visitation. It is anticipated that, as the number of members grow, so will Museum visitation.

Objective Strategies

- Develop new and strengthen existing institutional relationships across the region in order to create new opportunities to reach potential visitors. Potential relationships include convention and visitors bureaus, chambers of commerce, other museums and cultural institutions, other state agencies, and other educational institutions.
- Implement Museum marketing and public relations efforts including press releases, the website, advertising, signage and promotions to a wider geographic region with 100 miles as the primary radius and 250 miles as the secondary market. Continue to promote the Museum's exciting outreach programs and exhibits, special exhibits, opportunities for lifelong learning, groundbreaking scientific research, and innovative educational programs that continue to reach broader audiences across Virginia.
- Support the efforts of other departments in order to effectively disseminate information to the public about the important mission and programs of the Museum. Particular departments to be supported and promoted include Education and Public Programs, Research and Collections, and Development.

Alignment to Agency Goals

- Create and deliver life-long learning opportunities for the citizens of the Commonwealth of Virginia as well as its visitors through programs, exhibits, and publications based on scientific and educational research.

Measures

- Number of visitors to the Museum and remote Museum exhibit sites.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Data is extracted from excel spreadsheets and visitation reports which track the number of visitors at the Museum. Off-site visitation is extracted from reports submitted by host venues that display Museum exhibits at remote sites. The numbers are totaled to get the quarterly attendance totals. Quarterly totals are added together to get annual totals.

- Cost per visitor to provide temporary Museum exhibits.

Measure Class Preferred Trend Frequency

Data Source and Calculation

Divide the total cost required to provide a temporary exhibit by the number of visitors attending the exhibit. Cost is the resource or input and it includes rental costs, advertising costs, and setup costs. The output is increase in visitors and overall income. Calculate the average cost per visitor. Data is extracted from excel spreadsheets and visitation reports which track costs of all temporary exhibits and the number of visitors. The cost is then divided by the number of visitors.

Objective

Ensure at least one professional development opportunity for supervisors; survey staff to determine current and future space needs.

Description

Maintain the best staff by providing necessary training and support.

Objective Strategies

- Provide at least one professional development opportunity to supervisors annually with support staff attending when appropriate. Survey staff space needs annually.

Alignment to Agency Goals

- Provide the highest quality administrative support services and financial management for the Museum to protect its fiscal integrity.

Measures

- Number of professional development opportunities offered annually.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The Human Resource Manager will track by requesting a report of all training from supervisors on a quarterly basis and total all trainings offered at the end of the fiscal year.

Objective

Produce well-designed and maintained exhibits that are dynamic, educational, interactive, thought provoking, and grounded in scientific and social content for a wide range of audiences.

Description

Permanent exhibits, special exhibits and displays, rented or internally produced, are well-designed and have a high level of quality and customer satisfaction.

Objective Strategies

- Collaborate with scientific and education staff, along with relevant outside individuals and organizations.

Alignment to Agency Goals

- Create and deliver life-long learning opportunities for the citizens of the Commonwealth of Virginia as well as its visitors through programs, exhibits, and publications based on scientific and educational research.

Measures

- Percentage of exhibit evaluations with overall rating of good or better.

Measure Class **Other Agency** Measure Type **Outcome** Preferred Trend **Increase** Frequency **Annually**

Data Source and Calculation

Visitor evaluations are collected from on-site surveys and electronic kiosk, reviewed and results recorded on a spreadsheet and totaled annually.

Objective

Produce text, electronic, and web-based publications and educational materials.

Description

To design, produce, evaluate, analyze, and modify publications to ensure a high level of quality, accuracy, and customer satisfaction.

Objective Strategies

- Work with scientists and educators to determine upcoming publications that highlight the Museum's current and upcoming education and research programs.

Alignment to Agency Goals

- Create and deliver life-long learning opportunities for the citizens of the Commonwealth of Virginia as well as its visitors through programs, exhibits, and publications based on scientific and educational research.

Measures

- Number of publications produced and distributed annually.

Measure Class **Other Agency** Measure Type **Output** Preferred Trend **Increase** Frequency **Annually**

Data Source and Calculation

Count publications and log monthly to produce a total of publications for the fiscal year.

- Percentage of publications reviewed internally for accuracy and quality.

Measure Class **Other Agency** Measure Type **Outcome** Preferred Trend **Stable** Frequency **Annually**

Data Source and Calculation

Publications review system is used to determine accuracy and results are logged in a spreadsheet and counted at year-end.

14508: Scientific Research

Description

This service area provides scientifically informed and accurate natural history publications, programs and exhibits for researchers, students, teachers and the public. It also develops awareness of Virginia's natural heritage among all citizens via popular and technical presentations and publications and the Museum's website, newsletter and publication series.

Mission Alignment and Authority

This service area supports the mission of this agency to investigate and preserve the various elements of natural history found in Virginia and other parts of the United States and the world and to foster an understanding and appreciation of how man and the earth have evolved while encouraging and promoting research in the varied natural heritage of Virginia and other parts of the world.

Customers for this Service Area

Anticipated Changes to Customers Base

Currently, this customer base is being served by a reduced collections and curatorial staff. Additional staff would allow us to reach more groups of customers.

Current Customer Base

Pre-Defined Customer Group	User Specified Customer Group	Customers Served Annually	Potential Annual Customers	Projected Trend in # of Customers
Adult	Virginia Association of Science Teachers	100	100	Stable
Adult	Virginia Science Standards Institute	50	50	Stable
Adult	Archaeological Society of Virginia	200	200	Stable
Adult	Council on Virginia Archaeology	200	200	Stable
Adult	Department of Conservation and Recreation, Division of Natural Heritage	6	6	Stable
Adult	Geological Society of America	1,300	1,300	Stable
Adult	International Bryozoology Association	250	250	Stable
Adult	International Commission on Zoological Nomenclature	35	35	Stable
Adult	Mineralogical Association of Canada	20	20	Stable
Adult	Society of Vertebrate Paleontology	250	250	Stable
Adult	Virginia Academy of Sciences	30	30	Stable
Adult	Virginia Polytechnic Institute and State University	10	20	Increase
Adult	Virginia Master Naturalists	25	25	Stable
Adult	American Society of Mammalogists	300	300	Stable

Partners for this Service Area

Partner	Description
Carnegie Museum of Natural History	Collaborative research and program development
Caroline County, Virginia	Collaborative research and program development
College of William and Mary	Collaboration on "Geology of Virginia" volume
Harvard University	Collaborative research
James Madison University	Collaborative research
National Museum of Scotland	Collaborative research
Radford University	Collaborative research
Smithsonian Institution	Multiple collaborations with staff from the National Museum of Natural History
The American University	Collaborative research
University of Sao Paulo	Collaborative research
University of Virginia	Collaborative research
University of Wyoming	Collaborative research projects

US Bureau of Land Management (BLM)	The Museum curates and houses vertebrate fossils from federal lands and BLM provides access to these vertebrate fossils for the Museum to use in research and exhibits.
Virginia Department of Conservation and Recreation, Division of Natural Heritage	Identify fauna collected by Natural Heritage staff during inventories and curate and house voucher specimens to maintain a database of the Commonwealth's fauna.
Virginia Department of Historic Resources	Collaborative research
Virginia Polytechnic Institute and State University	Adjunct appointments of the Museum curators to teach courses at Virginia Tech and to supervise graduate students. Multiple collaborative research projects.
Roanoke College	Collaborative research
University of Otago	Collaborative research
New York College of Osteopathic Medicine	Collaborative research
Calvert Marine Museum	Collaborative research
North Carolina Museum of Natural Science	Collaborative research
Maryland Historical Trust	Collaborative research
Towson State University	Collaborative research
Utah State University	Collaborative research
Archaeological Society of Virginia	Collaborative research
University of Sao Paulo	Collaborative research
University of Wales	Collaborative research

Products and Services

Factors Impacting the Products and/or Services

Constraints related to budgets and staffing levels.

Anticipated Changes to the Products and/or Services

Number of programs, publications and other services cannot increase much beyond current levels without additional staff.

Listing of Products and / or Services

Scientific Publications

Public programming content to include educational and exhibit materials, popular publications

Scientific knowledge to support educational materials and advance scientific research at the Museum and elsewhere

K-12 teacher education programming

Service to public, museum, and professional organizations

Peer review of grant proposals and manuscripts

Identification of specimens, objects, and artifacts for individuals and agencies

Financial Overview

Budget Component	2013 GF	2013 NGF	2014 GF	2014 NGF
Base	446,165	148,019	446,165	148,019
Changes to Base	179,211	-41,061	133,926	-63,008
Total	625,376	106,958	580,091	85,011

Objectives for this Service Area

Objectives for this Service Area

Objective

Provide consultancy services for industries and law enforcement using the state-of-the-art equipment in the Museum laboratories and the Museum collections

Description

Provide consultancy services for industries and law enforcement using scientific expertise and the state-of-the-art equipment in the Museum laboratories and the Museum collections.

Objective Strategies

- Pursue consulting opportunities with law enforcement and industry within constraints of personnel, time and budget.

Alignment to Agency Goals

- Conduct and disseminate research relevant to the stewardship of Virginia's natural environment, leading to enhanced appreciation of these resources for improving the quality of life for our citizens and contributing to the global reservoir of knowledge.
- Generate operating revenue through increased grants and other voluntary contributions from the public and private sectors and through cooperative arrangements with other museums, state agencies and organizations.

Measures

- Number of times the Museum laboratory facilities and scientific expertise are used by business and law enforcement entities.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The number of technical consultations provided to law enforcement and business entities by Museum staff is recorded on a spreadsheet and totaled at the end of each fiscal year.

Objective

Build collections through appropriate research.

Description

Determining the ecological impacts of human activities and natural changes is reliant upon up-to-date knowledge of the natural history of an area. Natural history collections form the most comprehensive base reference for inventories of fauna and flora in Virginia, and must be kept up to date. Collections form the reference "library" and the database for research into all aspects of natural history, and therefore must be continually updated to reflect advances in our knowledge. Building collections through research also includes curatorial field work programs in the Commonwealth. Collections from areas outside the Commonwealth provide comparative material, which is necessary for proper investigation and accurate interpretation. Museum collections will be developed based on areas of greatest need.

Objective Strategies

- Accept collections from private sources that increase the diversity of the collections.
- Conduct field work in Virginia and elsewhere and incorporate new material into the collections.
- Receive and catalogue specimens received from other institutions with the goal of an extensive inventory of the Commonwealth's fauna and flora.

Alignment to Agency Goals

- Conduct and disseminate research relevant to the stewardship of Virginia's natural environment, leading to enhanced appreciation of these resources for improving the quality of life for our citizens and contributing to the global reservoir of knowledge.
- Preserve and maintain the record of the Commonwealth's natural history - the library of our natural heritage - for present and future generations.

Measures

- Number of specimens added to Museum collections.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Acquisitions of appropriate specimens and output of prepared specimens from the laboratories. All acquisitions are recorded as they come in and a report is presented to the Board of Trustees. Acquisitions are partially opportunistic and numbers may vary significantly from year to year.

Objective

Be the premier resource in understanding Virginia's natural heritage within a global context in ways that are relevant to the citizens of the Commonwealth.

Description

The Museum is the state repository for natural history collections, including voucher specimens. The Commonwealth boasts an incredible diversity of plant and animal life that is surpassed by few other states in the nation. It also has a wealth of world-class archaeological and paleontological sites, and specimens from many of these localities are housed at the Museum. With these rich resources it is incumbent upon the Museum to develop world-class research programs that form the basis for innovative and exceptional educational programs. To realize the full potential of the Commonwealth's rich natural heritage requires expertise in numerous specialized areas. This will be facilitated by developing and enhancing formal collaborative programs with scientists at other state agencies, universities, and scientific institutions around the nation and the world. Dissemination of the results of the research programs to the scientific community is critical. In order to facilitate this process, the Museum has its own peer-reviewed publications series including "Jeffersoniana," "Virginia Museum of Natural History Memoirs," and "Virginia Museum of Natural History Special Publications". Production of these series enables the Museum to reach not only the state and national scientific communities, but also the international one. Contributions to these publications is open to the entire scientific community, not just Museum researchers and affiliates. Museum scientific staff also disseminate results of their research through technical presentations at conferences and by publishing in other peer-reviewed scientific literature.

Objective Strategies

- Produce peer-reviewed scientific publication series such as Jeffersoniana, Virginia Museum of Natural History Memoirs, and Virginia Museum of Natural History Special Publications.
- Publish the results of research findings in peer-reviewed scientific publications on a regular basis.
- Seek continued scientific collaboration with colleagues at institutions in the Commonwealth as well as nationally and internationally.

Alignment to Agency Goals

- Conduct and disseminate research relevant to the stewardship of Virginia's natural environment, leading to enhanced appreciation of these resources for improving the quality of life for our citizens and contributing to the global reservoir of knowledge.

Measures

- Number of scientific collaborations, number of scientific publications produced by the Museum, and number of other scientific publications and technical presentations by Museum scientific staff.

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

Data are collected during the year as scientific research results are published and as technical presentations are made at conferences. The total used is the aggregate total of the number of collaborations with various agencies during the year, the number of scientific publications produced by the Museum, and the number of other scientific publications and technical presentations by Museum scientific staff.

Objective

Operate scientific labs that are visitor-friendly and provide public education by encouraging interaction with Museum visitors.

Description

Operate the Vertebrate Paleontology, Archaeology and Stereoscanning Electron Microscope (SEM) laboratories so that the visitors can see and understand cutting-edge scientific research in action. Specimens brought back from programs will be prepared and examined by trained staff and volunteers in the laboratories on public view. Develop a vehicle that will aid K-12 students in understanding the scientific method and provide visitors with an interactive experience of fundamental research procedures. This is particularly important in the surrounding underserved rural community.

Objective Strategies

- Continue the operation of the three laboratories that can viewed by the general public and increase the number of staff, volunteers and students that work in the laboratories.

Alignment to Agency Goals

- Create and deliver life-long learning opportunities for the citizens of the Commonwealth of Virginia as well as its visitors through programs, exhibits, and publications based on scientific and educational research.
- Conduct and disseminate research relevant to the stewardship of Virginia's natural environment, leading to enhanced appreciation of these resources for improving the quality of life for our citizens and contributing to the global reservoir of knowledge.
- Develop visitor experiences that are interesting, emotionally charged, immersive, well-paced, dramatic, social and grounded in content which result in multiple visits per person.

Measures

- Number of hours that laboratories are operational and available for public viewing each week

Measure Class Measure Type Preferred Trend Frequency

Data Source and Calculation

The hours the labs are available for public viewing are recorded daily and totaled at the end of the fiscal year.