# PLANNING TO PRESERVE THE PAST FOR THE FUTURE, PART 2:

## A DETAILED CONSERVATION SURVEY OF ARCHAEOLOGICAL ARTIFACTS AT HISTORIC ST. MARY'S CITY

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**with contributions by**

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## FOREWORD

This report comprises the results of a detailed conservation survey that was performed at Historic St. Mary's City (HSMC) with support from the Institute for Museum and Library Services. The report was written by Lisa Young, President of Alexandria Conservation Services and HSMC's contractual conservator, with contributions by Kareen Gualtieri, Conservation Assistant, and Silas Hurry, Laboratory Director and Curator of Collections at HSMC.

The survey was conducted for the purposes of assessing the conservation treatment needs of thousands of artifacts excavated and housed by the Historic St. Mary's City Commission. This assessment is a crucial step in the long-term care of these archaeological collections, and as such it will be used to apply for future grants to support conservation activities.

Because the detailed conservation survey will be used to apply for further support, the resulting report is structured to facilitate this action. Some sections of the report contain redundant information because those sections will most likely be pulled for use in individual project proposals. To be more specific, the "Future Recommendations and Guidelines" plus the "Final Recommendations and Preservation Plan" will act as an Executive Summary of the report. It therefore includes some information about the methods and results of the survey that are repeated from previous sections. Additionally, artifacts from four archaeological sites were surveyed, and the background of these sites is discussed in the main body of the report. The background of each site is then repeated in Appendices I-XIV because these appendices contain detailed survey results from each site, and it is important that it be possible to pull each appendix to apply for funding to conserve artifacts on a site-by-site basis.

Although the inclusion of redundant information my interfere somewhat with the flow of the report as a whole, it enables the report to better fulfill the future needs of HSMC staff who will use it as a tool for planning and grant application activities as they work to protect and conserve St. Mary's City's unique collections.

## ACKNOWLEDGEMENTS

The authors wish to express their appreciation to the Institute of Museum and Library Services for their financial support which made this entire project possible. We especially wish to thank Mr. Steven Schwartzman of the IMLS Conservation Support Program for his assistance when we were preparing the initial proposal and for all his help during the course of the grant.

The authors wish to especially thank Ms. Emily Williams of the Colonial Williamsburg Foundation for her assistance with producing the x-rays which helped us discover significant artifacts hidden in large lumps of corrosion. Ms. Williams' knowledge of artifact conservation and her special skills with this technology allowed us to efficiently collect data that otherwise would have been irretrievable.

In many ways, this entire study would not have been feasible without the volunteer efforts of Mr. Jason Young. His design of the database which captured all the significant detail we needed resulted in a system which was both effective and elegant.

Thanks are also extended to Kelli Southard, conservation intern, for her time in assisting the Conservation Assistant with repackaging the collections, surveying the collections and performing on-going collections management tasks in the research department. We wish to express our gratitude to Don Winter for taking photos and helping with both the figures and copy editing for the report.

We also wish to thank the current staff of Historic St. Mary's City who assisted in innumerable ways during the project. We especially wish to acknowledge Henry Miller and Martin Sullivan for their thoroughgoing review of this report, their encouragement during the course of the study, and general enthusiasm for the efforts to help preserve these important archaeological collections. We also want to acknowledge the efforts of Cathy Robinson, Porzia Arneson, Sue Wilkinson and Annetta Oh of the HSMC administrative office for taking care of the financial reporting, personnel, and varying procurement challenges.

Thanks also goes to Sara Rivers-Cofield who assisted with the 2002-2003 IMLS Conservation Survey of HSMC, and was available to provide insight and training to the conservation assistant at the beginning of this project. Her willingness to answer questions and provide insight to the decisions made during the first survey throughout this project was invaluable.

Finally, we wish to thank all the archaeologists, laboratory workers, and conservators who for the last thirty years have worked so hard to recover, study, and preserve the archaeological remains of Maryland's first capital. Without their careful work and dedication over the many years we would know so much less about the past and would have lost the opportunity to learn more by the re-examination and further study of these materials.

## INTRODUCTION

St. Mary's City is located in St. Mary's County on the western shore of the Chesapeake Bay (Figure 1). St. Mary's City is a 1500-acre National Historic Landmark that commemorates the founding site of Maryland and is jointly administered by the Historic St. Mary's City Commission and St. Mary's College of Maryland.

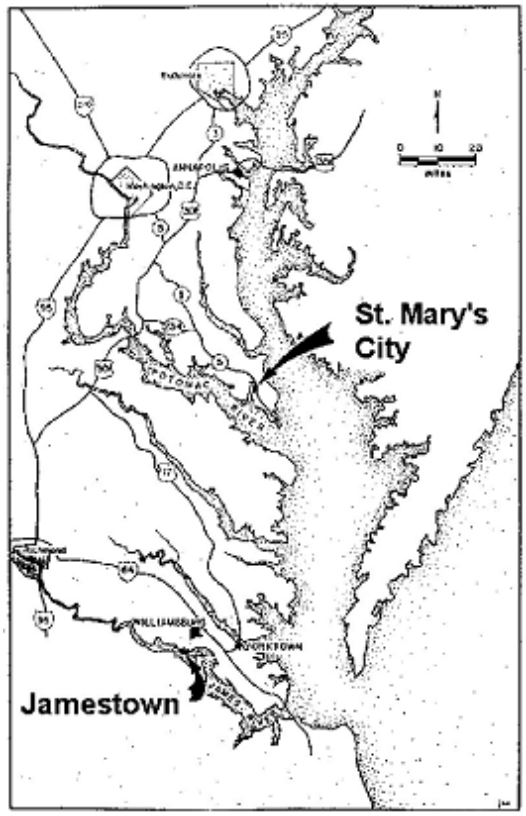


**Figure 1. Map of the Chesapeake Bay showing Historic St. Mary's City.**

During the winter of 2002-2003 a detailed conservation survey and condition assessment of the archaeological collections curated prior to 1988 was carried out for Historic St. Mary's City (HSMC). The survey was conducted by a team of people including Lisa Young, Project Conservator, Silas Hurry, HSMC Laboratory Director and Curator of Collections, and Sara Rivers Cofield, Conservation Assistant.[1] The survey was conducted from October 7, 2002 to May 27, 2003. A total of 303 boxes containing 6083 lots of materials were surveyed. During the winter of 2004-2005, the second half of this project commenced and was conducted by a team including Lisa Young, Silas Hurry, Kareen Gualtieri, Conservation Assistant, and Kelli Southard, a conservation intern from St. Mary's College of Maryland. The survey was conducted from October 25, 2004 to May 9, 2005. A total of 2039 boxes containing 6674 lots of materials were surveyed. In addition to the survey, the repackaging of a considerable amount of the collections was accomplished, as well as the organization of the Archaeological Annex with the introduction of shelving labels and row guides. These projects would not have been possible without funding from the Institute of Museum and Library Services with matching support from HSMC.

The purpose of the conservation survey was to perform a detailed condition survey and assessment of the archaeological collections that were curated after 1988. This date was chosen as it reflects the timing when HSMC implemented more up-to-date curation standards and guidelines for their collections. These guidelines were based on a summary report produced by a special committee within the Council of Maryland Archaeology. The guidelines were subsequently, with minor revisions, adopted by the State of Maryland. The curation procedures implemented by HSMC in 1988 therefore follow the State of Maryland and Federal curation guidelines[2] and are still being used today to process and curate artifacts at HSMC.

[1] Final survey report on file with IMLS and St. Mary's City; Planning to Preserve the Past for the Future: A detailed conservation survey of the archaeological artifacts at Historic St. Mary's City (Young et al 2003).

[2] Shaffer, Gary and Elizabeth Cole (1994), Standards and Guidelines for Archaeological Investigations in Maryland. Maryland Historical Trust.

The collections surveyed are comprised of six archaeological zones (1-6) and Zone 1 is further broken down into seven major sites: ST1-11, Trinity Church; ST1-13, Town Center; ST1-14, Slave Quarter; ST1-19, Van Sweringen Site; ST1-103, Chapel Site; ST1-104, Aldermanbury Street Site; and ST1-126, Middle Street South Site. The results of this survey will be useful in the short-term in order to plan for the repackaging of collections, including continued desiccation of metal artifacts and to prioritize resources for treatments of deteriorated artifacts (priority 1 and 2). It will also be beneficial in the long-term for the improved care and conservation of the collections. The information and data collected during the survey has been entered into a computerized database so that it is easily accessible. All of this is necessary in order to allow the collections to be exhibited, published, and further studied by historical archaeologists, conservators, scientific researchers, students, and the general public.

**Figure 2. HSMC's contractual conservator Lisa Young conducted the 1997 conservation survey for HSMC, and she continued to work with HSMC as she supervised the 2002-2003 and 2004-2005 detailed conservation surveys.**

This project demonstrates that the staff at HSMC recognizes their responsibilities regarding the curation, collections management, and conservation of their collections. This commitment is demonstrated further by the recent news that HSMC was awarded Museum accreditation by the American Association of Museums in 2003. Historically, the institution has demonstrated its commitment to collections care as the second full time archaeological staff member hired by HSMC was that of Archaeological Curator. Dr. Henry Miller's involvement with the Society for Historical Archaeology Curation Standards Committee as well as being the recipient of an Institute of Museum Services' award in 1986 continued this commitment. The 1986 grant allowed HSMC to install environmental controls and repackage some of the archaeological collections in order to ensure long-term artifact preservation.

A self-funded general conservation survey of the archaeological and historical collections at HSMC was completed during the summer of 1997. The purpose of the survey was to assess the environmental condition of the storage and exhibit areas, to perform a general condition survey of the archaeological collections, and to evaluate past conservation practices in regards to documentation and treatment of artifacts. Since that time, several of the short and long-term recommendations have been completed by the staff of HSMC using annual conservation funding and funding allocated for collections care. While the yearly budget

United States Department of the Interior, NPS (1991) 36 CFR Part 79, Curation of Federally-Owned and Administered Archeological Collections. Department Consulting Archeologist, Archeological Assistance.

allocated for collections care is still not adequate, many of the high priority tasks have been completed and others are still ongoing. One of the main recommendations was to secure more space for the already over-crowded storage of the collections, as well as to accommodate for the future growth of these collections. This task has been accomplished as the detached garage has now been upgraded and environmentally controlled to house more collections. IMLS GOS funding allowed for additional staff to re-house artifacts into acid-free materials and to bring the collections up to State and Federal standards. One of the short-term recommendations was to apply for additional grant funding to perform a detailed condition survey of the collections. This was accomplished with the IMLS conservation support grant in 2002-03 as well as the current IMLS conservation support grant. The second major recommendation identified during the general survey, to fund more staff positions, is still unresolved. Each year the budget calls for the reinstatement of an archaeological conservator at HSMC, however, State budgetary cutbacks and other priorities have not made this possible as of yet. The State does continue to fund contractual conservation work yearly, primarily to deal with staff training, preventive conservation of the collections, and treatment of artifacts that are in need of immediate care (Figure 2).

## HISTORY OF CONSERVATION AT HSMC

Historic St. Mary's City has had an active conservation program ever since professional archaeology began in the late 1960s. The original conservation program was initiated by contact with Carolyn Rose of the Smithsonian Institution. Dr. Rose had undertaken some conservation treatments for material recovered from the John Hicks site, located in Historic St. Mary's City, by Stephen Israel of Contract Archaeology Inc. During the St. John's excavations (beginning in 1972), this relationship continued and the first Curator of HSMC, Mr. George L. Miller, received training directly from Dr. Rose to continue treatment of archaeological artifacts. Mr. Miller, in turn, trained additional staff members the conservation techniques that he learned from Dr. Rose and at Wayne State University.

During the past twenty years a small conservation laboratory was established and artifacts from on-going excavations were treated to stabilize their conditions. High priority was given to metals and glass, both of which were treated on a regular basis. Other unique and unstable artifacts were treated as needed, or in special circumstances such as an outgoing loan or exhibition.

Early treatments focused on iron artifacts and utilized electrolytic reduction of corrosion, manual cleaning, boiling in deionized $H_2O$ to remove salts, baking to remove water, and hot microcrystalline wax coatings. Tannic acid was also used as a rust inhibitor. Copper artifacts were cleaned with either sodium sesquecarbonate or weak acid solutions. All of these techniques, which represented the most up-to-date treatments at the time, were focused on stripping metal artifacts clean to arrest corrosion. All of the treatments utilized a post-treatment coating for further protection (i.e. microcrystalline wax or Krylon®).

A second major area of artifact conservation treatment was the stabilization of fragile glass, bone, and tin-glazed ceramics. All glass was routinely impregnated with polyvinyl acetate (PVA) in an acetone solution using vacuum impregnation.


**Figure 3. Conserved window leads at HSMC sometimes show maker's marks and dates.**

These processes were maintained at Historic St. Mary's City until the late 1980s when the Museum hired its first professional conservator. Electrolytic reduction of iron was abandoned in favor of more gentle methods of cleaning corrosion. The use of manual (air abrasion) cleaning facilitated the removal of corrosion, thus allowing the conservator to stop when the original surfaces of the object were encountered. If necessary, stabilization of the corroded surfaces was performed. CRC, a rust inhibitor, was applied to iron alloys as was dilute black enamel paint. Similar mechanical cleaning and over coating procedures were used with copper alloy materials.

Glass treatment continued with the addition of a professional conservator but the procedure was refined and included dewatering in ethanol and vacuum impregnation with Acryloid B-72/ethanol instead of PVA.

Another new area of conservation treatments was added at this time for the cleaning and stabilization of lead and lead alloy artifacts. Of particular note in this regard was the systematic treatment of turned window leads to help identify makers' marks (Figure 3). EDTA, ethylene-diamine-tetra-acetic acid, was used to soften corrosion and glass bristle brushes were used to remove the corrosion. After treatment, the lead was coated in hot microcrystalline wax.

In 1987 the museum hired a professional conservator to establish a conservation program and to treat the archaeological collections. A full-time conservator was staffed at the museum until 1994 when she left to pursue a higher degree. Due to State funding problems, this position was eliminated from the museum in 1994. Due to the loss of this position the collection remains in a transition period regarding conservation. A backlog of artifacts routed to conservation remains untreated as do artifacts from sites prior to 1987 that were not treated previously. Currently, conservation treatments occur on a yearly contractual basis or by supervised staff, students and volunteers when time and money permits.

## HISTORY OF ARTIFACT PROCESSING

Historic St. Mary's City was established in 1966 with one acre of land and a 1934 reconstruction of a 17th-century Statehouse. Today, it includes 814 acres of original Town lands and more than eighty buildings. In 1969 the site was certified as a National Historic Landmark and it represents one of the major 17th century archaeological sites in North America. HSMC officially opened in 1984 as an outdoor museum of history, archaeology, and natural history.

A brief review of past excavation methodologies is useful to understand how the collections of assemblages came to be at HSMC. Archaeological investigations have been conducted at Historic St. Mary's City since 1969, including both systematic excavations and surface collecting. Several million artifacts have been collected, making this one of the largest 17th-century collections in the United States. Excavation techniques have remained at a high standard for the last twenty years. Excavations are carried out by museum staff, field school students, and, supervised volunteers. During special projects and as needed, funding is sought to hire archaeological technicians to assist with excavations and laboratory work.

**Figure 4. Provenience information is written on each artifact and this label is then sealed with an Acryloid B-72 top-coat.**

All artifacts are carefully screened in the field using modern techniques. The artifacts are divided by material in the field, and unique or unstable artifacts are separated and routed to the conservation lab. The artifacts are placed in polyethylene plastic bags within paper bags and transported to the laboratory for processing. Soil samples, bricks and flotation samples are separated out for additional processing. After the artifacts arrive in the laboratory they are sorted, cleaned, and labeled (Figure 4). All artifacts are wet cleaned using water and a soft brush unless they are composed of metal or mortar/plaster or they are particularly fragile. The metals and mortar/plaster are surface cleaned using a dry, soft brush. From 1988 to 1994, all glass and fragile objects were pulled using duplicate removal slips and routed to conservation. All other objects are labeled and stored away after the Laboratory Director examines them. A laboratory manual was written in 1980 and is updated annually.

The material included in this survey was generally sorted into labeled polyethylene bags in the field as it was being recovered. These plastic bags were then placed in labeled brown paper bags. The contents of the individual plastic bags was resorted in the lab into water sensitive and water-cleaning tolerant materials for processing. Fragile, unstable artifacts were routed to conservation on an as available basis. Unstable glass was generally consolidated while window

leads were cleaned and unstable metals treated mechanically and chemically rather than electolytically. After the conservation position was abandoned in 1994, artifacts were no longer routed directly to conservation but instead only very unstable items were treated contractually by a consultant or, in the case of unstable glass, by staff.

## ENVIRONMENTAL STORAGE CONDITIONS

Acquiring proper storage for the archaeological and historical collections has not always been easy and often presents a large problem for institutions responsible for providing long-term care to objects in their collections. Collections composed of a variety of materials, all requiring different storage needs, creates a challenge to staff members who are committed to establishing a storeroom that meets Federal and/or State curation standards. In 1997, a general survey of the archaeological collections was performed. During that time, it was determined that the environmental conditions of the archaeological storage areas were adequate for curation of archaeological materials. A review of past environmental records (hygrothermograph charts from 10 years) as well as environmental monitoring performed during the project, showed that the environment surrounding the artifacts was acceptable and stable.

The state of preservation of the artifacts is greatly influenced by the storage and packing materials as well as the environment surrounding those materials. Because packing materials are in immediate contact with the artifacts, these materials will directly influence the rate of deterioration. The packing and storage materials provide a physical and chemical barrier to the outside environment and once that barrier is broken down, the rate of degradation increases. Even artifacts that have undergone conservation treatment in the past will not be able to withstand the agents of decay unless they are stored in a stable environment. The 1997 survey showed that the packing materials for some of the collections, primarily those curated prior to 1988, needed to be brought up to museum standards. This task was accomplished prior to performing the detailed condition survey using IMLS GOS funding. The re-housing of the collections will be discussed in detail below.

The archaeological collections at HSMC are primarily stored in two main areas: the basement of the archaeological laboratory [Room 1], and an environmentally controlled detached garage [Room 2]. The majority of the archaeological collections are stored in Room 1, a house built ca. 1967. The collections were brought to this area in 1979 from the basement of the administrative building next door. In addition, artifacts that are undergoing research, and/or being processed, are stored on the main floor of the archaeological laboratory, or within the conservation work area if they are undergoing treatment. Other artifacts awaiting processing or cataloguing may also be stored in the back enclosed porch area of the research laboratory, as well as the archaeology overflow area [environmentally controlled trailer on the property]. Archaeological collections being exhibited are located in the exhibition center within the Visitors Center.

During the 2002-2003 and the 2004-2005 conservation surveys, the majority of all the materials surveyed were housed in acid-free Hollinger record size boxes and were located one-deep on metal shelving. The boxes were either housed in Room 1, basement of the archaeology laboratory, or in the archaeology annex (detached garage), Room 2 (Figures 5 and 6). In addition to the assessment of artifacts stored inside these archival boxes, artifacts on exhibit, Room 3, (Figure 7) and the comparative collections housed inside the metal cabinets in drawers, also located in Room 1, were surveyed for the 2004-2005 project. Artifacts ranged from tiny fragments of ceramics to large, over-sized items such as a lead coffin from the Chapel Site (Figure 8).

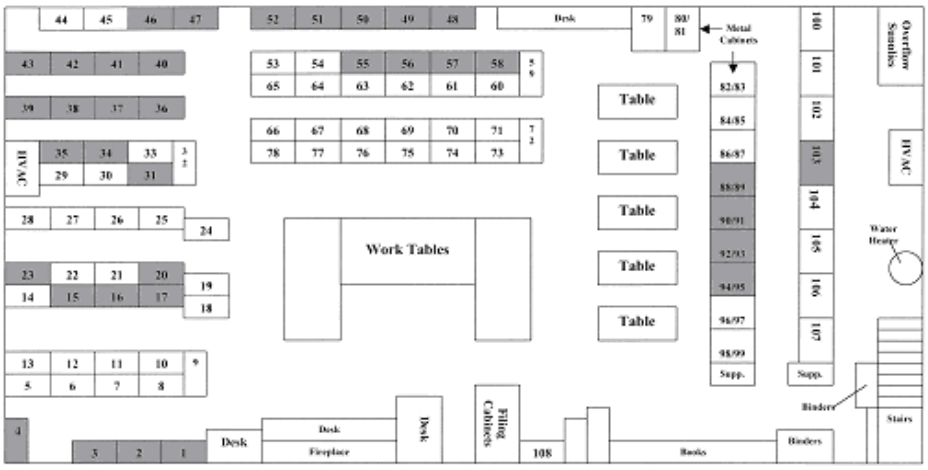


**Figure 5. Planview of Room 1 (Not to Scale), the basement of the archaeological laboratory that acts as the primary storage facility. Each bank of shelves is numbered and shaded shelves indicate the presence of collections studied in this survey.**

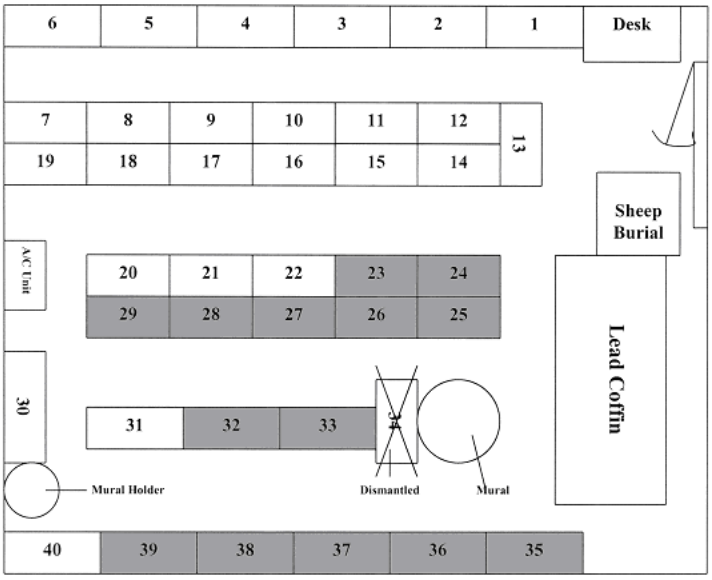


**Figure 6. Planview of Room 2 (Not to Scale) Archaeological Annex storage. Each bank of shelves is numbered and shaded shelves indicate the presence of collections studied in this survey**

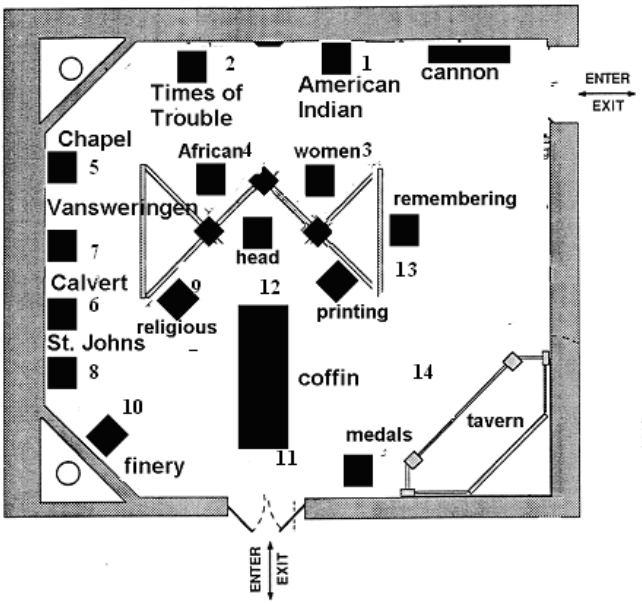


**Figure 7. Figure 7. Planview of Room 3 (Not to Scale), Exhibition Hall in Visitor Center. In order to effectively assess the artifacts on display, conservation survey terminology was applied to this space. Each case was referred to as a bank, one unique object or a cluster of similar objects represented a box, and objects from the same archaeological provenience comprised a lot.**

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**Figure 8. Largest lead coffin on exhibition at the HSMC Visitor's Center with special armatures and display case.**

# DETAILED CONSERVATION SURVEY

## PURPOSE OF SURVEY

The purpose of the 2004-2005 HSMC Conservation Survey was to collect information about the current state of the collections excavated at HSMC after 1988. More specifically, the condition of the artifacts contained within the collections was of interest. Information collected was targeted at specific questions about the condition of the artifacts as well as the past care of the collections and the general needs of the collections. The database was therefore designed to incorporate data needed by conservators and collections staff. Ultimately, this database will be linked to other databases such as the collections catalog and treatment forms for object conservation.


**Figure 9. Examples of typical artifact lots. Left: a non-metal lot containing ceramics, pipes, glass, plaster, faunal items, buttons, and brick. Right: a metal lot containing an iron jaw harp, iron/copper alloy corset hooks, nails, unidentified iron**

The emphasis of the conservation survey was an assessment of the condition and conservation needs of the artifacts. The contents of 2,039 boxes were surveyed box by box. Two types of boxes were surveyed: "metal" boxes containing metal artifacts in desiccated microenvironments with silica gel and "non-metal" boxes that contained all other materials. Obviously, it was not practical to document each individual artifact. A general review of each lot (defined below) within each box provided sufficient information to establish plans for treatment and care of the collections. For the purposes of the conservation survey, each different provenience within a box was considered a separate lot. In non-metal boxes, each bag in the box generally represented a different provenience unless there were so many artifacts that multiple bags were needed. In metal boxes, multiple proveniences might be enclosed in one outer bag for desiccation purposes. Lots in metal boxes were still assigned by provenience, however, and desiccation bags often contained multiple lots within them. Within this system, each provenience generally had two lots: one non-metal lot, and one metal lot (Figure 9). The only exception to this was the metal boxes and non-metal boxes surveyed in the exhibition space and study collection drawers.

The *Conservation Survey* form of the database was designed to capture information about the provenience of the lot, its physical location within the collections facilities, any previous treatments that may have been performed, the sorting condition of the lot, information about silica gel in desiccated microenvironments, the name of the surveyor and date of the survey, the number of bags represented by the lot, and all of the different materials found in the lot (Figure 10).

Furthermore, a *Conservation Treatment* form was created as a sub-form to capture information about individual objects within a lot, including their material type, condition, recommended treatments, priority recommendation, and comments (Figure 11). For the purposes of this report, each *Conservation Treatment* form that was filled out constitutes one *object*, even though dozens of artifacts could be included on the same form. The grouping of multiple artifacts on one form was necessary because of the burdensome amount of time it would have taken to individually assess each fragment (i.e. every glass shard). For more details about these forms, see Appendix XV: Procedural Manual for the 2002 IMLS Conservation Assessment.

This database is therefore capable of answering questions about the number and types of artifacts needing treatment, the types of treatments needed for particular artifacts, and who should perform the treatment. The survey also prioritizes treatment needs and makes it possible to locate the artifacts when funds become available to treat them. Tallies can be created of the past treatments that have been performed as well as material types present within different lots. The database can also help track the dates of the silica gel so that it may be replaced at future intervals. Furthermore, the database can be used to analyze the rate of survey, and this may be helpful in predicting the amount of time it will take to complete a survey of the remaining collections.

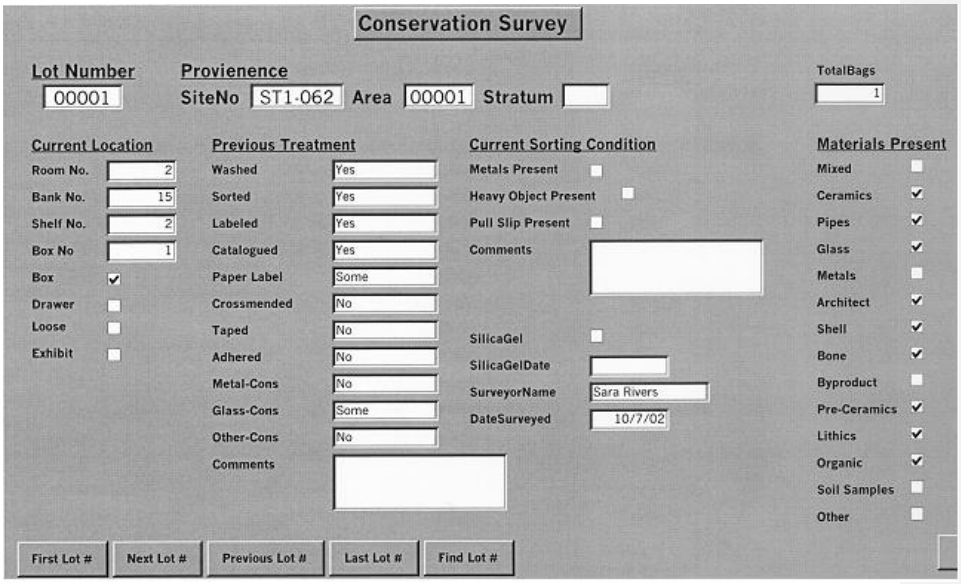


**Figure 10.The Conservation Survey form designed in Microsoft Access to collect data that is true of a whole lot. For more information about this form, see Appendix XV. Form designed by Jason Young.**

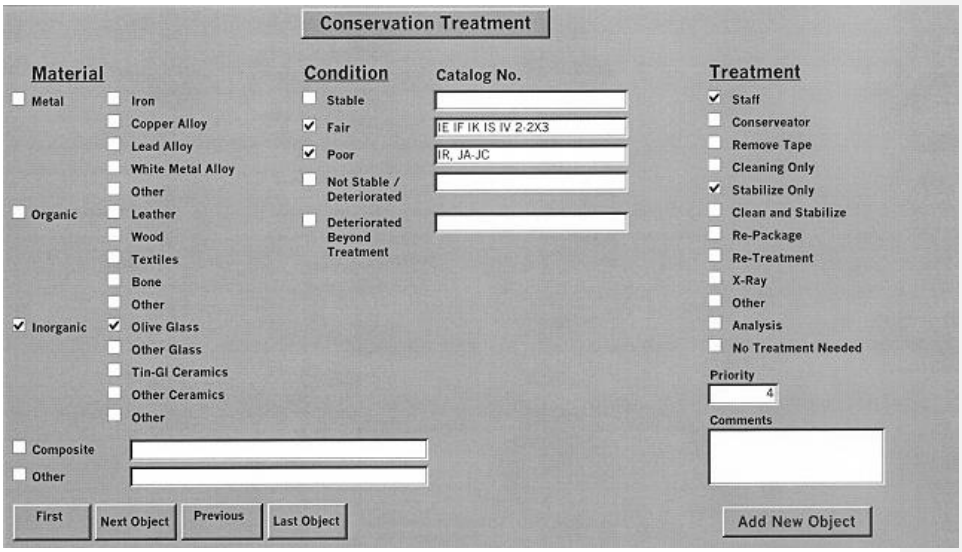


**Figure 11. The Conservation Treatment form designed in Access to collect data about individual objects. For more information about this form, see Appendix XV. Form designed by Jason Young**

## STORAGE CONDITION OF ARTIFACTS

All of the collections surveyed in this study had been recently re-housed with IMLS GOS funding (Figure 12). Originally, the collections had been housed in small, acidic, cardboard boxes. Most of the artifacts were further enclosed in plastic bags within the boxes. These bags were of the types available in the 1970s, before zip-lock bags were common. The bags were therefore not stable and ranged from self-sealing polyethylene bags to small sandwich bags of unknown plastics. The one exception to this are the artifacts stored in the metal cabinets located in Room 1. Many of these collections are currently stored in small, acidic, cardboard boxes because they contain ceramics and lithics, both of which are more inert than other materials. This system was updated during the 2004-2005 survey and will be discussed further in this report.

The repackaging project housed all of these collections into archivally stable packaging as follows:

1. Artifacts from any given provenience were divided by material type and each material type was bagged separately in an appropriately sized, vented polyethylene bag with a mini-grip closure.
2. The provenience information was written on each polyethylene bag containing artifacts with a black permanent marker.
3. The provenience information was written on a small acid-free paper slip for each of these bags of different materials, and this slip was enclosed in the bag.
4. Extremely fragile items were given extra support within vented polyethylene bags with Ethafoam® or small acid-free boxes.
5. Metal and non-metal objects within a provenience were separated and bagged in separate, larger polyethylene bags and the provenience information was written on these two outer bags with a black Permanent marker. The outer bag for non-metals was vented while the outer bag for metals was left un-vented.
6. For non-metals, an acid-free Hollinger record box was lined with a layer of 1/4" Ethafoam®, and the vented bags from several proveniences were placed inside.
7. For metals, desiccated microenvironments were created using silica gel packets.

8. Silica gel packets were created by filling polyethylene bags with a zip-lock style closure with a mixture of 10-15% indicating silica gel and 85-90% regular silica gel.
9. The date of the silica gel packet was written on the polyethylene bag with a black Permanent marker and the bag was vented with holes small enough that no silica could fall out of the bag.[3]
10. Metals were enclosed in larger, un-vented outer bags and a packet of silica gel was enclosed in this outer bag. Multiple proveniences could be enclosed in one outer bag to save silica gel packets. If multiple proveniences were enclosed, a list of these proveniences was made on the outer bag using a black Permanent marker.
11. For metals, a Coroplast®[4] box was assembled and lined with 1/4" Ethafoam®, and the bags containing microenvironments were placed inside.
12. When the bottom of a metal or non-metal box was full, an Ethafoam® platform was placed on top of the bags in the bottom of the box and a second layer of bags was added to the box atop this platform.
13. When a box was full, an archivally stable box label holder was placed on the box and an acid-free paper label with a list of the enclosed proveniences was placed in this label holder.
14. For metal boxes, a bracket was placed on the box label to indicate that multiple proveniences were bagged together within a microenvironment bag.
15. A humidity indication strip was placed in one of the bags within each metal box. This strip was placed in a desiccation bag at the top of the box so that it could easily be located for monitoring purposes.

## SURVEYING PROCEDURES

Archaeological materials have little to no meaning without context. The context, or provenience of artifacts is therefore of paramount importance for the organization of archaeological collections. In keeping with the importance of context, archaeological collections management at HSMC represents a balance between grouping artifacts by provenience and storing the objects with conservation in mind.

During the conservation survey, artifacts were bagged by provenience and enclosed in Hollinger record boxes. These Hollinger boxes are stored on steel shelving in one of two primary storage facilities (described above). Boxes are generally grouped by site and arranged by provenience. In order to facilitate the passive conservation of unstable archaeological metals, however, metal objects were separated from the other objects within a provenience and they were stored in desiccated Coroplast® boxes with indicating silica gel to regulate the relative humidity. The metal boxes and non-metal boxes are still grouped on shelves by site and provenience, however, so that the association of the artifacts is still very clear.

A number of metal cabinets in Room 1, the basement of the archaeology laboratory, also house objects excavated at Chancellor's Point, Van Sweringen, St. John's, and Town Center (For the location of metal cabinets, see Figure 5, #79-99, and #108). These cabinets house artifacts that need to be available for teaching, and those that have been subject to analysis, or artifacts needing extra protection. For example, all ceramics from St. John's and Van Sweringen were pulled for analysis and are housed in the metal cabinets. Additionally, metal artifacts that received conservation treatments were often housed in the metal cabinets rather than being re-integrated into their provenience bags. Artifacts housed inside these cabinets from St. John's, as

[3] Staff involved in re-packaging collections did not begin putting dates on silica gel packets until after all of Chancellor's Point and part of Van Sweringen had already been re-housed. Dates therefore exist on silica packets for part of Van Sweringen, all of St. John's and all of Town Center.

[4] Polypropylene-Polyethylene corrugated board (Canadian Conservation Institute)

well as artifacts excavated at various locations within ST1-13, Town Center, were examined and added to the database during the 2004-2005 conservation survey.

In order to survey the condition of the artifacts and assess their treatment needs, it was necessary to physically examine every object individually. Individual artifact examination in a collection of millions of archaeological specimens is extremely time consuming, and it was therefore necessary to create systematic procedures that would make the survey both thorough and efficient. As stated above, all of the artifacts examined in this survey were located in archivally stable Hollinger boxes (for non-metals) or Coroplast® boxes (for metals). Each box contained one or more different proveniences of artifacts. Each provenience was individually bagged, and the contents of each provenience bag were further separated by material type into smaller bags.

When a box of artifacts was assessed, it was assigned a number in the order that it was surveyed. This became the Conservation Survey Box Number (or "*C. S. Box#"* as it appears on box labels). All of the provenience bags were then removed from each box and arranged in ascending order by area and strata designations. The contents of the box were then crosschecked against the box label to make sure that the label was accurate.

Each provenience bag was then given an arbitrary five-digit lot number that was written on the back of the bag. This was the Conservation Survey lot number (or *"C. S. Lot #"* as it appeared on the bags). This number was the primary control number in the Access database created for the survey (see Appendix XV: Procedural Manual for the 2002 IMLS Conservation Assessment).

Once the lot number was assigned, the assessment of the lot could be conducted and entered in the computer (Figure 12). The computerized database has two forms, the *Survey Form* for information true of the whole lot, and the *Conservation Form* to allow for individual object assessments. The first form of the computerized database, the *Survey Form* includes the following categories of information: provenience data, location information, number of bags per lot, previous treatment information, sorting condition information, silica gel documentation, surveyor information, and a list of materials present. The *Conservation Form*, a sub-form for individual object assessments, contains information about the type of material of the object, the condition of the object, the object's bag size or alpha designation, if available (see HSMC Lab Manual for an explanation of alpha designation), recommended treatment(s) for the object, a priority rating for the recommended treatment, and a comments field for further explanation. For a detailed description of the procedures used to fill out these forms, and examples of both forms please refer to the Procedural Manual for the 2002 IMLS Conservation Assessment (Appendix XV). Each time an object was entered into the Conservation form and assigned a priority rating, an acid-free slip of paper with the priority rating on it was added to the bag. When a whole box of artifacts was completed, a label was added to the box designating its "C.S. Box#" and the range of "C.S. Lot #s" contained within the box.

**Figure 12. Kelli Southard and Kareen Gualtieri assessing archaeological collections at HSMC during the 2004 IMLS Detailed Condition Survey.**

During the 2004-2005 conservation survey, monthly reports were written and distributed to the curator of collections and project conservator. These reports noted the total number of archaeological proveniences surveyed each month and discussed in detail the physical conditions of the artifacts that required further stabilization. Additionally, data was collected as to their location within the storage area and their assigned conservation priority level. These reports also provided information on general artifactual trends from each site and updated staff on the status of indicating silica gel that had been placed within the microenvironments of metal artifacts during the 2003-2004 survey. When necessary, it was recommended that silica gel be replaced or dehydrated due to extreme moisture retention.

In order to facilitate future collections projects, the storage units for Hollinger and Coroplast® boxes within the Archaeological Annex received numerical bank and shelf labels, as well as guides situated at the beginning of each row. The row guides offer staff preliminary information on the contents of the units, which includes the locations of archaeological collections by site name and number.

## Metal Boxes

Because metal boxes contained desiccated microenvironments, several small proveniences of metal might be contained within one large outer bag in order to conserve silica gel packets. For this type of packaging, the lot numbers were written upon each individual provenience bag, as in all other boxes, but the range of lot numbers was also written on the outer bag containing the multiple lots.

## Packaging Issues Encountered and Addressed

Initially, the goal of the survey was merely to document the state of the collection without actually changing anything within the boxes. As the survey began, however, it became clear that several small storage issues would be more efficiently dealt with if they were corrected as the survey progressed rather than having to pull the boxes again, risking increased harm to objects from extra handling. The following is a list of packaging tasks that were accomplished as the survey progressed.

Metal Desiccation was a goal of the re-packaging project that occurred prior to the conservation survey, but some items were missed and did not get separated into the metal boxes. This was noted in the database for later correction. In some sites, however, boxes were arranged

so that no metal box was surveyed until all of its proveniences had already had their non-metal objects surveyed. This allowed the re-integration of any metal items discovered in non-metal boxes when the metal box was surveyed without slowing down the survey. Metal artifacts excavated from smaller sites within major zones were placed inside non-metals boxes due to their minuscule amount (5-10 *objects*) and the need for space management within collections areas. However, polyethylene microenvironments complete with silica gel were created inside the boxes to facilitate efficient desiccation. Eventually, these metal artifacts from the various sites will be re-packaged inside a separate Coroplast® box as space permits, with each polyethylene environment displaying archaeological provenience information. Provenience data will also be displayed on the outer label of the Coroplast® box.

Fragile items were often repackaged as the survey progressed. Glass beads, for example, were often protected by Ethafoam®, and copper alloy straight pins that were not being desiccated because they were enclosed in air tight glass vials were removed from the vials and supported with Ethafoam® instead.

Due to the efforts put forth during the 2002-2003 conservation survey to address packaging issues, the goals of the 2004-2005 survey were centered more on examining the artifacts housed inside the Hollinger and Coroplast® boxes and ensuring that their treatment needs were recorded in detail so they could be treated by a conservator in the future. The packaging issues confronted during the most recent project concerning these objects were completing the sorting activities implemented previously (separating non-metal and metal artifacts) and the desiccation of artifacts housed in metal boxes that were missed during the 2002-2003 survey. Silica gel packages were created, dated, and placed within individual polyethylene microenvironments.

The comparative artifact collections housed in the metal cabinets in Room 1 required more packaging attention, as they were not included in the 2002-2003 survey. These objects had been housed inside acidic trays without archival liners and had begun to crowd over the years. Therefore, during the 2004-2005 survey, artifacts were re-housed inside acid-free trays with Ethafoam® liners and additional metal drawers were installed to effectively create more space (Figure 13).

**Figure 13. Rehoused artifacts in acid-free boxes within metal cabinets**

## CONSERVATION METHODOLOGY

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their "value" within the collection as a whole. A brief description is necessary in order to understand what was intended for each priority level. General conservation priorities (including those for composite and "other" objects) were established as well as separate priorities for specific metal and glass artifacts that were relatively unstable and in greater need for conservation. Many of the glass and metal artifacts were pulled and separated for conservation prior to the survey or had undergone conservation treatments previously. For further details on the priority categories for individual materials, please refer to Appendix XV: Procedural Manual: 2002-2003 Conservation Survey.

**Priority 1**- Artifacts or materials that are actively deteriorating and whose survival is now seriously threatened. Immediate attention is required, including a stable environment. The artifacts given a priority 1 require treatment by a conservator. Consideration was also given to the artifact's context, importance or uniqueness. Examples of priority 1 artifacts include actively corroding iron, window leads, and fragile, complex composite objects often composed of two dissimilar metals.

**Priority 2**- Artifacts or materials that are now actively deteriorating but are either less threatened than priority 1 or are of less importance. Clearly these decisions are somewhat subjective and so the conservation need for priority 2 artifacts should still be considered urgent. Most of these treatments will require treatment by a conservator though some could be performed by trained staff working under the supervision of a conservator. Examples of priority 2 artifacts include corroded iron not considered a priority 1, corroded copper alloys, corroded white metals, unstable tin-glazed ceramics, and composite items.

**Priority 3**- Artifacts that will remain stable if housed in a good environment but are in need of cleaning and further conservation. Some of these treatments can be performed by supervised staff members or students. Some of the objects listed as a priority 3 may be considered less important than priority 1 and 2 objects of the same material, or are found in large quantities such as copper alloy pins and window glass. Some conservation treatment is still necessary to fully stabilize the artifacts. Examples of priority 3 artifacts include copper alloys, lead alloys, white metal alloys, general organic materials, and diagnostic olive bottle glass that is unstable.

**Priority 4**- These artifacts are considered stable in a good environment but in need of further treatment such as cleaning and/or stabilization in the future. Included in this category are those artifacts that can be batch treated such as olive bottle glass. Artifacts that require a similar treatment for large groups of objects can be carried out by trained staff and supervised volunteers and students at the discretion of the laboratory Director. Examples of priority 4 artifacts include materials that may need repackaging, undiagnostic olive bottle glass, glass in fair condition, 20$^{th}$-century copper or white metal objects, precious metals such as gold and silver, and anything needing tape removal such as ceramics.

**Priority 5**- Artifacts in this category appear to be stable and no treatment is generally recommended. Artifacts noted during the survey such as olive bottle glass in need of no treatment were considered a priority 5. The surveyor simply noted their presence so that in the future a staff member could relocate and examine the materials for conservation needs more efficiently. An exception to this is artifacts so deteriorated that they are beyond treatment. They were also noted during the survey and given a priority 5.

Each material within the given lot was assessed using the above system. More specific comments relating to the condition of the object (i.e. stable, fair, poor, not stable/deteriorated or deteriorated beyond treatment) were also recorded for each object form. If the condition of one object in particular was being referenced, the alpha catalog number was recorded under the "catalog no" blank (Figure 11). Within each of the lots of artifacts recommended for treatment, it was important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers recorded represent the number of *objects*[5] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, one *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

In addition, specific treatment recommendations were recorded for each object as well. These included treatment tasks such as removing tape, cleaning only, cleaning and stabilization, re-packaging, re-treatment of objects, x-radiography, analysis and other. A category for "no treatment needed" was also present for objects that were recorded, (i.e. such as some of the olive bottle glass) but may not necessarily need treatment.

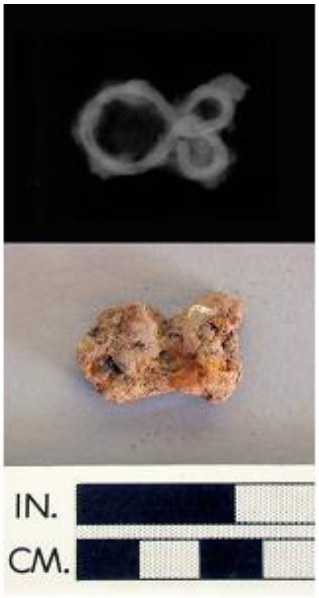


**Figure 14. X-radiography enabled the identification of this small lump of corrosion products as a clothing eye from St. John's (ST1-23-35J/AA).**

## X-Radiography

X-Radiography was the only artifact treatment funded under the 2004-2005 conservation support IMLS grant. X-radiography is an important conservation tool for metals, and iron in particular, in that it can reveal the metal core within corrosion encrusted metal objects (Figures 14-16). The revelation of the metal core of artifacts is useful for identification and documentation purposes, and to obtain a stable record of the artifact that adds to the archaeological archives for each site.

Within this conservation survey, metal artifacts were slated for x-ray if they met the following conditions:

1. The object was so corroded that its form was not discernable.
2. The object appeared likely to have features such as holes or hinges that were obscured by corrosion, but could be identified through x-radiography.

Within the 6,674 lots surveyed, 81 *objects* were slated for x-radiography. The Colonial Williamsburg Foundation archaeological laboratory performed all of the x-radiography for this project. Iron was the primary target of x-radiography, but some composite metal artifacts were x-rayed as well. Often whole bags of unidentified, corroded iron fragments were sent for x-ray. The x-radiography of these objects enabled the identification of numerous objects that had heretofore been unidentified in the collection, and this enabled the appropriate assignment of treatment priorities to the objects. If the iron turned out to have no extra detail, its priority would be lower than if it turned out to be a buckle or other identifiable object.

[5] Each *Conservation Treatment* form surveyed for a lot and/or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

## X-Radiography of Priority 1 Iron Artifacts

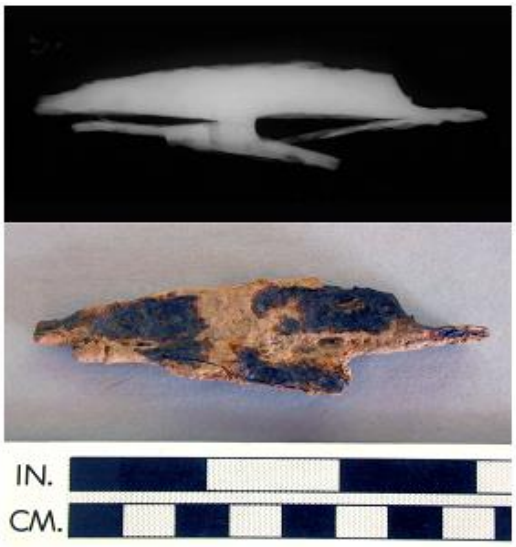


**Figure 15. This object was identified through x-radiography as a "Smoker's Companion," also known as ember tongs, tenders, tobacco tongues, or pipe tongs. The pointed end of the object (broken off here) would be used to hold a hot ember to light a pipe**

As the survey progressed and x-rays were obtained for unidentified objects, it became clear that x-raying bigger batches of metals was more cost efficient. The use of big batches of iron enabled the x-radiography of more metal objects than the 81 that met the criteria above.

With the remaining money slated for x-ray, priority 1 iron objects identified during the survey were also x-rayed. The goal behind these x-rays was less about identifying objects than it was about recording the objects before they receive conservation treatment in the future. Once again, they also record an image that can be reviewed by the curator in lieu of handling the collections. X-rays, like photographs, are key to documenting objects before they get treated. X-rays differ from photos, however, in that they illustrate the metal core that the conservator will expect to find when cleaning the object.

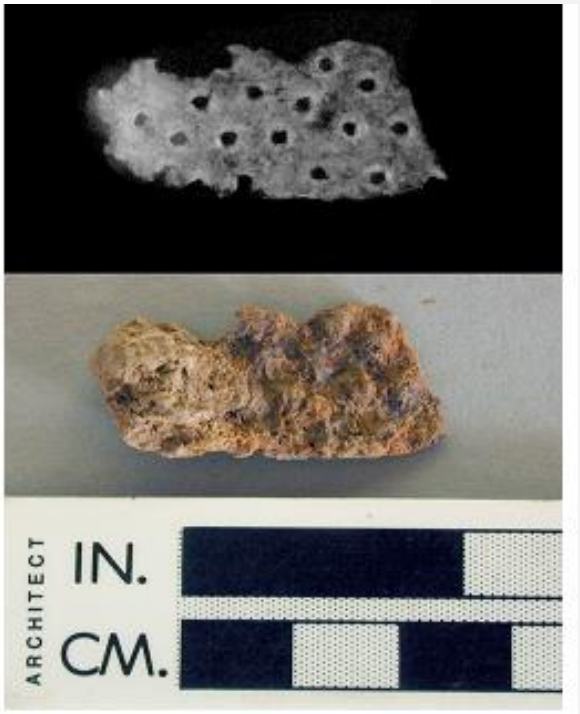


**Figure 16. X-radiography illustrated that this small metal fragment was full of holes and was probably part of some type of strainer or skimmer from the Van Sweringen site (ST1-19-402J).**

Because it enabled the x-radiography of metal objects that were assigned a priority 1, the 2004-2005 conservation survey has helped to document the condition of some of the more important artifacts in the HSMC collections. Furthermore, HSMC is now equipped with specific information that can be used to apply for object treatment grants.

## Queries to Check for Mistakes

Like any conservation survey, the HSMC 2004-2005 Conservation Survey was subject to human error, and the database contained mistakes. In order to identify and correct mistakes, the surveyor developed a system for running special queries. Each query selected fields to identify specific anomalies that needed correction or verification. Queries that were run to extract data from the database were implemented after the survey had been completed and checked for mistakes so it was not necessary to name the queries after the number of lots in them.

## THE SURVEY AND ST. MARY'S COLLEGE OF MARYLAND

### HSMC INTERNSHIP

Between January 24, 2005 and May 6, 2005, Kelli Southard, a student in attendance at St. Mary's College of Maryland (SMCM) accepted a conservation internship offered by HSMC. The museum has had a beneficial relationship with the College for over 30 years and has provided students experience within the fields of archaeology, museum studies, and public interpretation. This year, the student worked a total of 148.5 hours for 36 days, assisting with projects at HSMC 2-3 days a week. Ms. Southard was trained on all aspects of the 2004-2005 conservation survey process, which included familiarization with the survey database and performing preventive conservation on unstable artifacts using archival materials. She learned to assess the conditions of archaeological artifacts and enter this information into the database, which was then made available to the project conservator and curator of collections. Survey-related activities involved locating high-priority iron artifacts with the aid of the database and preparing these objects for x-radiography performed by Emily Williams at the Colonial Williamsburg Foundation archaeological laboratory. A total of 102.5 hours of the internship was dedicated to the conservation survey (Figure 17).

Ms. Southard was also able to assist the curator of collections with standard museum practices, such as hygrothermograph inspections and integrated pest management procedures. In addition, this intern participated in exhibition installation at the HSMC Visitor Center. Another side project involved the organization of collections storage units, in which she aided the conservation assistant with labeling banks and shelves inside the Archaeological Annex. Towards the end of the internship, educational trips to institutions such as the Smithsonian and Colonial Williamsburg provided her with further knowledge of how museums preserve their collections and the absolute importance of conservation within the discipline of archaeology.

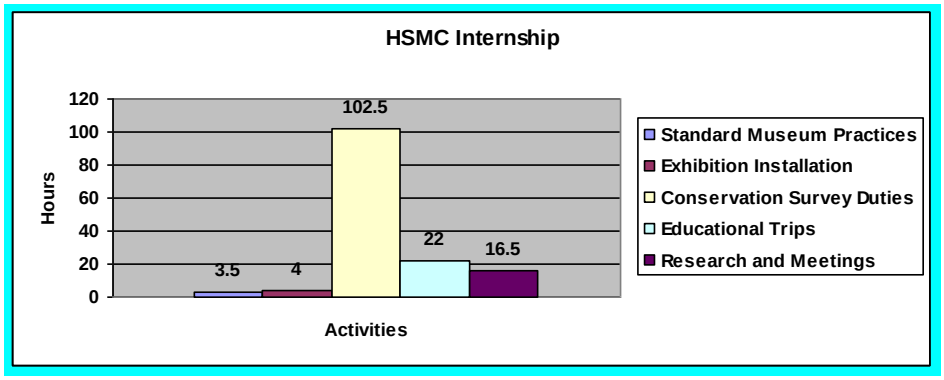


**Figure 17. Bar graph illustrating the distribution of internship duties and activities.**

## BACKGROUND OF ARCHAEOLOGICAL SITES SURVEYED

### ARCHAEOLOGY AT HISTORIC ST. MARY'S CITY

The Historic St. Mary's City Commission began professional archaeology in 1971 and has had an active program of excavation ever since. The subject material of this study focuses on those items recovered after 1988 and includes some of the most important collections held by the St. Mary's City Commission. Materials recovered in a series of major excavations before 1988 were surveyed by an earlier IMLS funded conservation survey. The current investigations often involve smaller collections of material, much of it encountered during the development of the outdoor museum. However, some large collections representing multi-year research efforts such as the Chapel site are addressed.

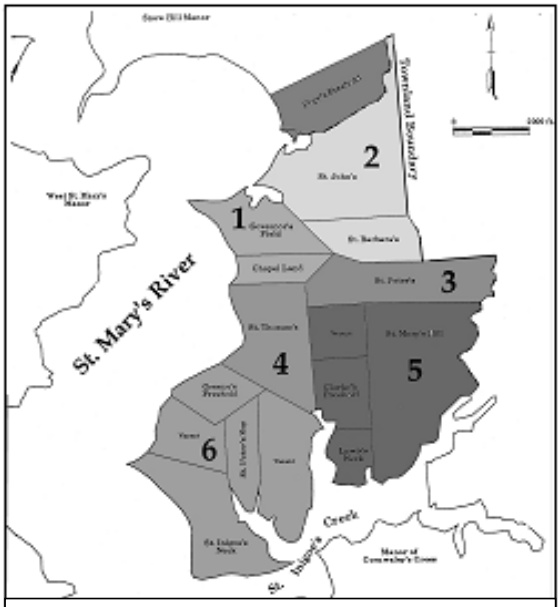


**Figure 18. Archaeological Zones of 18ST1, Historic St. Mary's City, Maryland**

All of the excavations that will be involved in this study were completed in the late 1980s through 2000. The paper records from the fieldwork include context record cards (called provenience cards) which describe the soils excavated in terms of color (Munsell standard), texture (sand/clay/silt ratio), and any inclusions such as brick fragments or oyster shell. Opening and closing elevations for all contexts are recorded as are the relative stratigraphic positions of these contexts *vis-à-vis* other strata. The provenience cards also record the tools used in the excavation, the dimension of the mesh of the screen used to recover artifacts, any special samples taken (floatation, soil samples, etc.) and a brief check off for artifacts present. Other information recorded on this form includes interpretive comments concerning the deposit, the original function of the excavation that produced the "catchment" basin for the deposit and the names of the individuals who excavated and recorded the strata. Scale plan and profile drawings are created for all cultural contexts and both plan and profile photographs (both color slide and black and white) are taken. In addition to the record on the provenience card, all individual strata are recorded in a stratum register, all elevations are recorded in a survey log, and all photographs are recorded in a photo log. In addition to the structured forms which capture the consistent data set for each provenience, the site supervisor also maintains a daily field journal. This field journal documents who is working where on the site on any given day and impressions and other observations concerning the excavations.

All of the National Historic Landmark which St. Mary's City represents has been designated by the State of Maryland as 18 ST 1. The "18" represents Maryland (18th in alphabetical order when the system was established), while the ST represents St. Mary's County and the final "1" represents the actual 1000 acre archaeological site. To simplify management of the cultural resources in the vast tract, St. Mary's City has been divided into six zones based on historic land use in the 17th century when St. Mary's was the capital of the colony (Figure 18). Generally, these zones encompass large 17th century tracts which were subsequently subdivided into additional land parcels. These six zones are: Zone 1, Governors Field and the Chapel Lands; Zone 2, St.

John's and St. Barbara's; Zone 3, St. Peter's; Zone 4, St. Thomas'; Zone 5, Clarke's Freehold, Lewis' Neck, and St. Mary's Hill; Zone 6, Green's Freehold, St. Peter's Key and St. Inigoes Neck. Both zones 5 and 6 include tracts that were vacant for part of the 17th century. While defined by 17th century land use, these zones include American Indian sites that date to thousands of years before the arrival of Europeans and many sites from after the capital was removed to Annapolis at the end of the 17th century. Sites are numbered sequentially within each zone in the order in which they were discovered. For example, the site number "14" actually tells you that this site is located in zone 1 in St. Mary's City and represents the fourth site recorded within that zone. Sites are generally cultural entities representing sometimes discontinuous occupations, however, all sites must be defined geographically. When multiple, unrelated occupations occur in the same location they will have only one site number while they actually represent a series of unrelated cultural activities that happened to occur in the same spot. Indeed, there are no colonial sites in St. Mary's City that do not include some American Indian occupations dating to well before the colonial presence.

In the current phase of the conservation survey, a variety of sites from all of the zones were encountered. The nature of these sites varies widely temporally as does the level of effort that has been applied to their investigations. For the purpose of this study, each zone will be discussed in turn.

**ZONE 1**

Zone 1 is made up of the Governor's Field and the Chapel Lands. These are the original names of the tracts shortly after settlement began in the 1630s. The Governor's Field was initially all part of the plantation of Leonard Calvert, the first governor of the colony and the brother of Lord Baltimore the colonial proprietor. The Governor's Field was subsequently subdivided in the 17th century and grew to encompass the center of the capital. The Chapel Field was the tract taken up by the Jesuits in the early 17th century and served as the site for a succession of Roman Catholic chapels. Table 1 includes all the sites in Zone 1 encountered as part of the current conservation survey.

| Lot #Range | Site # | Site Name |
|---|---|---|
| 10853-10854 | ST1- Δ | Deltas |
| 10855-10882, 11092, 11190 | ST1-10 | Zone 1 finds |
| 09103-09139 | ST1-11 | Trinity Church |
| 06084-06480, 07634 | ST1-13 | Pope's Fort |
| 07635-07818, 08253 | ST1-13 | Bank Soil Erosion Project |
| 07819-07973, 08162 | ST1-13 | Beneath Brome |
| 07974-08161 | ST1-13 | Brome House |
| 08163-08250 | ST1-13 | Carriage House |
| 08251-08369 | ST1-13 | Cordea's Hope |
| 08370-08522, 08524-08617 | ST1-13 | Cordea's Reconstruction |
| 08618-08907 | ST1-13 | Leonard Calvert |
| 08908-09102, 09464-09466 | ST1-13 | Smith's Ordinary |
| 09140-09286, 09292-09301, 09467, 10941, | ST1-13 | Town Center (missed in 02') |
| 11078-11084, 11092, 11094-11097, 11111, 11118-11123 | ST1-13 | Town Center (missed in 02') |
| 11139, 11141-43, 11145-46, 11150-11151, 11154, 11172 | ST1-13 | Town Center (missed in 02') |
| 11176, 11178, 11179, 11183, 11186, 11187, 11194-98, | ST1-13 | Town Center (missed in 02') |
| 11260, 11203, 12408-12756 | ST1-3 | Town Center (missed in 02') |
| 10054-10237 | ST1-14 | Slave Quarter 1979 |
| 10238-10392 | ST1-14 | Inside Slave Quarter |
| 10393-10630 | ST1-14 | Outside Slave Quarter |
| 10996-10997 | ST1-15 | 1993 Fort Survey Surface Collect |
| 10883-10896 | ST1-17 | State House |
| 10998-11007 | ST1-18 | Mackall Inn |
| 10631-10852, 11087-91, 11103, 11124-29, 11152, 11173 | ST1-19 | Van Sweringen (missed in 02') |
| 11175, 11177, 11180, 11184-85, 11192, 11199 | ST1-19 | Van Sweringen (missed in 02') |
| 06481-07633, 09468-09477, 11085-86, 11112-17, 11204- | ST1-103 | Chapel |
| 11207 | ST1-103 | Chapel |
| 09287-09291, 09642-10025 | ST1-103 | Chapel Field Mitigation, Route 5 |
| 10026-10053 | ST1-103 | Chapel Field 2001 |
| 09302-09463 | ST1-104 | Aldermanbury Street |
| 10897-10930, 11197, 11201 | ST1-110 | NE Corner Anne Arundel Annex |

| | |
|---|---|
| 11008-11009 | ST1-111 Sidewalk East Rte. 5, old grave |
| 11140 | ST1-116 Baker's Choice |
| 09478-09641 | ST1-126 Middle Street South |
| 11010 | ST1-129 Lord Baltimore's World |
| 11011 | ST1-130 Adjacent to current Calvert Hall |
| 10931-10940 | ST1-132 17th century jail or prison |
| 11012 | ST1-133 College Waterfront |
| 11013-11014 | ST1-135 Trinity Church Hall |

*Table 1. Archaeological Sites in Zone 1*

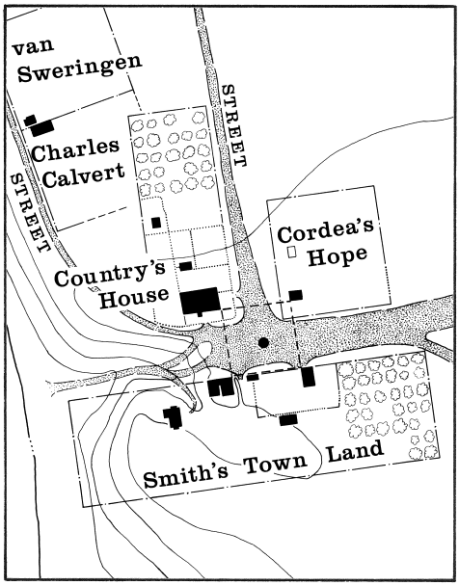


**Figure 19. Principal sites included in ST1-13, Town Center area.**

The designation ST1-1-10 was used in the computer database to represent the unassociated materials from Zone 1 that cannot be attributed to an individual site locus in the zone. These artifacts are generally donations, random discoveries by visitors, or very old collections for which there is no record. The designation 00 is used because in the original system the designation "Δ" or delta was applied to unassociated finds, but such symbols do not work well within computer databases. Materials designated at ST1-10 are isolated finds within Zone 1 which cannot be attributed to an established site, but for which a find location has been recorded. The rest of the site designations in Zone One are attributable to actual archaeological sites.

ST1-11 is the area surrounding the current Trinity Episcopal Church which was constructed in the 1840s using brick from the original statehouse of 1676 which stood nearby (see ST1-17 below). Investigations here have been limited to minor excavations relating to church renovation and testing related to the extent of 17th-century occupation. These excavations relating to the addition of handicapped access to the church focused on the site of Gellie's Ordinary, a 17th-century tavern. Historical sources indicated that Gellie's was adjacent to the original brick statehouse since the business was ordered closed because it was an "unruly" house and a distraction to those participating in government at the statehouse. The principal signature of the site is late 17th-century domestic material.

The largest group of sites that occur as part of this study in Zone 1 are all designated as ST1-13 (Figure 19). ST1-13 includes the center of the original town and has been investigated by a variety of projects over a number of years using a range of techniques. In addition to the 17th-century remains, the site area also contains prehistoric American Indian deposits and materials relating to an 1840s plantation house owned by Dr. John M. Brome. The Brome house actually sat directly above the site of the Calvert House and was removed by professional house movers in 1993.

The materials listed as associated with Pope's Fort were recovered as part of a project to investigate an English Civil War period fortification which surrounded the home of the first governor of the colony, Leonard Calvert. The Bank Soil Erosion Project explored the area near the Calvert House on the eroding bank of the St. Mary's River and was undertaken in advance of installing erosion control devices. The material described as Beneath Brome are artifacts

recovered under the Brome House when the building was undergoing renovations in the late 1980s while the Carriage House and Brome House projects actually relate to the preparations for the moving of those two structures. The artifacts listed as Leonard Calvert were discovered as part of a project to assist in the interpretation of the site undertaken in the late 1980s. The material from Cordea's Hope, the Cordea's Hope reconstruction, and the Smith's Ordinary all relate to projects undertaken in association with reconstructions of these buildings from the 17th century town. Cordea's Hope was a storehouse owned by Mark Cordea by 1675 while Smith's Ordinary was an inn built by William Smith in 1666 and destroyed by fire in 1677. Finally, the materials listed as Town Center (missed in '02), are artifacts from a major research study undertaken in the early 1980s which identified the original building of the 17th century town. Most of the material from this project was surveyed as part of the earlier Conservation Survey but these lots represent materials overlooked in the 2002 study.

Moving beyond the ST1-13 area, ST1-14 represents a site initially related with an extant 19th-century slave quarter. Subsequent investigations identified a second quarter adjacent to the surviving building and a complex of 17th-century and prehistoric American Indian deposits (Figure 20). The extant quarter was removed from the site as part of the project which moved the Brome House and the Carriage House. Subsequent excavations discovered the remains of a print shop operated here in the late 17th century. This 17th-century structure was begun to be reconstructed in the Fall of 2005.

ST1-15 is a site which has only been slightly investigated with subsurface techniques. Its primary association is with an agricultural complex that was part of the Brome plantation, but it includes one barn dating to the 18th century and has archaeological components dating from both the prehistoric American Indian period, 17th century occupations, and 18th and 19th century domestic occupations which may relate to slave habitations. It was recorded as part of a large survey project investigating parts of Governor's Field in the 1990s.

Figure 20. 19th-century photograph of Slave Quarters

ST1-17 is the site of the original brick statehouse which was built in 1676 and which is now the location of the graveyard associated with Trinity Church (see ST1-11 above). Investigations here have been limited to a few test excavations. ST1-18 is related to the Mackall plantation, the site of an 18th century domestic locus near the present Anne Arundel Hall, a 1950s classroom structure on the campus of St. Mary's College of Maryland. The artifacts from ST1-19, described as Van Sweringen missed in '02, are from the site of Garret Van Sweringen's inn which was built in the 1660s as a government building and was modified and expanded into one of the best accommodations for travelers in the 17th century city. These artifacts represent a small part of the collection which was overlooked during the initial phase of the survey in 2002.

ST1-103 is the site of the Roman Catholic brick chapel built sometime around 1667 and demolished in the early 18th century. This site has been the focus of a number of projects over the past 20 years. The first investigations were limited test excavations in 1984. Subsequently, starting in 1988, a major campaign of investigations uncovered a massive, cross-shaped brick foundation, two other colonial loci, and a major 17th-century cemetery (Figure 21). The colonial domestic sites include an earlier chapel house and residence built together, and a structure which has been called the Priest's House and which appears to date to the end of the 17th century and into the 18th century. ST1-103 was the location where three lead coffins were excavated in the early 1990s. Currently the brick building is being reconstructed on its original foundation using period techniques and materials and plans call for the cemetery to be restored and the building know as the Priest's House to be reconstructed to serve as a gallery space for interpreting the site.

**Figure 21. Chapel Foundations before reconstruction.**

ST1-104, Aldermanbury Street, was the number originally used to demark a site area along one of the original streets of the city. This site area was adjacent to the Van Sweringen site (ST1-19) which was described above. ST1-110 is the designation for an earlier colonial site near the current location of Anne Arundel Hall (see ST1-18 above) but not directly related to the Mackall plantation. ST1-111 is a colonial site associated with a small 18th- and 19th-century cemetery that holds the remains of Mackalls and Bromes, and their relatives.

ST1-116, known as Baker's Choice, is a primarily 17th century site which was occupied by John Baker who also operated an ordinary at the Calvert House and served as sheriff of St. Mary's County. The site was tested as part of an investigation of the Mill Field and further investigated as part of the project exploring the Roman Catholic Chapel and related sites.

ST1-126, Middle Street South, is a colonial occupation near the Van Sweringen site that was uncovered as part of an investigation relating to a visit by the *Time Team*, a British television program that lends assistance to answering archaeological questions. Utilizing magnetometer and resistivity testing, a small feature was identified and subsequently explored by an archaeological field school from Historic St. Mary's City and St. Mary's College of Maryland.

ST1-129, Lord Baltimore's World, was the designation given to an area where interpretive activities were undertaken as part of the 1984, three hundred and fiftieth celebration of the founding of St. Mary's City. The area was explored before the construction to confirm the absence of significant remains. It was subsequently chosen as the site for interpreting the contact period occupants of St. Mary's City and serves as the Indian Hamlet.

ST1-130 is adjacent to the current Calvert Hall, one of the original college buildings initially constructed in the 1840s. ST1-132 is the site of the 17th-century jail or prison, built for the colony in 1676. It was a brick building with a pantile roof and it appears that the site was destroyed by the construction of Kent Hall, a St. Mary's College of Maryland classroom building in the 20th century.

ST1-133, the College Waterfront site was investigated as part of Campus improvement projects. It was found that much of the property occupied by the site area was made land created

by the redeposit of spoil from earlier campus construction and renovation in the 20th century. Organic preservation is exceptional with timbers and other wharf parts preserved.

ST1-134, Chapel Surface scatter, is a locus of 17th-century material south of the actual chapel site which seems to relate to a domestic site unassociated with the chapel. It was recorded as part of a large survey project investigating parts of Governor's Field in the 1990s. ST1-135, Trinity Church Hall, is currently the location of the hall associated with Trinity Church. It is located across the highway from Kent Hall (above) and was investigated as part of a pre-construction survey relating to burying utilities on the college campus. Finally, ST1-138, South Chapel field, is another colonial domestic concentration south of the Brick Chapel. It was recorded as part of a large survey project investigating parts of Governor's Field in the 1990s.

**ZONE 2**

Zone 2, St. John's and St. Barbara's, encompasses the northernmost parts of the National Historic Landmark and in the 17th century were large plantation areas associated with the St. John's plantation started in 1638 by John Lewgar, first Secretary of the colony and St. Barbara's which was patented in the 1640s as a 50 acre tract and occupied by Mary Troughton. Most of the material from the early excavation at St. John's site (18ST1-23) was addressed by the 2002 report. The sites addressed as part of this survey representing Zone 2 are listed in Table 2 below.

| Lot #Range | Site # | Site Name |
|---|---|---|
| 11015.00 | ST1-2 | St. John's Freehold/ Force Main |
| 11101, 11158, 11191, 11202 | ST1-22 | John Hicks Site |
| 11098-11100,11102, 11104-10, 11130-11138, 11144, 11147-9, 11153, 55-57, 11160-11171, 11181-82, 11188-89, 11208-12407 | ST1-23 | St. John's Site |
| 11016-11017 | ST1-24 | St. Barbara's |
| 11018-11019 | ST1-25 | Chapman House |
| 11020.00 | ST1-242 | St. Peter's Brick Yard |

*Table 2. Archaeological Sites in Zone 2*

ST1-2, called St. John's Freehold/Force Main, is a small collection of isolated finds recovered in Zone 2 along Mattapany Road when a force main sewer system was installed for St. Mary's College in the late 1970s. The force main went from the campus to Pine Hill Run sewage treatment plant south of Lexington Park, Maryland. The portion of the force main located in Zone 2 was assigned to the general Zone 2 material collection but individual find sites are recorded.

The St. John's site (ST1-23) is located in the midst of the campus of St. Mary's College of Maryland. St. John's was explored by archaeologists from the Historic St. Mary's City Commission from 1972 to 1975. Additional work was conducted in 1982, 2001 and 2002. Excavations have generated over 350,000 artifacts, a group that comprises one of the premier collections of 17th-century materials in America. Analysis of the site has produced three Ph.D. dissertations, numerous reports and articles, and provided data for dozens of related studies. As one of the early large scale projects in historical archaeology, the site also led to the development of new approaches, research questions and analytic methods.

ST1-22, the John Hicks site, was the first archaeological site professionally investigated in St. Mary's City. The site was discovered in advance of the construction of new dormitories on St. Mary's College's campus. The work was undertaken by a company called "Contract Archaeology" and was directed by Glen Little and Stephen Israel. The emphasis of the project was the recovery of artifacts from a trash filled cellar hole. The site had been the home of an English mariner and planter named John Hicks from approximately 1720 to 1740.

ST1-24 is the number assigned to the St. Barbara's site. In addition to the 17th century occupation, there is a major later 18th century dwelling associated with William Hicks and eventually ancestors of John M. Brome in the 19th century. The structure stood into the 20th century and existed as an open cellar hole at the time of the establishment of Historic St. Mary's City. The cellar was eventually filled with clean bank run gravel to stabilize it and protect against potential injuries. The materials in our collection from this site resulted from unstructured collections over time.

The designation ST1-25 has been applied to a standing 20th century structure on the College campus which now houses the college's admission department but was originally a private residence of the Chapman family. The archaeological remains that occur there include outlying elements of the St. John's plantation (1638 to ca. 1720), prehistoric American Indian deposits, and twentieth century materials associated with the extant structure. This area was investigated as part of a major survey of college properties in preparation for campus development.

The final site in Zone 2 which is addressed in the current phase of the conservation survey is ST1-242, known as St. Peter's brickyard. It is located adjacent to the St. Barbara's site. This site was discovered by a field walkover which found large quantities of overfired brick. This brick is characteristic of a type of brick associated with two major structures in the city, the brick chapel (ST1-103) mentioned above and St. Peter's (ST1-31) which will be discussed below. This brickyard is assumed more likely related to the construction of St. Peter's rather than the Chapel since it is on property that was under the control of the builder of St. Peter's in the period under consideration.

**ZONE 3**

Zone 3, St. Peter's, was originally designated as a tract patented in 1638, possibly by Jerome Hawley one of the original commissioners of the colony who arrived in 1634. In 1664, Philip Calvert repatented the parcel as 150 acres and built his great mansion house there (see ST1-31 below). The zone is located south of St. Barbara's and east of the Governor's Field. The collections from this zone encompassed in the survey are listed in Table 3.

| Lot #Range | Site # | Site Name |
|---|---|---|
| 11050-11077 | ST1-31 | St. Peter's |
| 11021-11022 | ST1-32 | Brome Plantation Tenement house |
| 11023.00 | ST1-36 | Mrs. Brown's residence |
| 11024-11027 | ST1-37 | Klobusicky's Farm |
| 11028-11029 | ST1-38 | Klobusicky's Orchard |

*Table 3. Archaeological sites in Zone 3*

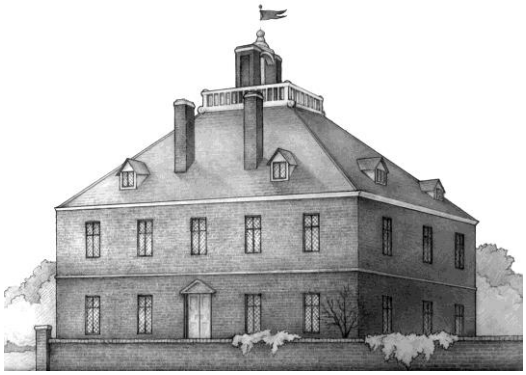

**Figure 22. Artist's conception of St. Peter's**

ST1-31, St. Peter's, as mentioned above, was the mansion house of Philip Calvert, Chancellor of the colony and Cecil, Lord Baltimore's, half-brother. The site was originally identified and explored by H. Chandlee Forman in the 1940s. Excavations by HSMC on this site have been limited to brief investigation relating to a visit by the *Time Team*, a British television program that lends assistance to answering archaeological questions. Utilizing magnetometer and resistivity

testing, a large brick-lined cellar was identified. As part of the project, limited testing confirmed the building location and recovered a small sample of artifacts. The site is not actually on property owned by HSMC so additional investigations have not been undertaken.

ST1-32, Brome Plantation tenement house, is a standing structure adjacent to the St. Peter's site. It was probably constructed in the 19th century and is the current residence of J. Spence Howard Jr., Dr. John M. Brome's great-grandson. This property is also not owned by HSMC and the collection of material is limited to a few items donated by Mr. Howard.

ST1-36, Mrs. Brown's residence, is a standing structure located at the corner of Maryland Route 5 and Rosecroft Rd. across Route 5 from the Brome Plantation tenement (St1-36) above. It was built ca 1938 and was used as a residence until the late 1990s. It was subsequently converted into the Costume shop for the museum. The material found near was the result of an archaeologist being in residence before the conversion and relates to a small amount of surface collected artifacts.

ST1-37, Klobusicky's Farm, was the site of a small farmhouse built ca. 1917 by members of the National Slavonic Society which attempted to resettle Slavonic immigrants in St. Mary's City in the early 20th century. Numerous families moved to St. Mary's as part of this effort. The building was demolished in 1976 and samples of artifacts were collected at that time. ST1-38, Klobusicky's Orchard site, was a concentration of brick rubble identified at the site of an orchard associated with the farm above. The concentration was observed as a result of plowing and only a limited collection of material was retained. The artifact signature suggested a 20th century date.

**ZONE 4**

Zone 4, St. Thomas' represents a tract of land immediately south of Chapel Lands and bordering on the St. Mary's River. It was originally taken up by Giles Brent (the Whitehouse tract) and Margaret and Mary Brent (Sisters' Freehold) shortly after settlement began. The sites from Zone 4 covered by this study are listed in Table 4 below.

| Lot #Range | Site # | Site Name |
|---|---|---|
| 11030.00 | ST1-4 | Beach Below Commission Offices |
| 11031-11032 | ST1-42 | Visitor Center Parking lot |
| 11033.00 | ST1-43 | Beach NW of Hogaboom Resident |
| 11034-11035 | ST1-45 | Duerfeldt House |
| 11036.00 | ST1-46 | No Name (Merchant House) |
| 11037.00 | ST1-47 | Scheible's Field |
| 11038-11039 | ST1-406 | The Daffodil Site |

*Table 4. Archaeological Sites in Zone 4*

ST1-4 is the location of a series of isolated finds discovered along the beach of the St. Mary's River. This material was recovered by a student and donated to the Museum. The principal artifact signature was 19th and 20th centuries.

ST1-42 was a systematic surface collection of the area near the Visitors Center for HSMC. It was investigated in advance of the construction of parking lots in 1983. The material recovered was extremely dispersed and primarily 19th century and American Indian.

ST1-43, like the ST1-4 material above was collected along the shore of the St. Mary's River. This material was 19th and 20th century in nature and isolated to an area adjacent to the Hogaboom residence, a mid-20th -century residence.

ST1-46 is a standing structure known as the Merchant House that currently houses the administrative offices of Historic St. Mary's City. A small fragment of colonial earthenware was discovered there adjacent to the north basement window in 1976. ST1-47 is the site of the Scheible house which currently serves as the Archaeology Laboratory for HSMC. A small collection of mostly 19th-century material was donated by the former residents when the property was obtained by HSMC.

ST1-406, known as the daffodil site, was discovered based on blooming daffodils and associated artifacts which date to the 18th century. It is located in the extreme southeast of Zone 4 and only surface material was recovered.

**ZONE 5**

Zone 5, Clarke's Freehold, Lewis' neck, and St. Mary's Hill, are all parcels taken up during the 17th century. This zone includes the easternmost parts of the National Historic Landmark. Table 5 (below) lists the sites from this zone.

| Lot #Range | Site # | Site Name |
|---|---|---|
| 11040-11041 | ST1-5 | Various |
| 11042.00 | ST1-51 | Clark's Freehold |
| 11043-11044 | ST1-52 | Deacon's Quarter/Fenwick Farm |

*Table 5. Archaeological Sites in Zone 5*

ST1-5 represents a variety of isolated find collections in the fields around the Tilch/Milburn house by the resident in the 1980s. The material includes principally 19th and early 20th-century material. Additionally, grouped with this generalized provenience are some isolated finds of prehistoric American Indian material from Zone 5.

ST1-1-51 is a small collection of material from a shell scatter in a plowed field that includes a broken quartz projectile point and some historic material including nineteenth century ceramic. Finally, ST1-52, Deacon's Quarter/Fenwick Farm is a collection of principally 19th-century material recovered following a tree blow-down near a standing early 19th-century private residence within the National Historic Landmark, known variously as the Leigh House, Fenwick's Free or the Keene residence.

**Figure 23. House known as Fenwick Free, Leigh House or Keene residence.**

**ZONE 6**

Zone 6, Green's Freehold, St. Peter's Key, St. Andrew's Freehold, and St. Inigoes Neck, is the last area in St. Mary's City to be discussed and includes parcels taken up by Maryland's second governor, Thomas Greene, and other early settlers. This zone is the southernmost within the National Historic Landmark and is bordered on the north by Zone 4 and on the south by the St. Mary's River and St. Inigoes Creek. Table 6 below lists the contexts from Zone 6

| Lot #Range | Site # | Site Name |
|---|---|---|
| 11159 | ST1-62 | Wiseman Site-Chancellor's Point |
| 11045 | ST1-64 | 19th Cent Site in Center of Field |
| 11046 | ST1-65 | St. Andrew's |
| 11047 | ST1-69 | Aboriginal Site |
| 11048 | ST1-610 | Aboriginal Site |
| 11049 | ST1-652 | Found on the Trail |

*Table 6: Archaeological Sites in Zone 6*

ST1-62, the Chancellor's Point site, is part of a larger tract known as St. Inigoes Neck which was patented in 1639. By 1643, when it was sold, there was a house and plantation on the property. In the 1660s, the tract was purchased by Chancellor Philip Calvert and became known as Chancellor's Point. Calvert never lived here but rented the property out to tenants.

Only limited excavations have been completed on this site. They produced a wealth of artifacts dating to the period 1640-1680 as well as evidence of post holes and fence lines. These archaeological investigations were conducted in 1973, 1976 and 1980. The principal excavations were in 1973 when the site was explored as part of a program supported by Educational Expeditions International, a predecessor to Earth Watch. The site was heavily effected by erosion until the early 1980s when stone revetments were added to the downriver side of the Point. In addition to the domestic materials recovered from the site, a quantity of slag and other materials suggest that iron working was conducted at this site, possibly even a small bloomery operation producing wrought iron from the local bog iron deposits.

The artifacts recovered from the Chancellor's Point were processed using the standard methods of St. Mary's City which included cleaning, labeling, and cataloging. Cleaning was undertaken with brush and water for less sensitive artifacts while fragile artifacts were cleaned without water. Artifacts were labeled directly on the fragments with permanent ink with the actual provenience of the material. The labels were overcoated with acrylic to protect the writing. The cataloging process at that time included basic inventory information recorded on paper forms. Catalog entries are generally descriptive in nature and evidence the then state-of-the-art knowledge of 17$^{th}$-century material culture. As part of a collections upgrade in 2002, all of these materials were re-housed into archival boxes and polyethylene bags with the metal artifacts isolated from the non-metal artifacts for micro-environmental control.

ST1-64 described as 19$^{th}$-century site in center of field, is a small surface collection of 19$^{th}$ century material recovered in 1976. It represents a small surface scatter with ceramics and glass. ST1-65 is an 18$^{th}$-century site occupied by the descendants of Daniel Clocker, an early resident of St. Mary's City. The materials from the site include a range of 18$^{th}$ century items. Both ST1-69 and ST1-610 are American Indian sites represented by isolated finds of projectile points. The point from ST1-69 is undiagnostic while the tool from ST1-610 appears to represent an Early Archaic, Kirk projectile point made of quartz. Finally, ST1-652 represents a scatter of colonial material found along the developed nature trails on the Museum grounds. The material includes

colonial ceramics and a brick of the type used in the construction of the Brick chapel but these bricks were often reused in the colonial period.

## RESULTS OF CONSERVATION SURVEY

The 2004-2005 Conservation Survey examined a total of 2039 boxes (6674 lots) of artifacts from all six archaeological zones at HSMC. All of the 6674 lots were surveyed between October 2004 and May 2005. Figure 24 shows the breakdown of the number of lots for the six archaeological zones in HSMC. Zone 1 contained 80% of all lots surveyed and can be further broken down into seven major sites and one grouping of smaller Zone 1 sites (Figure 25). The Zone 1 breakdown also includes artifacts that were excavated or surface collected from an unidentified location within St. Mary's County. This unknown provenience was symbolized by a delta (Δ) during the conservation survey. These artifacts are generally donations, random discoveries by visitors, or very old collections for which there is no record. Zone 2 had the next largest breakdown with 19% of all lots surveyed, containing one major site worth noting [ST1-23]. Zones 3-6 contained 1% of the lots surveyed. (Further detail about each individual site can be found in the previous section). Of the 2039 boxes surveyed, 366 (18%)[6] are "metal only" boxes included in this survey (Figure 26). All of the "metal only" boxes contained silica gel which served as a desiccant, except those boxes located in the exhibition space or in the metal cabinets in Room 1.

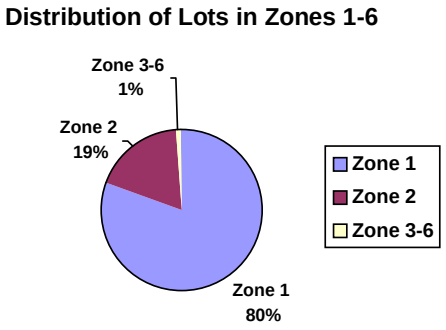


**Figure 24. Pie chart illustrating the distribution of lots by zone.**

[6] The number of metal boxes may be slightly inaccurate because some of the boxes surveyed contained both metals and non-metals. This did not occur often and was found in boxes that contained very small numbers of artifacts from sites that were isolated finds. The majority of these are found in Zones 3-5.

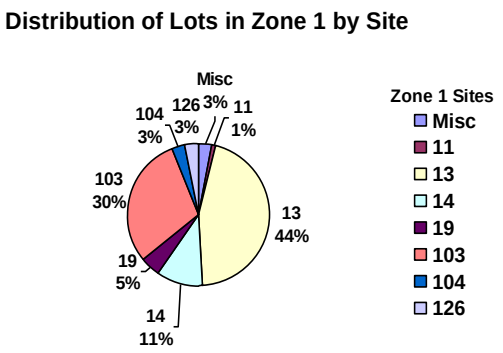


*Figure 25. Pie chart illustrating the distribution of lots in Zone 1*

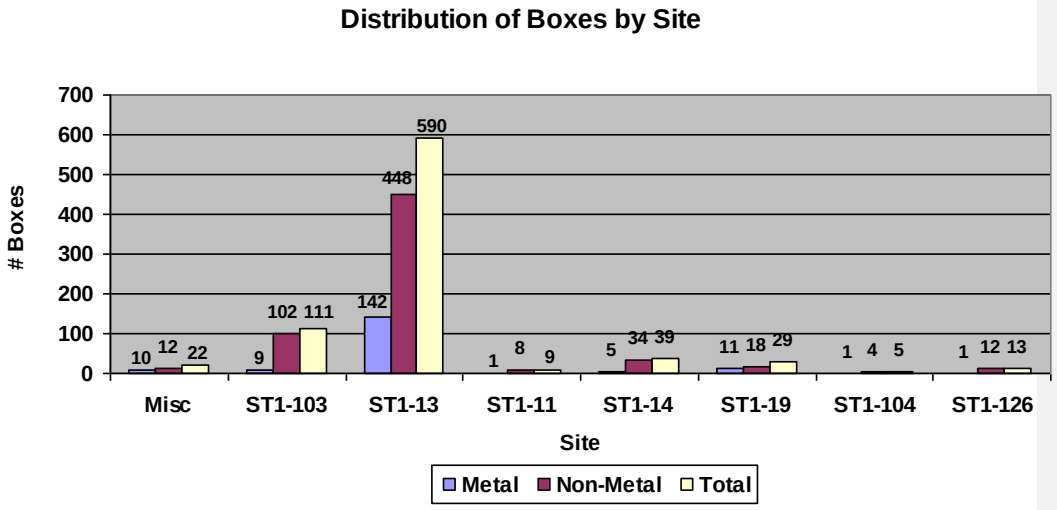


*Figure 26. Total of metal vs. non-metal boxes, Zone 1 sites*

## *OBJECTS* SURVEYED

During the survey of each of the lots, the *objects* in need of conservation treatment were assessed and their condition was recorded. As mentioned previously, an *object* is defined as all of the artifacts that share a *Conservation Treatment* form. Each lot, however, may have multiple *Conservation Treatment* forms and therefore multiple *objects* requiring conservation treatment. Furthermore, each *Conservation Treatment* form could represent multiple artifacts. Some artifacts requiring treatment, such as olive bottle glass or iron, were grouped together on one *Conservation Treatment* form because the recommended treatment and priority were the same (Figures 11 and 27). Thus one *Conservation Treatment* form could represent over 100 actual artifacts in need of treatment.

As a result, the numbers represented in the data section of this report (Tables 1- 14) represent the number of *objects* or *Conservation Treatment* forms and not the actual number of artifacts requiring treatment. Counts of the actual number of artifacts were not always available, and time restraints made it impractical to count individual artifacts as the survey progressed. The numbers in Tables 1-14 therefore represent the <u>least</u> amount of artifacts requiring treatment.

Because the *Conservation Treatment* form contained a field for a description of the artifacts, however, and this description often consisted of the alphabetical designations of catalogued artifacts ("Catalog No."), it was possible to count the number of individual artifacts for *some* conservation forms. *Conservation Treatment* forms whose descriptive fields only contained information about the number of bags present, however, have no available counts of individual objects. For estimation purposes, the descriptive field of the *Conservation Treatment* forms was used as a basis for creating hand counts of individual artifacts with alphabetical designations or other distinctive descriptions. Each bag of artifacts was counted as one individual artifact. Although these hand counts still represent a low estimate, they were used in Table 1 to examine the relationship between the least number of individual artifacts needing conservation and the number of *Conservation Treatment* forms that were filled out.

**Figure 27. An *object* is defined in this report as a group of artifacts that share a provenience, material type, treatment recommendations, and priority. In the above photo, two *objects* are shown; the six bags of glass on the left represent one *object* and the ring on the right is the other.**

As shown in Table 7 below, the metal materials category (primarily iron) has the smallest ratio of *Conservation Treatment* forms to actual artifacts (approximately 50%), meaning there are many more artifacts than forms filled in (.468 ratio). The organic, composite, and "other" material categories have much higher *Conservation Treatment* form to actual artifacts, or bags of artifacts ratio, indicating that the number of *Conservation Treatment* forms is a much truer count of the actual number of artifacts requiring conservation treatment.

Fortunately, the types of artifacts that were most often grouped (i.e. bags of olive bottle glass or metal objects) are also most likely to be batch treated. It is therefore reasonable to use the number of *Conservation Treatment* forms, or *objects*, rather than individual artifact counts, to determine the cost of treating the artifacts identified by the survey.

**TABLE 7**
**RATIO OF *OBJECTS* TO NUMBER OF ARTIFACTS**

| | ***Conservation Treatment* Forms (*Objects*)** | **Artifacts/ Bags of Artifacts Represented by Descriptions** | **RATIO** |
|---|---|---|---|
| METAL | 1416 | 3026 | .468 |
| ORGANIC | 100 | 122 | .820 |
| INORGANIC | 1896 | 2545 | .745 |
| COMPOSITE | 51 | 63 | .810 |
| OTHER | 59 | 65 | .908 |

## SORTING CONDITION

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the conservation survey or it was completed as the survey progressed. This type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of metals in non-metal boxes, the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table 8). The metals were boxed separately in acid-free Coroplast® boxes and were desiccated using indicating silica-gel unless otherwise noted during the survey. Modern ($20^{th}$ century) materials such as bottle caps and aluminum fragments were not recommended for desiccation.

The numbers in Table 8 represent the total lots from all six archaeological zones surveyed. Metals represent approximately one-third (37%) of the total lots surveyed. Out of 6674 lots, very few contained pull slips (19%) or heavy objects (0.1%). The very low number of heavy objects represented is a result of the repackaging project that took place prior to commencing the survey in 2004.

These numbers are very close to the data recorded for each of the individual sites. In each of the sites surveyed, metals represented approximately half of the lots surveyed or more in some instances. In a few instances there were no pull slips present and none of the objects had been separated from the boxes. This number also reflects objects surveyed in the exhibition and in the comparative study collections which would not contain pull slips.

**TABLE 8**
**SORTING CONDITION**

| **CURRENT SORTING CONDITION** | **YES** | **NO** |
|---|---|---|
| METALS PRESENT | 2488 (37%) | 4186 (63%) |
| HEAVY OBJECT PRESENT | 5 (0.1%) | 6669 (99.9%) |
| PULL SLIP PRESENT | 1290 (19%) | 5384 (81%) |

## MATERIALS PRESENT

The materials present were recorded during the survey (Table 9). The numbers represented in Table 9 are the total number of lots surveyed (out of 6674) from all six archaeological zones.

The largest groups of artifact materials surveyed included metal (37%), architecture (34%), lithics (30%), shell (28%), and glass (27%). Keep in mind, however, that metals and non-metals were separated into different lots, giving the impression that metal was more prominent than

other artifact types in the collection. For example, 34% of lots contained architectural items, but only 63% of the lots were non-metal lots that would have had the potential to contain architectural items. Architectural items were therefore present in about half (54%) of the proveniences surveyed. Keeping this in mind, the distribution of materials types is very consistent with the data found on each of the individual sites and is typical considering the time period of the archaeological sites excavated. There were a very low number of soil samples (.3%), prehistoric ceramics (6%), and organic materials (8%) represented by the survey. Ceramics were present in 27% of the lots surveyed. This number is low considering ceramics typically constitute a significant proportion of any archaeological collection. Most of the ceramics had been pulled prior to the survey for use in the comparative study collection, and only some of these artifacts were part of this survey.

**TABLE 9**
**MATERIALS TYPES PRESENT**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 1 (0.01%) | 6673 (99.99%) |
| BONE | 1301 (19%) | 5373 (81%) |
| CERAMICS | 1800 (27%) | 4874 (73%) |
| GLASS | 1770 (27%) | 4904 (73%) |
| METAL | 2496 (37%) | 4178 (63%) |
| ARCHITECTURE | 2272 (34%) | 4402 (66%) |
| SHELL | 1897 (28%) | 4777 (72%) |
| BY-PRODUCT | 1634 (24%) | 5040 (76%) |
| LITHICS | 1997 (30%) | 4677 (70%) |
| PREHISTORIC CERAMICS | 403 (6%) | 6271 (94%) |
| SOIL SAMPLE | 23 (0.3%) | 6651 (99.7%) |
| ORGANIC | 558 (8%) | 6116 (92%) |
| PIPES | 1489 (22%) | 5185 (78%) |
| OTHER | 307 (5%) | 6367 (95%) |

The artifacts in the HSMC collections date primarily from the mid-to-late 17th century, with a few examples of prehistoric artifacts and some from the 18th through 20th centuries. The bulk of the materials surveyed were not given *Conservation Treatment* forms because they were either stable or their level of significance to the mission of HSMC does not warrant expensive conservation treatments. Information about these materials will be described below.

**Bone.** Nineteen percent (19%) of the lots surveyed contained bone. Bone objects such as buttons, combs, and toothbrushes were always given a *Conservation Treatment* form. The vast majority of bone, however, represented faunal materials that were only recommended for conservation treatment in special circumstances as outlined in the Procedural Manual for the 2002 IMLS Conservation Assessment (Appendix XV).

Faunal materials excavated at HSMC were generally stable because the burial environment at HSMC is conducive to preserving bone materials. In some instances, faunal materials were found having physical cracks with flaking evident. Deterioration was not of a level that would threaten identification of bone, however. As long as the faunal remains are stored in a stable environment without dramatic fluctuations in temperature and relative humidity, they will remain stable.

**Ceramics.** Ceramics did not receive recommendations for conservation treatment unless they needed to have tape/tape residue or exhibition wax removed from the surfaces. Ceramics also received treatment forms if there was a need to repackage the artifacts in archival materials.

Only 27% of the lots contained ceramics, and the majority of these were located in the metal cabinets for study or in the exhibition.

**Glass and Metal.** Glass and metal almost always received *Conservation Treatment* forms and they will therefore be discussed later. Some exceptions include modern glass (i.e. 19th- to 20th-century glass) and 20th-century metal objects. Additionally, nails were generally not recommended for treatment because they are so profuse that it would not be feasible to conserve them all. Modern metals excavated from ST1-014 [19th-20th century tenant farmer dwellings] and coffin nails from ST1-103 [Chapel Site] received *Conservation Treatment* forms due to their archaeological significance.

**Architectural Rubble.** Architectural rubble includes brick, plaster, mortar, and daub and these were present in 34% of the lots surveyed. Architectural items were not recommended for conservation treatment as outlined in the Procedural Manual for the 2002 IMLS Conservation Assessment (Appendix XV). Brick, mortar, and plaster fragments commonly suffer from minor surface deterioration caused by internal friction within the bags, but because their analytical value was not threatened, they were not recommended for repackaging or treatment.

**Shell.** Like architectural items, shells commonly suffered minor surface deterioration due to internal bag friction, but it was not recommended for conservation treatment as outlined in the Procedural Manual for the 2002 IMLS Conservation Assessment (Appendix XV). Shell objects, however, such as buttons, were recommended for treatment if they were found to be deteriorating.

**By-Product and Lithics**. By-Products (i.e. slag, charcoal, and coal) were present in 24% of lots surveyed and lithics were present in 30% of lots. These categories were not recommended for treatment because they were almost universally stable. Because they tend to be so heavy, lithics may need to be repackaged as well so that they are separated from items that may be damaged by crushing.

**Prehistoric Ceramics.** Prehistoric Ceramics were not recommended for treatment because they were all considered stable.

**Soil Samples.** Soil samples were noted primarily for tracking purposes and to record their level of processing. Soil samples do not need conservation and therefore did not get *Conservation Treatment* forms.

**Organic.** Organic objects were generally given *Conservation Treatment* forms unless they were clearly 20th-century artifacts (i.e. modern yarn) and they will be discussed in more detail later.

**Clay Tobacco Pipes.** Pipes were rarely recommended for conservation treatment because these materials were all stable. Some pipes, however, were taped and had some stains from the tape adhesives. These were recommended for conservation treatment as deemed necessary.

**Other.** The "Other" category was generally comprised of polymers (i.e. plastics). Because most of these items date to the 20th-century, they rarely received a conservation priority recommendation. However, 19th-century rubber and plastic, such as "Goodyear" vulcanite items and Bakelite materials, received treatment forms due to their inherent instability and historical importance. These artifacts were primarily comb and ornamental ring fragments, in addition to screw-on caps and buttons.

## PREVIOUS TREATMENT

Almost all of the lots surveyed from the six archaeological zones have been washed (99.9%), sorted (99.9%), labeled (99.9%), catalogued (96.9%), and include a paper label inside the bag (89%) (Table 10). The lower percentage of artifacts that contain a paper label can be accounted for by surveying collections housed inside the metal cabinets and on exhibition. Some of the collections within the metal cabinets were found to be missing paper labels and none of the artifacts on exhibit would have a paper label. Nine percent (9%) of the artifacts had been crossmended, which was primarily found within the study collection ceramics and the objects on exhibit. A very low number of objects were recorded as having been previously conserved. This included metals (3.2%) and other artifact types (.5%). A larger percentage of glass was found conserved (14.5%). This is partially due to the fact that most of the conserved artifacts, especially the metals, have been pulled for exhibition and research and were not all surveyed at this time. Additionally, after 1987 a full-time conservator was staffed at HSMC and all glass was routed to the conservation laboratory for treatment immediately after excavation.

**TABLE 10**
**PREVIOUS TREATMENT INFORMATION**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 6670 (99.94%) | 2 (0.03%) | 2 (0.03%) |
| SORTED | 6673 (99.98%) | 1 (0.02%) | 0 |
| LABELED | 6667 (99.90%) | 6 (0.08%) | 1 (0.02%) |
| CATALOGUED | 6468 (96.9%) | 199 (3%) | 7 (0.1%) |
| PAPER LABEL | 5962 (89%) | 659 (10%) | 53 (1%) |
| CROSSMENDED | 623 (9%) | 6042 (91%) | 9 (<0.1%) |
| TAPED | 10 (0.15%) | 6650 (99.64%) | 14 (0.21%) |
| ADHERED | 82 (1.2%) | 6345 (95.1%) | 247 (3.7%) |
| METAL CONSERVED | 215 (3.2%) | 6414 (96.1%) | 45 (0.7%) |
| GLASS CONSERVED | 969 (14.5%) | 5672 (85%) | 33 (0.5%) |
| OTHER CONSERVED | 33 (0.49%) | 6639 (99.48%) | 2 (0.03%) |

## CONDITION OF *OBJECTS*

Basic observations were made while surveying the collection regarding the condition of the *objects* (Table 11). This information relates directly to the information in Table 13. It should be noted, however that items receiving *Conservation Treatment* forms are the only ones that have condition assessments. The percentages representing condition of artifacts are therefore percentages of artifacts that received *Conservation Treatment* forms, and not the collections surveyed as a whole. For a reminder of the types of artifacts that receive *Conservation Treatment* forms, see the Materials Present section (above) or the Procedural Manual for the 2002 IMLS Conservation Assessment (Appendix XV).

Of the artifacts that were recorded on *Conservation Treatment* forms, the more unstable or deteriorated artifacts were given a higher priority for conservation treatment in the future. The more stable artifacts, such as olive bottle glass, were given a priority 4 indicating treatment can wait. Some exceptions were made in regard to artifacts which were either more stable than anticipated, or for those which were deteriorated beyond treatment or very unstable and required treatment immediately.

Typically, as has been indicated by conservation activities at HSMC, metal (primarily iron) and inorganic (primarily olive green bottle glass) represent the bulk of *objects* designated for conservation treatment. For metal items surveyed, almost one-third of the *objects* were

considered not stable (37%), and a smaller number were stable (23%), in poor condition (26%), and fair condition (13%). Only 3 *objects* were deteriorated beyond treatment. Most of the *objects* recorded as being "fair" and "poor" were listed as a priority 2 and 3. These included copper alloys, iron and lead. Of the metal *objects* listed as being "not stable," and therefore requiring conservation treatment sooner rather than later, the majority of *objects* surveyed fell evenly between a priority 1 and 2 - indicating that the artifacts are a higher priority and are in the most need of treatment due to their deteriorated condition. Most of these were actively deteriorating iron objects.

Very few organic items were recorded during the survey. Most of the artifacts that were recommended for treatment included bone, leather, and a few shell *objects*. Almost two-thirds of the objects surveyed fell into the priority 3 and 4 (69%) categories, indicating that their treatment needs are not immediate, but they should be re-examined and treated in the near future. The majority of other organic artifacts surveyed were either in fair or poor condition, very little were considered not stable.

For inorganic, the priority 5 items recorded during the survey were almost all found in a stable condition. These items were generally olive bottle glass and, as stated above, were recorded so that the staff at HSMC would be able to find the glass in the future and re-examine it to determine its conservation needs. Four inorganic objects were deteriorated beyond treatment, a number comparable to that of the metals. Most of the inorganic *objects* recorded as a priority 4 were found in fair condition (10%), indicating that some level of treatment is recommended in the future, but not immediately. A handful of glass *objects* were found in poor condition (5%) and even fewer were considered not stable (.25%), both recorded as a priority 3 and 4.

The composite items recorded during the survey fell primarily in three categories of condition: not stable/deteriorated (29%), poor (21.5%), and fair (41%). This is consistent with the metals surveyed, as most of the composite *objects* are composed of two different metals. These results, therefore, mirror the results found during the survey for the metals, and many of the composite items require conservation treatment sooner rather than later. The majority of "other" *objects* recorded during the survey were in fair or stable condition. These include hard rubber buttons and plastic artifacts.

**TABLE 11**
**CONDITION OF OBJECTS BY PRIORITY**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 1 | 0 | 0 | 0 | 335 | 336 |
| Fair | 2 | 58 | 111 | 14 | 4 | 189 |
| Poor | 11 | 136 | 210 | 7 | 2 | 366 |
| Not Stable/Deteriorated | 173 | 351 | 6 | 3 | 3 | 536 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 3 | 3 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 3 | 0 | 15 | 18 |
| Fair | 0 | 2 | 32 | 26 | 0 | 60 |
| Poor | 0 | 2 | 3 | 8 | 0 | 13 |
| Not Stable/Deteriorated | 0 | 1 | 1 | 7 | 0 | 9 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 1 | 0 | 237 | 1320 | 1558 |
| Fair | 0 | 39 | 26 | 186 | 1 | 252 |
| Poor | 0 | 12 | 23 | 46 | 1 | 82 |
| Not Stable/Deteriorated | 0 | 0 | 2 | 1 | 0 | 3 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 4 | 4 |

| | | | | | | |
|---|---|---|---|---|---|---|
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 4 | 4 |
| Fair | 17 | 2 | 1 | 1 | 0 | 21 |
| Poor | 9 | 1 | 1 | 0 | 0 | 11 |
| Not Stable/Deteriorated | 15 | 0 | 0 | 0 | 0 | 15 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 13 | 13 |
| Fair | 0 | 0 | 0 | 34 | 0 | 34 |
| Poor | 0 | 0 | 2 | 10 | 0 | 12 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **228** | **605** | **421** | **580** | **1705** | **3539** |

## TREATMENT RECOMMENDATIONS

As noted previously, to assess the condition of the artifacts a quantitative ranking system was chosen based on conservation needs of the materials. This ranking system was used for any artifact or group of artifacts receiving a *Conservation Treatment* form. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table 12. For each *object* surveyed, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects* that require treatment by a conservator or staff member, and these may or may not include more than one artifact.

**TABLE 12**
**LEVEL OF CONSERVATION TREATMENT BY PRIORITY**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 186 | 544 | 314 | 24 | 2 | 1070 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 5 | 39 | 39 | 0 | 83 (99%) |
| Staff | 0 | 0 | 0 | 1 | 0 | 1 (1%) |
| INORGANIC | | | | | | |
| Conservator | 0 | 51 | 46 | 32 | 2 | 131 (23%) |
| Staff | 0 | 1 | 4 | 434 | 1 | 440 (77%) |
| COMPOSITE | | | | | | |
| Conservator | 41 | 2 | 2 | 1 | 0 | 46 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 2 | 43 | 0 | 45 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTALS | 227 | 603 | 407 | 574 | 5 | 1816 |
| Conservator | 227 | 602 | 403 | 139 | 4 | 1375 (76%) |
| **Staff** | 0 | 1 | 4 | 435 | 1 | 441 (24%) |

These data are important in determining the future resources and funding needed to treat *objects* at HSMC in the future. Overall, 76% of the treatments require the specialty of a conservator and only 24% of the treatments can be performed by staff. The metals, organic, composite (often objects composed of two metals) and "other" objects require treatment by a conservator almost 100% of the time. This is due to the fact that most metals require intricate cleaning methods and the skill of a professional who has experience with these materials, while the inorganic objects, primarily olive bottle glass, require the treatment of a staff member the majority of the time (77%). These numbers are consistent with the data recorded on each of the individual sites. Most of the objects requiring treatment by a conservator were given a priority 1 or 2, while those requiring staff treatment tended to be a priority 4. This indicates that the objects in the most need of treatment (higher priorities) cannot wait, and must be performed by a conservator. *This data reflects the need for a staff conservator to be reinstated at HSMC so that difficult and complex treatments can be performed in the immediate future.*

The conservation needs can also be reviewed according to artifact material (Table 13). Data is grouped in Table 13 under the broader headings of metal, organic, inorganic, composite and "other," as well as by specific materials within the metal and inorganic groups. Although additional data was collected for more specific materials within the organic, composite, and "other" categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

**TABLE 13**
**ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 176 | 362 | 1 | 1 | 153 | 693 |
| Copper Alloy | 0 | 164 | 181 | 18 | 56 | 419 |
| Lead Alloy | 11 | 12 | 127 | 3 | 125 | 278 |
| White Metal Alloy | 0 | 7 | 3 | 0 | 5 | 15 |
| Other | 0 | 0 | 2 | 2 | 7 | 11 |
| Total Metals | 187 | 545 | 314 | 24 | 346 | 1416 |
| ORGANIC | 0 | 5 | 39 | 41 | 15 | 100 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 1 | 2 | 135 | 831 | 969 |
| Other Glass | 0 | 51 | 48 | 62 | 449 | 610 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 30 | 6 | 36 |
| Other Ceramics | 0 | 0 | 0 | 65 | 19 | 84 |
| Other | 0 | 0 | 0 | 177 | 20 | 197 |
| Total Inorganic | 0 | 52 | 50 | 469 | 1325 | 1896 |
| COMPOSITE | 41 | 3 | 2 | 1 | 4 | 51 |
| OTHER | 0 | 0 | 2 | 44 | 13 | 59 |
| **TOTALS** | **228** | **605** | **407** | **579** | **1703** | **3522** |

The metal and inorganic material groups contained the majority of artifacts in need of treatment. The majority of artifacts in need of immediate conservation treatment (priority 1 and 2) are iron (15%). A smaller number of copper alloy *objects* (10%) with a priority of 2 or 3 and lead alloy *objects* (3.5%) with a priority of 3 also require treatment. Two categories of glass, olive and "other" in need of treatment were found to be recorded primarily as a priority 4 (9%). A little more olive bottle glass (23.5%) was recorded as being present and stable, and therefore was given

a priority 5 with no treatment recommended. Other inorganic artifacts surveyed and recorded include glass beads, lamp glass, tin-glazed ceramics, other ceramics, and pipe stems.

Organic *objects* varied in material type and condition. Most of the leather and bone objects found during the survey were given a priority 3 or 4 (2.5%), indicating that treatments can wait. The majority of organic *objects* were bone - many of which were recorded as a priority 4. These include bone comb fragments, toothbrush handles, buttons, and other worked bone. A smaller number of organic *objects* surveyed were priority 5 and no treatment was recommended at this time.

The majority of composite *objects* surveyed were recorded as a priority 1 (1.2%). Most of the composite *objects* were a combination of metals, or another material, such as bone, leather or glass with a metal attached (Figure 29).

Overall, the two largest groups of materials requiring conservation are the metals (primarily iron) and inorganic (primarily olive bottle glass) (Figure 28). These represent 98% of the objects recommended for treatment with almost 48% of these being iron and olive bottle glass, including those noted during the survey as a priority 5. A wider variety of metals across more condition categories were found in need of treatment (i.e. iron, copper alloys, lead alloys and white metal alloys) compared with that of the inorganic materials.

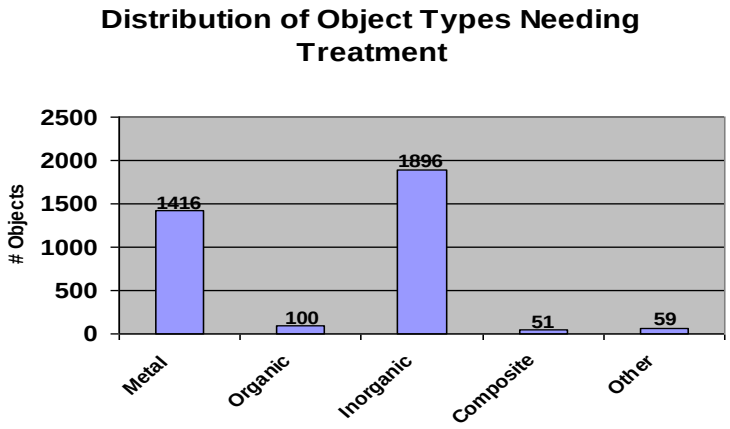


**Figure 28. Distribution of object types recommended for treatment.**

Conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. General material groups containing no data were not tallied and listed. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table 14. The numbers listed in Table 14 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.*


**Figure 29. Examples of composite objects found during the survey. Top: leather shoe sole with metal studs from the Town Center site (ST1-13-2671B). Bottom: Copper alloy corset hooks attached to iron boning from the Town Center site (ST1-13-1946P).**

For both metal and inorganic material types (primarily iron, copper alloys and olive green bottle glass), one-third of artifacts in need of treatment simply need to be cleaned and stabilized (31%), and a large number need to be repackaged (8 %). A smaller percentage of composite items are also in need of cleaning and stabilization (1.5%). These treatments are relatively simple and straightforward and some of the artifacts will most likely be batch treated. The majority of glass *objects* listed represent multiple bags of glass and not one object. Once again, the metals and composite items represent *objects* which are considered a higher priority than the inorganic objects. A small number of priority 1 and 2 iron *objects* are in need of x-radiography (2.2%). These objects were treated as part of the survey by the Colonial Williamsburg Foundation archaeological laboratory. All of these percentages are consistent with the results recorded for each of the individual sites.

The inorganic *objects* in need of treatment are primarily priority 4 (13%), indicating that treatments can wait. A large number of inorganic items recorded as priority 5 (36%), primarily olive green bottle glass, were not recommended for treatment but may need to be re-examined in the future for treatment needs including repackaging. Several other inorganic tin-glazed ceramics, pipe stems, glass beads and other ceramics were recommended for treatment as well. Nineteen *objects* were noted as needing tape removed (.5%) (Figure 30 below). Once again, this is a relatively straightforward treatment and can wait until the future.


**Figure 30. Examples of taped ceramics and pipestems from the Town Center site (ST1-13-1707P).**

The majority of organic *objects* surveyed were recorded as a priority 3 and 4 (80%), and were in need of cleaning and stabilization. Most of these were leather and shell buttons in poor condition. Other items requiring treatment include composite *objects* (1.2%) that also require cleaning and stabilization. The majority of these objects are a combination of two metals such as iron and copper alloys, or a metal and another material such as glass, bone, and lead. These objects require attention by a conservator and were given primarily a priority 1, as their complex composition is aiding in their degradation. Several "other" objects found during the survey were recommended for cleaning and stabilization as well as analysis. These include hard rubber and plastic objects, such as buttons and comb fragments.

**TABLE 14**
**TREATMENT RECOMMENDATIONS BY PRIORITY**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 6 | 5 | 3 | 0 | 14 |
| Stabilize Only | 0 | 1 | 1 | 0 | 1 | 3 |
| Clean and Stabilize | 186 | 504 | 306 | 21 | 0 | 1017 |
| Re-package | 2 | 10 | 2 | 3 | 20 | 37 |
| Re-treatment | 3 | 7 | 4 | 2 | 1 | 17 |
| X-ray | 37 | 44 | 0 | 0 | 0 | 81 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 33 | 0 | 0 | 0 | 33 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 344 | 344 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 10 | 16 | 0 | 26 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 4 | 29 | 25 | 0 | 58 |
| Re-package | 0 | 0 | 1 | 9 | 0 | 10 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 1 | 0 | 0 | 0 | 1 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 15 | 15 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 1 | 18 | 0 | 19 |
| Cleaning Only | 0 | 18 | 5 | 140 | 1 | 164 |
| Stabilize Only | 0 | 1 | 3 | 21 | 0 | 25 |
| Clean and Stabilize | 0 | 33 | 41 | 66 | 2 | 142 |
| Re-package | 0 | 1 | 0 | 237 | 2 | 240 |
| Re-treatment | 0 | 0 | 2 | 4 | 1 | 7 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 1 | 0 | 1 |
| No Treatment Needed | 0 | 0 | 0 | 1 | 1321 | 1322 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 2 | 0 | 0 | 0 | 0 | 2 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 38 | 2 | 2 | 1 | 0 | 43 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 2 | 0 | 0 | 1 | 0 | 3 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 1 | 0 | 0 | 0 | 0 | 1 |
| No Treatment Needed | 0 | 1 | 0 | 0 | 4 | 5 |
| OTHER | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 20 | 0 | 20 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 2 | 23 | 0 | 25 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 1 | 13 | 14 |
| **TOTALS** | **271** | **666** | **414** | **613** | **1725** | **3689** |

# FUTURE RECOMMENDATIONS AND GUIDELINES

The HSMC archaeological collections were surveyed to determine three things: 1) the individual lots of artifacts were surveyed to determine their current condition; 2) the boxes of artifacts were surveyed to determine their current state of curation pertaining to exterior and interior packaging, labeling and processing; 3) conservation treatments were recommended for artifacts which were actively deteriorating.

## RECOMMENDATIONS FOR REPACKAGING THE COLLECTIONS

The state of preservation of the artifacts is greatly influenced by the storage and packing materials as well as the environment surrounding those materials. Because packing materials are in immediate contact with the artifacts, these materials will directly influence the rate of deterioration. The packing and storage materials provide a physical and chemical barrier to the outside environment and once that barrier is broken down, the rate of degradation increases. Even artifacts that have undergone conservation treatment in the past will not be able to withstand the agents of decay unless they are stored in a stable environment.

The importance of proper storage conditions to the short and long-term preservation of the archaeological collections at HSMC cannot be overemphasized. A controlled environment is the primary factor to the artifacts' survival. By improving the environment surrounding the collections, less active conservation will be necessary in the long term. The storage of archaeological collections is probably the least exciting aspect of the discipline. The prospect of having to divert funds from excavation to storage is not an appealing one. However, there should not be a choice between one or the other. Many federal and state agencies are now requiring that when archaeological projects are still in the planning stage, and money is being allocated for

fieldwork, laboratory work, report writing and publication, that money also be allocated at that time for preservation, storage and curation of the artifacts. [7]

In addition to the long-term preservation of the artifacts, archaeological collections must also be easily accessible for comparative studies and research. Therefore, unlike most museum collections, it is important to keep sites together and store most artifacts by provenience and not material. It may seem like some of these factors are in conflict with one another, however, simple solutions can be sought so this goal can be achieved. HSMC has taken great strides towards achieving the goal of preserving the collections by re-housing the artifacts using IMLS GOS funding during 2002 and 2003. Obviously, the most ideal solution would be to construct a purpose built storage facility for the long-term preservation of all the archaeological collections at HSMC. Recommendations for long-term storage of the collections were outlined in the general survey of the Museum's collections and will not be repeated here. However, several additional recommendations can be made based on the data collected during the 2004-2005 detailed condition survey. These relate to the repackaging and re-housing of the collections. Detailed recommendations for the treatment of artifacts at HSMC will follow.

### Olive bottle glass

Olive bottle glass was one artifact type that would benefit from more protective packaging. At present, olive bottle glass (i.e. window and bottle glass) is bagged in polyethylene bags with little or no interior padding. Numerous glass pieces bagged together create friction and the glass was often found deteriorated simply because it was in physical contact with other glass shards. This deterioration occurred even if the glass had been conserved in the past. This points out a shortcoming of the current state and federal packaging standards since fragile items suffer physical damage when they are enclosed in bags without additional support.

Because of the problem described above, it would be beneficial to research a system that provides more protective packaging for the olive bottle glass. By eliminating this type of physical deterioration to the glass, the need for conservation treatment or re-treatment of previously conserved glass will be minimized. In the long term, collections costs will be lower if the glass does not need a great deal of re-treatment. The re-packaging of olive bottle glass, however, will be a daunting task considering how much there is in the collection and the amount of space that would be necessary to re-house the glass. One solution would be to interleave layers of glass within a polyethylene bag using 1/8" Ethafoam® or acid-free tissue paper. This type of project would be most cost-effective if a student, intern or collections assistant were to repackage the glass as time permitted.

### Fragile Organics

Fragile organic items such as faunal remains and charcoal have the potential to yield information about the flora and fauna found on archaeological sites. Like with olive bottle glass, faunal remains or charcoal that was bagged together often suffered harm from friction within the bag, and it is generally not possible to identify crushed or badly damaged specimens for archaeological analysis. Unlike glass, these items were generally stable except for the physical harm they may have suffered. Small bones bagged with large ones, for example, may have broken because of handling or crushing, but their condition was otherwise stable. These types of items were not recommended for conservation treatment, but they would benefit from repackaging so that they will be available for archaeological analysis in the future.

[7] United States Department of the Interior, NPS (1991) 36 CFR Part 79, Curation of Federally-Owned and Administered Archeological Collections. Department Consulting Archeologist, Archeological Assistance.

- As with olive bottle glass, it would be beneficial to research new methods of packaging fragile organic items. Small specimens might be bagged together and enclosed in an acid-free box for protection from other artifacts. Larger quantities of bone or charcoal might be separated into numerous bags to limit damage from weight and friction within the bags. Again, this would be most cost-effective if performed by students or interns, but it would be burdensome in terms of taking up storage space and it is a task that should be performed only after a new storage facility is available.

**Metals**

The desiccation of metals in polyethylene bags has created a dry environment for the artifacts within each of the individual Coroplast® boxes. Regular monitoring and replacement of silica gel will keep these relative humidity levels low. Some observations were made about how conditions might be further improved, however.

- The ratio of silica gel to the size of the bag of objects was not consistent in the metal boxes. All silica bags should be made to conform to a standardized bag size that relates to the outer bag size.

- The outer bags of desiccated microenvironments were much more effective and sturdy if the bag were composed of 4 mil polyethylene. Metals are often very heavy and the objects in the bags (i.e. nails, wire, tacks, etc.) can be pointed and sharp. Bag punctures were common, and seemed to be more common in 2 mil bags. It is therefore recommended that all 2 mil outer bags be placed within a sealed 4 mil outer bag for added support. It is further recommended that only 4 mil bags be used as outer bags for microenvironments in the future.

- Objects that are particularly pointed or awkward and may risk puncturing the outer bag, should be padded with ⅛ inch Ethafoam®.

- A further problem with the creation of metal boxes for desiccation is that of friction within bags. Metal boxes within the collection universally have a problem in terms of their weight. Iron is at the greatest risk. It was not uncommon to find a bag with a hundred or more nails in it. Every time these bags are removed for study or silica gel monitoring, the objects rub against each other and cause irreparable damage. The cost of padding or individually bagging most metal items would likely be too great to make the task feasible. Some recommendations may be made to help alleviate part of the problem, however.

- Second, boxes should not be filled to capacity. It would be useful to have a scale available and a weight limit set on the contents of any metal box. Once the box reaches an agreed upon weight, it is considered full, regardless of how much space is in it. This, like the repackaging of olive bottle glass, would require more space to be available and might be costly in terms of boxes and supplies used. It would, however, decrease the number of future active conservation treatments needed, thereby saving HSMC money on collections care in the long term.

- Lastly, some of the bags of metals were mixed within the boxes. This was not common, as initial sorting of materials was accomplished during the first repackaging project. However, if diagnostic metals are mixed with nails and other metals which are not considered a priority (modern metals and surface finds), the metals should be sorted into different bags.

## COMPARATIVE STUDY COLLECTIONS

### Metals

Several large metal artifacts featured within the study collections are unable to be re-housed inside archival trays. Therefore, they come in direct contact with the metal surface of the cabinets. Interaction between two different kinds of metal can increase deterioration. Metal objects that are allowed to come into contact with the metal drawers are more susceptible to physical damage from being jostled or abraded when the drawers are pulled open and shut. As they have been placed in drawers with smaller objects housed inside trays, it is recommended that these oversized pieces receive individual ¼" Ethafoam® liners to prevent physical and chemical damage from occurring. For artifacts that may not have their surfaces completely exposed to the surface of the drawers, such as three-legged iron cooking kettles, square strips of Ethafoam® can be placed directly between the feet of the kettle and the drawer to conserve archival supplies.

### Glass

A number of relatively whole glass artifacts and glass shards remain housed in acidic, cardboard trays without protective liners. It has been noted that a considerable amount of glass flakes and debris, a sign of active deterioration, has settled at the bottom of these boxes. It is recommended that the artifacts be re-housed in acid-free archival trays with ¼" Ethafoam® liners. In addition, the accumulation of deteriorated glass should be packaged inside 2 mil polyethylene bags and kept inside the archival trays with their associated artifacts.

### Ceramics and Pipes

Ceramic sherds have been haphazardly clustered inside small, acidic trays. Most of these boxes have been filled to capacity. This arrangement has lead to excessive handling and increases the possibility of physical damage to the artifacts, as these objects are intended to be researched by scholars on a more frequent basis. During the 2004-2005 condition survey, the trays had to be completely emptied in order to effectively examine each sherd for treatment requirements. These artifacts should be re-housed inside slightly larger archival trays lined with Ethafoam®. The amount of ceramics which are housed in over-filled trays should be decreased, with the additional sherds transferred to new boxes and appropriately labeled so that they may be identified as a part of a series (i.e. ST1-23-1426 G, Tin-Glazed Bowl, Box 3 of 3). Alternatively, several smaller boxes of sherds could be inserted into one larger acid-free tray in order to keep the vessels and ceramic types together. This order will create accessibility and facilitate the identification of artifacts in need of conservation. It will also minimize handling, which decreases the risk of damage.

## RECOMMENDATIONS FOR THE CONSERVATION OF ARTIFACTS

One of the main objectives of this project was to examine the artifacts within the archaeological collection, to record their condition, and to determine future conservation treatment needs. Each archaeological lot from a total of 2039 boxes of objects curated after 1988 was included in the survey. It should be noted that these observations and recommendations are being recorded in the winter of 2004-2005 and changes in the artifacts' conditions may occur by the time future conservation treatments are performed. A review of the survey data brings into focus the conservation needs of the collections of HSMC, based on previous care and their present condition. After a general discussion of pertinent survey results, more detailed recommendations will be provided by material, for the treatments that need to be performed by a conservator, and those which can be performed by supervised staff or students.

## Materials Surveyed

Material types examined during the survey are typical of those found on archaeological sites dating from the 17th to 19th century, with a few examples of prehistoric and 20th century artifacts as well. These include such artifacts as structural and architectural elements, glass, ceramics, metals, and some organics including faunal remains. Some modern materials from the late 19th and 20th century such as plastics and hard rubber were collected as well.

Metal artifacts represented one of the largest group of materials surveyed (37%) and recommended for conservation treatment. These include iron, copper alloys, lead alloys, white metal alloys, and other metals such as silver. Composite objects composed of two or more metals were also common throughout the survey. The iron objects were the most poorly preserved, and the highest priority of the metals surveyed. Their poor state of preservation is attributable to several causes: method of manufacture, the burial environment, salt contamination, lack of conservation treatment upon excavation, and poor storage environmental conditions (i.e. the lack of desiccation). Many of the iron artifacts are heavily corroded, delaminating, flaking and in need of immediate attention. For the purpose of the survey, not all individual iron artifacts were recorded - some unidentifiable fragments were grouped together in bags and most of the undiagnostic nails were not considered as requiring conservation. Other metals are in relatively good condition although some of the copper and lead alloys had minor surface corrosion. The only exception was that all the pewter was heavily corroded, often deteriorated beyond treatment. All of the priority 1 and 2 objects are in need of conservation treatment in the near future, along with some of the diagnostic priority 3 items. Most of the recommended treatments include cleaning and stabilization of the objects. Almost all of the priority 1 iron objects were x-rayed during the survey by the Colonial Williamsburg Foundation archaeological laboratory.

Glass objects represent the second largest group of artifacts surveyed which were in need of conservation treatments in the future. These include window glass, olive bottle glass, tablewares, lamp glass and beads dating from the 17th to 19th centuries. The glass varied in preservation from being very stable to very deteriorated. The bulk of the glass surveyed was olive bottle glass, primarily body shards. Most of the unstable olive bottle glass was found to be flaking and iridescent on the surfaces. As described above, physical damage was also evident to the glass due to over crowding of the bags and boxes. As indicated during the survey data, 14.5% of the glass was found to have been treated previously. Most of this glass remains stable and re-treatment of the glass was considered a low priority. Other glass that is not *stable* is in need of stabilization in order to preserve the flaking surfaces and retain the morphology of the glass. This task requires a significant amount of time due to the large quantities of glass recorded during the survey, however, this task can be performed by staff or supervised students in the future as time permits. It was not considered a high priority within the overall needs of the collections as much of the glass is generally not diagnostic.

Ceramic objects were relatively few (27%) considering that this material typically constitutes a significant proportion of most archaeological collections. This is due to the fact that most of the ceramics have been relocated to the study comparative collection, and therefore, were minimal in this survey. Many of the ceramics surveyed included high fired earthenwares, refined earthenwares, stoneware, redwares, porcelain, and tin-glazed wares. Most of the ceramics were in need of little conservation treatment and remain stable as is. A handful of tin-glazed ceramics were noted and their glazes were flaking and unstable. Other treatments recommended were the removal of masking tape from the surfaces of ceramics (a technique which is no longer used) and the re-treatment of ceramics which were mended with unstable adhesives in the past. Once again, these tasks were considered a low priority and can be performed in the future.

Architectural items were also recorded in large quantities during the survey (34%), including brick, stone, mortar, and plaster. Many of these artifacts were not chosen for conservation

treatment due to their abundance within the collection. Some of the materials were considered stable and no conservation treatments were recommended at this time. Some of the larger, heavier items, such as bricks, should be repackaged as stated in the section above.

Bone, both worked and faunal remains, was also found in large quantities (19%) during the survey. Most of these were faunal remains that were not recommended for conservation treatment. Most of the objects noted during the survey were worked bone such as toothbrushes, buttons, louse combs, utensil handles and dice. Some composite items were composed of bone /ivory and a metal (typically iron), such as bone handled utensils. These objects require further attention simply because of the two dissimilar materials in contact with one another, which is aiding in their overall degradation.

Organic objects represented a very low percentage (8%) of materials surveyed. A few examples of 19$^{th}$-to 20$^{th}$-century leather were noted for conservation treatment, but once again, these treatments are considered a low priority in the overall needs of the collections.

Lastly, a few plastic and hard rubber objects were noted during the survey (5%). Some of the items need further identification and analysis before a treatment plan can be developed. Many of these objects were simply noted, so that as treatments are developed for these types of materials in the future, the staff of HSMC will be able to re-examine the objects and assess their condition at that time. Other objects such as soil samples, flotation samples, seeds and shells were noted during the survey but not recommended for conservation treatment. The preservation of these materials, however, is greatly improved by proper packaging methods and storage in a stable environment.

**Previous Treatments**

The main role of the conservator during any detailed condition survey is to examine the artifacts, assess their condition, review past treatment information and to make recommendations for future treatments if needed. Information on previous treatment to the artifacts was entered into the database to record whether the artifacts had received any form of care since excavation. It is important to know whether or not the artifacts were washed, sorted, labeled (i.e. on the artifact itself), catalogued, or labeled with the appropriate provenience information. Another goal of the survey was to record any conservation treatments performed on the materials such as whether or not they were crossmended, taped, or adhered. This is important as the choice of technique or materials used to perform these past treatments may or may not have been harmful to the artifact in long-term storage. The database also documents metals, glass, or other artifacts that were actively conserved. Metals and glass were noted because they represent the bulk of materials which undergo conservation treatment at HSMC.

The survey showed that the curation practices in place at HSMC are acceptable. Almost 100% of the artifacts surveyed had been properly washed, sorted, catalogued, labeled and processed prior to the survey. Furthermore, when past conservation treatments were performed (i.e. taped, adhered, etc.) it did not appear that the artifacts were adversely affected by these treatments. Some exceptions were noted, such as tape needing to be removed from fragile surfaces of olive bottle glass, or bone objects that were adhered with unstable glues in the past which need cleaning and reversal. There seemed to be a low number of conserved artifacts (i.e. metals and glass) recorded during the survey. This can be accounted for by the large number of previously conserved objects that are either on exhibition or are being used in the research comparative collection. This number does not adequately represent the number of treatments performed in the past at HSMC.

It should be noted that a small sample of artifacts should be left unwashed for possible future analysis. As methods of scientific analysis become more refined, it may be possible to extract

data from artifacts in the future that cannot be accomplished today. This does not, however, justify leaving artifacts unwashed or cleaned which are not stable. A system must be developed and implemented for leaving artifacts that are stable and packaged correctly unwashed for future analysis.

## Condition

During the survey the artifacts within each box were examined. Although most artifact types did not require detailed *Conservation Treatment* forms, those that did receive *Conservation Treatment* forms were given a condition assessment. Their stability was determined and rated using a system based on their state of deterioration (Table 11). *Not stable/deteriorated* artifacts are those objects that are actively deteriorating and are in need of conservation treatment immediately. They will continue to degrade until such arrangements are made. Artifacts recorded as being in *poor condition* are those objects that are deteriorated, however, their condition is not as deteriorated as those that are considered *not stable*. Artifacts recorded as being in *fair condition* are deteriorated, however, their immediate survival is not dependent upon stabilization through active conservation. These artifacts may need to be cleaned or stabilized minimally through active treatment or re-treatment. *Stable* artifacts are those artifacts that are not actively deteriorating. This includes artifacts that are inherently stable due to their composition and are therefore in good condition and artifacts that have been treated in the past and remain in a stable condition. Very few objects surveyed were *deteriorated beyond treatment* however, there were a handful of glass and metal artifacts that were placed in this category.

Almost one-fifth (17%) of the *objects* were considered *not stable/deteriorated.* For the most part this includes iron artifacts and composite artifacts (composed of two differing metals) that are actively corroding, some of which are spalling and have corrosion blisters. Some lots contained copper alloy objects that were corroded enough to be considered *unstable.* These artifacts need to be repackaged using self-contained crystalline boxes with Ethafoam® for support. In addition, if copper alloy artifacts remain in contact with unstable artifacts and/or packing materials, this environment may cause an outbreak of bronze disease, thereby increasing the deterioration of these objects.

Seventeen percent (13.5%) of the *objects* surveyed were found to be in *poor* condition. Once again, this number primarily represents metals which were found corroded during the survey, and a handful of glass *objects* as well. A small number of composite *objects* (.3%), again composed of two differing metals or a metal and another material, were also in *poor* condition.

Fifteen percent (15%) of the *objects* were found in *fair* condition, with about two thirds being metals and the rest almost all inorganics. Most of the metals included copper alloys, lead alloys, and white metal alloys. The glass was primarily olive bottle glass in need of stabilization in the future. For the most part, these *objects* remain stable and were primarily considered a priority 3 or 4, indicating treatments can certainly wait.

More than half (54%) of the *objects* surveyed were considered to be in *stable* condition. Almost all of these *objects* tended to be olive bottle glass which was either treated previously and remains stable, or window and olive bottle glass which is stable due to its composition. A handful of conserved metals and 20$^{th}$ century metals were considered stable as well, and no treatments were recommended at this time. Some organic and "other" items, primarily bone, shell and plastics were also considered to be *stable* and were simply noted during the survey.

## CONSERVATION TREATMENT RECOMMENDATIONS

Data collected on the artifacts represent the condition of the materials being surveyed, as well as their significance as an archaeological find, or in relation to its archaeological provenience.

Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[8] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, one *object* may represent multiple bags of olive green bottle glass, or a single find such as a copper alloy buckle.

Approximately 76% of the treatments recommended during the survey require the specialty of a conservator and only 24% of the treatments should be performed by staff. The metals, organic and composite *objects* (often artifacts composed of two metals) require treatment from a conservator almost 100% of the time. This is due to the fact that most metals require intricate cleaning methods and the skill of a professional who has experience with these materials. While the inorganic objects, primarily olive bottle glass, require the treatment of a staff member the majority of the time (77%).

A better way to gauge conservation needs is to look at the time that will be required for conservation. The hours of conservation described here are defined as the hours of real time, i.e. the actual time that a conservator must be present. The times do not include hours during treatments such as soaking, consolidation or desalination when a conservator would not have to be present. In other words, this is the minimal amount of time needed to treat the objects recommended in the survey.

The total number of *objects* surveyed in need of conservation treatment by a conservator comes to 1375. Once again this number represents the *least* amount of objects in need of treatment, as one *object* may be multiple bags of olive bottle glass or several iron fragments. If you multiply this by an average of 3 hours per *object* for treatment, you come to 4125 hours of treatment time. If you then multiply this by an hourly rate for a conservator at $60.00/hour you get a staggering figure of $247,500 needed to conserve the objects surveyed. However, if we consider this figure over a 17 year period, it would have only taken $14,500 annually to treat objects as they were excavated and in need of conservation treatment. This number would most likely be even less, considering the time that has lapsed between when the artifacts were excavated and the date of the survey, hence their degradation has probably increased over that time. Plus, contractual conservation fees, the cost of chemicals and supplies would all have probably been less money than today. Another way to cope with this staggering figure is to consider treatments of just the priority 1 and 2 artifacts first. Priority 1 objects require 681 hours of treatment by a conservator and Priority 2 objects require 1806 hours of treatment. Adding these two figures together and multiplying that by an hourly rate of a contract conservator of $60.00/hour you get $149,220. Unfortunately this number remains high, and only serves as a reminder of the importance of having a conservator on staff to deal with such a huge backlog of untreated material.

The following is an outline of conservation treatments, listed by material, which may be performed by a professional Conservator. The treatments require skill and expertise and sometimes involve toxic or dangerous chemicals. Due to the training of some of the staff at HSMC, *some* treatments *may* be performed by HSMC staff or by supervised interns and students (indicated by an asterisk *). Ideally, it would be beneficial for a Conservator to work with the staff to develop these treatments, and to be on-site as much as possible to supervise the conservation of the artifacts. That way if any questions or concerns arise during the treatment of the artifacts, a staff member will be able to seek help from a professional Conservator. Although

[8] Each *Conservation Treatment* form surveyed for a lot and/or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

staff, students, and interns would still require costly equipment and supervision to perform conservation tasks, they would still be a more cost effective alternative than having a professional Conservator perform all conservation activities for all materials.

The following recommendations are divided into two sections for each material; a section of recommendations for treating artifacts that are newly excavated, and a section for artifacts that have already been curated and were identified during the survey as needing treatment. Some of these recommendations overlap between the two groups of artifacts.

## METALS

Most metals are much more fragile than they appear. Changes in color and shape indicate that the original object has already been altered during burial or storage. These changes often leave the object in a weakened state. If left without intervention, corrosion will continue until the entire metal core is gone.

Metal artifacts brought into the laboratory should be examined as soon as possible. All metals should be dry-brushed using a soft brush by the laboratory processing staff and then examined by the curator and conservator to decide whether the object is stable or not. Typically, a large number of iron nails are found along with a few distinguishable artifacts. All metals which take on a definite shape should be dealt with first. Those artifacts routed to conservation should be packed in a dry environment (with indicating silica gel) in a rigid polyethylene container with closing lid. A humidity indicator strip should be placed inside the box so it is visible from the outside in order to monitor the storage environment.

As with many excavations, there may be a large number of unidentifiable metal artifacts, particularly those made of ferrous alloys (iron). To save time and money treating each individual artifact, HSMC may want to investigate the possibility of setting up a large-scale X-radiography program for metal artifacts. Technological evidence, dissimilar metal types (i.e. tin wash), rivet holes, hammer marks, and stresses in the metal may be obscured by corrosion products.

**Treatment of Excavated Metals**

- Surface clean all metals using a soft, stiff brush to remove burial dirt prior to storage or being routed to conservation*
- Document and examine all metal artifacts to determine treatment priorities*
- Select a sample of artifacts for documentation and treatment when a large number of the same artifact exists from a particular provenience. Sampling artifacts can be useful, however, the methodology behind the sample should be consistent and well documented*
- X-radiograph all iron artifacts to document them for long-term preservation*
- Route artifacts to conservation if active conservation is needed; follow recommendations for metal artifacts in storage, as identified during the survey
- Package all metals in Coroplast® boxes containing dry indicating silica-gel. A humidity indicator should be placed inside each box for easy monitoring of the environment. Re-condition silica gel as needed. The boxes should be inspected every six months, after they are initially conditioned to the desired humidity level*
- Handle all metal objects using gloves*

**Treatment of Metal Artifacts Identified During the Survey**

- X-radiograph all iron metal artifacts identified during the survey as needing conservation treatment*

- Perform non-destructive analysis if necessary to identify the metal or alloy, especially those for white metal alloys identified during the survey
- Surface clean all metals of any disfiguring or obscuring corrosion using mechanical methods such as air-abrasion
- Stabilize active corrosion on all metals
- Apply a corrosion inhibitor and coating if necessary for handling and exhibition only
- Reinforce weak objects using physical support or adhesives

* Task may be performed by properly trained staff, students, or volunteers.

## GLASS

It has been shown that most of the colonial glass excavated at HSMC is not stable upon removal from the burial environment. Currently, the glass (vessel, bottle and window) is being washed using a soft-brush and water, allowed to dry and then routed to conservation for further stabilization. All glass that has friable and exfoliating surfaces should be routed directly to conservation prior to being washed and then follow the procedures below to ensure its future stabilization.

**Treatment of Excavated Glass**

- Log in glass artifacts from the field with the Laboratory Director and then directly route freshly excavated artifacts to the Conservator*
- Document the glass prior to treatment*
- Surface clean artifacts immersed in 50/50 Ethanol/Water using a soft brush*
- Allow robust and non-deteriorated glass to dry slowly in the fume hood or under loose polyethylene sheeting*
- Package vessels for storage using physical supports such as bubble-wrap or recessed mounts with Ethafoam®. If further stabilization is needed, follow treatment recommendations for glass artifacts identified during the survey (below) *

**Treatment of Glass Artifacts Identified During the Survey**

- Document the glass prior to treatment*
- Surface clean artifacts immersed in 50/50 Ethanol/Water using a soft brush if this step was not performed post-excavation*
- Stabilize and consolidate glass using an inert resin under vacuum*
- Glass identified as needing to be "re-treated" should follow the treatment regime above, however, the old consolidant (i.e. PVA or B-98) will first need to be removed from the glass as best as possible using a solvent rinse
- Restore any vessels using a stable adhesive for exhibition or research purposes
- Remove masking tape and masking tape residue from vessels in storage using mechanical and solvent means
- Package vessels using more physical support such as bubble-wrap, recessed mounts and Ethafoam®.*

* Task may be performed by properly trained staff, students, or volunteers.

## CERAMICS

Most ceramics are relatively stable upon excavation from burial. All ceramics should be bagged in the field by context and within context by vessel, if possible. The artifacts can then be brought to the processing area to be cleaned by the laboratory staff. Below are recommendations for treatment of newly excavated ceramics as well as un-mended specimens already in storage at HSMC.

**Treatment of Excavated Ceramics**

- Surface clean artifacts of burial dirt using a soft brush and water*
- Test for salts if they are suspected of being present. Monitor salt removal using de-ionized water under supervision of a Conservator*
- Dry desalinated ceramics slowly under polyethylene sheeting prior to storage. Make sure the ceramic bodies are completely dry before packaging for long term storage*
- If ceramics are in need of further attention, have staining which is obscuring decorative elements or the glaze is not stable, route to conservation and follow treatment regime for ceramics already in storage*
- Sort and repack ceramics to provide more physical support using bubble-wrap and polyethylene Ethafoam®*

**Treatment of Ceramic Artifacts Identified During the Survey**

- Document artifacts prior to conservation treatment
- Test for salts if they are suspected of being present. Monitor salt removal using de-ionized water under supervision of a Conservator
- Remove obscuring staining from surfaces if necessary and they are covering important decorative elements
- If salts are present in ceramics, dry them slowly under polyethylene sheeting or in fume hood prior to further treatment*
- Consolidate flaking glaze on ceramic bodies if necessary
- Restore objects if necessary for exhibition or research purposes using a stable adhesive
- Remove masking tape and masking tape residue mechanically and using solvents from objects in storage
- Re-treat old restorations using a stable acrylic resin if object is in danger of further damage due to misalignment or adhesive failure

* Task may be performed by properly trained staff, students, or volunteers.

## BONE AND IVORY

This includes both faunal remains and bone objects. Most of the bone objects found in highly acidic or basic soils undergo degradation at a rapid pace. For the most part, the bones found in the HMSC collections appear to be stable. Surface cleaning the objects using a small amount of water and a soft brush will often be enough. Friable bone surfaces may need to be re-adhered or consolidated, which should be performed by a professional conservator. Specialists should correctly identify all bones, faunal and human.

**Treatment of Excavated Bone and Ivory**

- Clean surfaces of bone using water, do not let bone soak in water*
- Fragile bones may be cleaned using Ethanol/water and soft brushes or swabs*
- Repackage objects using recessed foam-core mounts or bubble-wrap for added cushioning*
- Bone in need of further identification, surface cleaning or other conservation treatment should be routed to conservation and follow the treatment regime outlined for bones already in storage

**Treatment of Bone and Ivory Artifacts Identified During the Survey**

- Document all bone and ivory prior to conservation treatment
- Identify bone/antler/ivory prior to treatment. Perform analysis if necessary
- Clean bone/ivory surfaces using appropriate solvent/water if this was not done post-excavation

- Do not attempt to remove any stains from bones without consulting a specialist
- Consolidate surfaces if necessary
- Re-do old mends if adhesives are yellowing and failing, and if bone is in danger or being further damaged

* Task may be performed by properly trained staff, students, or volunteers.

## ORGANICS

Organic objects include wood, paper, leather, textiles, and any other objects made from a plant or animal. Most organic objects will not survive in the ground unless they are found on a wet site (i.e. waterlogged, well, privy) or a dry site (desert or cave). If an organic object survives it is more than likely going to be weak and unstable. If an object is found wet, store the object in a cool, dark place in de-ionized water until a Conservator can be consulted. If an object is found dry, assess its stability, and then carefully clean the surface using a dry, soft brush. Do not let the object get wet.

**Treatment of Excavated Organics**

- Treat all waterlogged objects such as wood, textiles and leather. Clean surfaces, remove salts present, consolidate surfaces and dry using air-drying or sublimation (freeze-drying). Re-adhere and reconstruct object if necessary
- Surface clean and consolidate dry objects. Re-adhere objects as necessary
- Re-house objects so that objects are fully supported and protected physically. Fragile objects, such as reconstructed leather shoes, may need to be stored in a rigid polyethylene box and cushioned using acid-free tissue paper*
- Consult a paper conservator and/or textile conservator to treat complex objects*
- Inspect objects in storage on a regular basis for signs of mold and mildew, especially in environments where the humidity reaches over 65%*

**Treatment of Organic Artifacts Identified During the Survey**

- Document all organic artifacts prior to conservation treatment
- Identify organic, i.e. specific type of leather for instance, performing analysis if necessary
- Clean surfaces using appropriate solvent/water if this was not done post-excavation
- Do not attempt to remove any stains from organics without consulting a specialist
- Consolidate surfaces of dry and friable organics if necessary
- If metal is attached to the organic (i.e. shoe tacks with leather), follow treatment regime for metals identified during the survey

* Task may be performed by properly trained staff, students, or volunteers.

## BRICK AND STONE

Brick and stone are generally found in stable condition. Wash artifacts using water and a soft brush. Do not allow the objects to soak in the water for any period of time. Similar to ceramics, brick and stone may develop salt infestation. If this occurs, desalination may be necessary before objects are stored away.

**Treatment of Excavated Brick and Stone**

- Surface clean brick and stone to remove burial dirt using a soft brush and water*
- Test for the presence of salts and desalinate if necessary
- Remove insoluble salts mechanically

- Re-adhere fragments for study and or exhibition
- Repackage using polyethylene bags. Do not over pack boxes or place with small, fragile objects*

**Treatment of Brick and Stone Artifacts Identified During the Survey**

- Document all artifacts prior to conservation treatment
- Identify materials if necessary, performing analysis
- No brick or stone were identified during the survey as requiring treatments, however, if over time brick or stone artifacts do require treatment, follow the treatments outlined for excavated brick and stone

* Task may be performed by properly trained staff, students, or volunteers.

## POLYMERS

With more and more late 19th-to 20th-century sites being excavated, it is not uncommon to find polymers such as plastics and rubber in historical archaeological collections. HSMC has a few of these more modern materials within their collection, often from surface finds or sites with 20th-century occupations. Due to the inherent instability of these materials, it is often unclear as to what methods to take when providing long-term care and preservation for these artifacts. Foremost, all modern materials should be identified whenever possible. All of these materials should be stored separately as many are made of unstable polymer chains that will readily break down when exposed to the agencies of decay. Over time the objects will then off-gas into the surrounding packing materials. This can then lead to the further deterioration of sensitive artifacts such as lead and pewter.

**Treatment of Excavated Polymers**

- Identify all polymer materials when possible. Consult analytical chemist if necessary for identification*
- Dry brush using a soft brush. Small amounts of water may be used to remove burial dirt if necessary, but at no time should the material be submerged in water*
- Store separately in polyethylene bags; monitor condition over time*
- If higher priority polymers are collected, store in an oxygen-free micro-environment using an oxygen scavenger such as Ageless®*
- Use cotton gloves to handle at all times*

**Treatment of Polymers identified during the Survey**

- Document all polymer artifacts prior to conservation treatment
- Identify materials if necessary, performing analysis
- Surface clean using soft brush and water; do not apply solvents to surfaces if crazing or crackling of the surfaces is evident
- No polymers were identified during the survey as requiring active conservation treatment, however, if over time these artifacts do require treatment, follow the treatments outlined for excavated polymers

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* Task may be performed by properly trained staff, students, or volunteers.

## FINAL RECOMMENDATIONS AND PRESERVATION PLAN

In summary, an overall preservation plan should be established, based on the results of this survey, to address short-and long-term needs. Museum preservation includes the examination, documentation, treatment and proper storage of the objects within the collection. Preventive care and conservation treatments at the time of excavation are critical to the long-term care and preservation of the collections. In addition to the recommendations given above, some general recommendations based on the results of this survey are given. A projected Conservation and Preservation plan for tasks, which should be accomplished in the near future is included below.

Due to the current staffing situation at HSMC, or lack thereof, several positions must be filled before the recommendations outlined in this report can be carried out. As stated above, a full-time professional conservator should be hired by the museum. If this position were to be filled, this person could potentially relieve the Laboratory Director of some of the environmental monitoring tasks as well as assist in developing long-range preservation and conservation plans for the museum. In addition, the Conservator could assist with artifacts in the field as needed, with laboratory processing, and with artifact stabilization for traveling and permanent exhibitions at HSMC. In addition, a laboratory assistant should be hired for at least 30 hours a week. This person could assist the Laboratory Director and the Conservator with all facets of artifact processing, assisting researchers and students, as well as repackaging and managing the collections. The assistant could work under supervision of the staff Conservator to help document, stabilize, and treat the collections. Due to lack of State funding these recommendations may not be able to be implemented expediently. In that case, grant funding should be sought for the two positions to provide a way to ensure the help needed.

On-going efforts to repackage the collections in long-term storage, as well as the study comparative collections should be continued. As time permits, those objects identified in the survey (primarily iron, fragile organics, and olive bottle glass) that would benefit from being re-housed should be repackaged as outlined above. Silica gel in metal boxes should continue to be tracked, regenerated, and replaced as necessary; and the condition of the iron enclosed in the boxes should be monitored as well.

Conservation treatments need to be resumed before irretrievable data is lost through the deterioration of the artifacts. Artifacts in storage, and awaiting treatment, are considered the highest priority, as the rate of deterioration is much higher than those newly excavated. Treatment priorities should be determined based on the stability of the artifacts as well as in conjunction with the goals of the Museum. The priority 1 and 2 objects recorded during the survey should be treated first. Simultaneously, and based on the excavation schedule, the newly excavated artifacts should be examined upon arrival in the laboratory and stabilized until treatments can begin. All metals should be put into a dry environment immediately. Artifacts should be cleaned and treated further as necessary, and in coordination with the laboratory staff and plans. As time permits, the Conservator should work with the laboratory staff to re-examine collections as they are being repackaged to determine other treatment schedules and priorities. In addition, the Conservator should be included in the planning stages of any excavation projects or research projects being undertaken by the museum. This will allow the Conservator to better plan and prioritize the on-going treatments already in progress.

Unfortunately, placing the collections in storage is not the end. All collections continue to have research value long after they are collected and must be accessible to HSMC employees, researchers, and the public. Significant information can be gleaned from the re-analysis of curated materials as technological advances and new research questions arise. As the field of archaeology expands, and more artifacts are recovered from HSMC, these collections will be re-accessed to aid in forming new interpretations and theories about life in St. Mary's City and The State of Maryland that can be used in public programs, exhibitions, and publications.

Lastly, the significance of the collections at HSMC makes it ideal for research projects for archaeologists, and conservation graduate students. The potential for research is incredible, especially involving new treatments for archaeological objects. The history of the collection and how it was recovered is an archive in itself for both archaeologists and researchers and it is critical that the collections be preserved for the future. Some of the collections, such as the ceramics and metals, could be further analyzed with techniques that were not available in the past. Overall, the collections care and treatment of artifacts at HSMC has always been a high priority. Due to limited resources, including funding, technology, and staff, it has been difficult to keep up with the ever-changing scientific world. Projected short-term and long-term conservation recommendations are provided below to aid with the organization and priority of some tasks that need to be accomplished. If these tasks are carried out, the HSMC archaeological facility will be state of the art with all of the expertise, technology, and accomplishments that are needed to set them apart from many other institutions.

**Short-Term Recommendations:**

- The information from the 2004-2005 survey should be reported and consolidated with the findings of the 2002-2003 survey to finalize treatment and conservation needs of the entire collections of HSMC
- Secure funding to treat the priority 1 and 2 objects recorded during this survey. For iron, continue x-radiography of ALL priority 1 and 2 objects. Due to the large amount of objects in need of treatment, sampling may be required. This should be accomplished in consultation and close collaboration with the Archaeological Laboratory Director and Curator of the Collections
- Reinstate a permanent, full-time conservator at HSMC to deal with the back log of artifacts in need of conservation and freshly excavated finds in need of examination, documentation, and treatment

**Long-Term Recommendations:**

- As outlined in the general survey performed in 1997, secure a permanent, environmentally controlled storage facility large enough to store all the archaeological collections in one space
- Hire a full-time laboratory/curation assistant
- Repackage the remainder of the study comparative collection in archivally safe materials, continuing to desiccate and sort all metals
- Re-house iron, fragile organic materials, and olive bottle glass, as outlined above when space permits, to avoid future physical damage to the objects
- Supervise intern/ student projects pertaining to collections care and conservation.
- Use available contractual conservation funding to work with a professional conservator to treat priority 4 olive bottle glass using students, interns and /or trained volunteers
- Secure funding to treat priority 3 and 4 objects in need of conservation treatment, as outlined in the detailed condition survey

# APPENDIX I: ZONE I

## ZONE 1

Zone 1 is made up of the Governor's Field and the Chapel Lands. These are the original names of the tracts shortly after settlement began in the 1630s. The Governor's Field was initially all part of the plantation of Leonard Calvert, the first governor of the colony and the brother of Lord Baltimore the colonial proprietor. The Governor's Field was subsequently subdivided in the 17th century and grew to encompass the center of the capital. The Chapel Field was the tract taken up by the Jesuits in the early 17th century and served as the site for a succession of Roman Catholic chapels. Table I-1 includes all the sites in Zone 1 encountered as part of the current conservation survey.

| Lot #Range | Site # | Site Name |
|---|---|---|
| 10853-10854 | ST1- Δ | Deltas |
| 10855-10882, 11092, 11190 | ST1-10 | Zone 1 finds |
| 09103-09139 | ST1-11 | Trinity Church |
| 06084-06480, 07634 | ST1-13 | Pope's Fort |
| 07635-07818, 08253 | ST1-13 | Bank Soil Erosion Project |
| 07819-07973, 08162 | ST1-13 | Beneath Brome |
| 07974-08161 | ST1-13 | Brome House |
| 08163-08250 | ST1-13 | Carriage House |
| 08251-08369 | ST1-13 | Cordea's Hope |
| 08370-08522, 08524-08617 | ST1-13 | Cordea's Reconstruction |
| 08618-08907 | ST1-13 | Leonard Calvert |
| 08908-09102, 09464-09466 | ST1-13 | Smith's Ordinary |
| 09140-09286, 09292-09301, 09467, 10941, | ST1-13 | Town Center (missed in '02) |
| 11078-11084, 11092, 11094-11097, 11111, 11118-11123 | ST1-13 | Town Center (missed in '02) |
| 11139, 11141-43, 11145-46, 11150-11151, 11154, 11172 | ST1-13 | Town Center (missed in '02) |
| 11176, 11178, 11179, 11183, 11186, 11187, 11194-98, | ST1-13 | Town Center (missed in '02) |
| 11260, 11203, 12408-12756 | ST1-13 | Town Center (missed in '02) |
| 10054-10237 | ST1-14 | Slave Quarter 1979 |
| 10238-10392 | ST1-14 | Inside Slave Quarter |
| 10393-10630 | ST1-14 | Outside Slave Quarter |
| 10996-10997 | ST1-15 | 1993 Fort Survey Surface Collect |
| 10883-10896 | ST1-17 | State House |
| 10998-11007 | ST1-18 | Mackall Inn |
| 10631-10852, 11087-91, 11103, 11124-29, 11152, 11173 | ST1-19 | Van Sweringen (missed in '02) |
| 11175, 11177, 11180, 11184-85, 11192, 11199 | ST1-19 | Van Sweringen (missed in '02) |
| 06481-07633, 09468-09477, 11085-86, 11112-17, 11204- | ST1-103 | Chapel |
| 11207 | ST1-103 | Chapel |
| 09287-09291, 09642-10025 | ST1-103 | Chapel Field Mitigation, Route 5 |
| 10026-10053 | ST1-103 | Chapel Field 2001 |
| 09302-09463 | ST1-104 | Aldermanbury Street |
| 10897-10930, 11197, 11201 | ST1-110 | NE Corner Anne Arundel Annex |
| 11008-11009 | ST1-111 | Sidewalk East Rte. 5, old grave |
| 11140 | ST1-116 | Baker's Choice |
| 09478-09641 | ST1-126 | Middle Street South |
| 11010 | ST1-129 | Lord Baltimore's World |
| 11011 | ST1-130 | Adjacent to current Calvert Hall |
| 10931-10940 | ST1-132 | 17th-century jail or prison |
| 11012 | ST1-133 | College Waterfront |
| 11013-11014 | ST1-135 | Trinity Church Hall |

*Table I-1. Archaeological Sites in Zone 1*

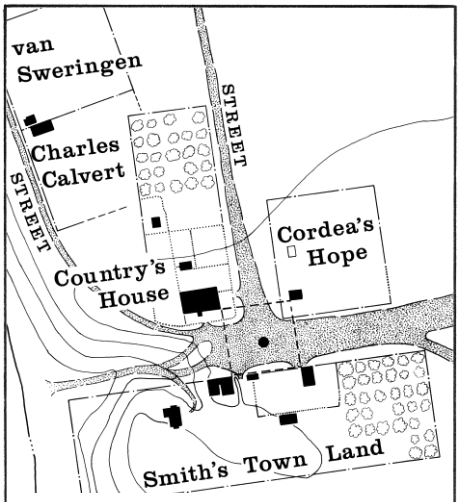


**Figure I-1. Principal sites included in ST1-13, Town Center area.**

The designation ST1-1-10 was used in the computer database to represent the unassociated materials from Zone 1 that cannot be attributed to an individual site locus in the zone. These artifacts are generally donations, random discoveries by visitors, or very old collections for which there is no record. The designation "00" is used because in the original system the designation "Δ" or delta was applied to unassociated finds, but such symbols do not work well within computer databases. Materials designated at ST1-10 are isolated finds within Zone 1 which cannot be attributed to an established site, but for which a find location has been recorded. The rest of the site designations in Zone I are attributable to actual archaeological sites.

ST1-11 is the area surrounding the current Trinity Episcopal Church which was constructed in the 1840s using brick from the original statehouse of 1676 which stood nearby (see ST1-17 below). Investigations here have been limited to minor excavations relating to church renovation and testing related to the extent of 17th-century occupation. These excavations relating to the addition of handicapped access to the church focused on the site of Gellie's Ordinary, a 17th-century tavern. Historical sources indicated that Gellie's was adjacent to the original brick statehouse since the business was ordered closed because it was an "unruly" house and a distraction to those participating in government at the statehouse. The principal signature of the site is late 17th-century domestic material.

The largest group of sites that occur as part of this study in Zone 1 are all designated as ST1-13 (Figure I-1). ST1-13 includes the center of the original town and has been investigated by a variety of projects over a number of years using a range of techniques. In addition to the 17th-century remains, the site area also contains prehistoric American Indian deposits and materials relating to an 1840s plantation house owned by Dr. John M. Brome. The Brome house actually sat directly above the site of the Calvert House and was removed by professional house movers in 1993.

The materials listed as associated with Pope's Fort were recovered as part of a project to investigate an English Civil War period fortification which surrounded the home of the first governor of the colony, Leonard Calvert. The Bank Soil Erosion Project explored the area near the Calvert House on the eroding bank of the St. Mary's River and was undertaken in advance of installing erosion control devices. The material described as Beneath Brome are artifacts recovered under the Brome House when the building was undergoing renovations in the late 1980s while the Carriage House and Brome House projects actually relate to the preparations for the moving of those two structures. The artifacts listed as Leonard Calvert were discovered as part of a project to assist in the interpretation of the site undertaken in the late 1980s. The material from Cordea's Hope, the Cordea's Hope reconstruction, and the Smith's Ordinary all relate to projects undertaken in association with reconstructions of these buildings from the 17th-century town. Cordea's Hope was a storehouse owned by Mark Cordea by 1675 while Smith's Ordinary was an inn built by William Smith in 1666 and destroyed by fire in 1677. Finally, the materials listed as Town Center (missed in '02), are artifacts from a major research study undertaken in the early 1980s which identified the original buildings of the 17th-century town. Most of the material

from this project was surveyed as part of the earlier Conservation Survey but these lots represent materials overlooked in the 2002 study.

Moving beyond the ST1-13 area, ST1-14 represents a site initially related with an extant 19th-century slave quarter. Subsequent investigations identified a second quarter adjacent to the surviving building and a complex of 17th-century and prehistoric American Indian deposits (Figure I-2). The extant quarter was removed from the site as part of the project which moved the Brome House and the Carriage House. Subsequent excavations discovered the remains of a print shop operated here in the late 17th century. This 17th-century structure was begun to be reconstructed in the fall of 2005.

**Figure I-2. 19th-century photograph of Slave Quarters.**

ST1-15 is a site which has only been slightly investigated with subsurface techniques. Its primary association is with an agricultural complex that was part of the Brome plantation, but it includes one barn dating to the 18th century and has archaeological components dating from both the prehistoric American Indian period, 17th-century occupations, and 18th- and 19th-century domestic occupations which may relate to slave habitations. It was recorded as part of a large survey project investigating parts of Governor's Field in the 1990s.

ST1-17 is the site of the original brick statehouse which was built in 1676 and which is now the location of the graveyard associated with Trinity Church (see ST1-11 above). Investigations here have been limited to a few test excavations. ST1-18 is related to the Mackall plantation, the site of an 18th century domestic locus near the present Anne Arundel Hall, a 1950s classroom structure on the campus of St. Mary's College of Maryland. The artifacts from ST1-19, described as Van Sweringen missed in '02, are from the site of Garret Van Sweringen's inn which was built in the 1660s as a government building and was modified and expanded into one of the best accommodations for travelers in the 17th-century city. These artifacts represent a small part of the collection which was overlooked during the initial phase of the survey in 2002.

ST1-103 is the site of the Roman Catholic brick chapel built sometime around 1667 and demolished in the early 18th century. This site has been the focus of a number of projects over the past 20 years. The first investigations were limited test excavations in 1984. Subsequently, starting in 1988, a major campaign of investigations uncovered a massive, cross-shaped brick foundation, two other colonial loci, and a major 17th-century cemetery (Figure I-3). The colonial domestic sites include an earlier chapel house and residence built together, and a structure which has been called the Priest's House and which appears to date to the end of the 17th century and into the 18th century. ST1-103 was the location where three lead coffins were excavated in the early 1990s. Currently the brick building is being reconstructed on its original foundation using period techniques and materials and plans call for the cemetery to be restored and the building know as the Priest's House to be reconstructed to serve as a gallery space for interpreting the site.

**Figure I-3. Chapel Foundations before reconstruction.**

ST1-104, Aldermanbury Street, was the number originally used to demark a site area along one of the original streets of the city. This site area was adjacent to the Van Sweringen site (ST1-19) which was described above. ST1-110 is the designation for an earlier colonial site near the current location of Anne Arundel Hall (see ST1-18 above) but not directly related to the Mackall plantation. ST1-111 is a colonial site associated with a small 18th- and 19th-century cemetery that holds the remains of Mackalls and Bromes, and their relatives.

ST1-116, known as Baker's Choice, is a primarily 17th-century site which was occupied by John Baker who also operated an ordinary at the Calvert House and served as sheriff of St. Mary's County. The site was tested as part of an investigation of the Mill Field and further investigated as part of the project exploring the Roman Catholic Chapel and related sites.

ST1-126, Middle Street South, is a colonial occupation near the Van Sweringen site that was uncovered as part of an investigation relating to a visit by the *Time Team*, a British television program that lends assistance to answering archaeological questions. Utilizing magnetometer and resistivity testing, a small feature was identified and subsequently explored by an archaeological field school from Historic St. Mary's City and St. Mary's College of Maryland.

ST1-129, Lord Baltimore's World, was the designation given to an area where interpretive activities were undertaken as part of the 1984, three hundred and fiftieth celebration of the founding of St. Mary's City. The area was explored before the construction to confirm the absence of significant remains. It was subsequently chosen as the site for interpreting the contact period occupants of St. Mary's City and serves as the Indian Hamlet.

ST1-130 is adjacent to the current Calvert Hall, one of the original college buildings initially constructed in the 1840s. ST1-132 is the site of the 17th-century jail or prison, built for the colony in 1676. It was a brick building with a pantile roof and it appears that the site was destroyed by the construction of Kent Hall, a St. Mary's College of Maryland classroom building in the 20th century.

ST1-133, the College Waterfront site was investigated as part of Campus improvement projects. It was found that much of the property occupied by the site area was made land created

by the redeposit of spoil from earlier campus construction and renovation in the 20th century. Organic preservation is exceptional with timbers and other wharf parts preserved.

ST1-134, Chapel Surface scatter, is a locus of 17th-century material south of the actual chapel site which seems to relate to a domestic site unassociated with the chapel. It was recorded as part of a large survey project investigating parts of Governor's Field in the 1990s. ST1-135, Trinity Church Hall, is currently the location of the hall associated with Trinity Church. It is located across the highway from Kent Hall (above) and was investigated as part of a pre-construction survey relating to burying utilities on the college campus. Finally, ST1-138, South Chapel field, is another colonial domestic concentration south of the Brick Chapel. It was recorded as part of a large survey project investigating parts of Governor's Field in the 1990s.

## SURVEY RESULTS

The 2004-2005 Conservation Survey examined 22 boxes (168 lots) of artifacts from Zone 1 surface collection activities. Most of the 168 lots were surveyed in March 2005, and a few boxes were surveyed earlier in November 2004. The majority of the artifacts from these sites are stored in Room 1 [Basement of the Archaeology Lab] on metal shelving, while several are on exhibit in Room 3 [HSMC Visitor Center]. One hundred and sixty-two lots were packaged in acid-free Hollinger boxes or acid-free Coroplast® boxes prior to the beginning of the survey. Six lots are on display in Room 3. Three "metals only" boxes and seven "mixed" boxes were included in this survey.[9]

**TABLE I-2**
**CURRENT SORTING CONDITION, ZONE 1 MISCELLANEOUS SITES**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 66 (39%) | 102 (61%) |
| HEAVY OBJECT PRESENT | 0 | 168 (100%) |
| PULL SLIP PRESENT | 4 (2%) | 164 (98%) |

### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the 2004-2005 Conservation Survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table I-2). When possible, the metals were boxed separately in acid-free Coroplast® boxes and were desiccated using indicating silica gel. Hollinger boxes were used to house very small amounts of desiccated metal artifacts. Sixty-six lots (39%) contained metals. Out of 168 lots, only 4 (2%) contained pull slips to indicate that objects were removed from those lots and no lots contained heavy objects.

### Materials Present

The materials present were recorded during the survey (Table I-3). The largest groups of artifact materials surveyed included ceramics (43%), architecture (40%), metal (39%), and glass (35%). The very high number of ceramics reflects the survey including the study collections housed within the metal cabinets and some on exhibition.

[9] A considerable amount of Hollinger boxes that contain miscellaneous sites within Zones 1-6 contain both metals and non-metals on account of the small number of artifacts retrieved from these sites. Therefore, the term "mixed" will refer to this anomaly. Nonetheless, the metals were re-packaged inside polyethylene microenvironments with indicating silica gel as they would have been in Coroplast® boxes.

**TABLE I-3**
**MATERIALS PRESENT, ZONE 1 MISCELLANEOUS SITES**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 168 (100%) |
| BONE | 27 (16%) | 141 (84%) |
| CERAMICS | 72 (43%) | 96 (57%) |
| GLASS | 58 (35%) | 110 (65%) |
| METAL | 66 (39%) | 102 (61%) |
| ARCHITECTURE | 68 (40%) | 100 (60%) |
| SHELL | 54 (32%) | 114 (68%) |
| BY-PRODUCT | 45 (27%) | 123 (73%) |
| LITHICS | 57 (34%) | 111 (66%) |
| PREHISTORIC CERAMICS | 4 (2%) | 164 (98%) |
| SOIL SAMPLE | 0 | 168 (100%) |
| ORGANIC | 18 (11%) | 150 (89%) |
| PIPES | 38 (23%) | 130 (77%) |
| OTHER | 4 (2%) | 164 (98%) |

## Previous Treatment

The majority of the lots surveyed from this site have been washed, sorted, labeled, catalogued, and include a paper label inside the bag (Table I-4). One ceramic had been crossmended and adhered. This artifact is a Morgan Jones pitcher on display in the Tavern section of the Visitor Center exhibit (Figure 7). A number of glass artifacts from one lot (0.6%) had been previously adhered, including a John Baker bottle seal. Treatments performed on glass from this zone included consolidation and impregnation of the glass with PVA (polyvinyl acetate). After 1988, glass that was retreated or treated for the first time from this site was consolidated and impregnated with Acryloid B-72 (co-polymer of methyl methacrylate/ ethyl acrylate). Two metal *objects* (1.2%) were previously conserved. This includes a cannon ball and a grouping of copper alloy religious medals on exhibition at the Visitor Center.

**TABLE I-4**
**PREVIOUS TREATMENT INFORMATION, ZONE 1 MISCELLANEOUS SITES**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 167 (99.4%) | 1 (0.6%) | 0 |
| SORTED | 168 (100%) | 0 | 0 |
| LABELED | 167 (99.4%) | 1 (0.6%) | 0 |
| CATALOGUED | 165 (98.2%) | 1 (0.6%) | 2 (1.2%) |
| PAPER LABEL | 161 (96%) | 7 (4%) | 0 |
| CROSSMENDED | 1 (0.6%) | 167 (99.4%) | 0 |
| TAPED | 0 | 168 (100%) | 0 |
| ADHERED | 1 (0.6%) | 166 (98.8%) | 1 (0.6%) |
| METAL CONSERVED | 2 (1.2%) | 166 (98.8%) | 0 |
| GLASS CONSERVED | 1 (0.6%) | 167 (99.4%) | 0 |
| OTHER CONSERVED | 1 (0.6%) | 167 (99.4%) | 0 |

## Condition of Objects

Basic observations were made while surveying the collection regarding the condition of the *objects* (Table I-5).

Typically, as has been indicated by conservation activities at HSMC, metal (primarily iron and copper alloys) and inorganics (primarily olive green bottle glass) represent the bulk of *objects* designated for conservation treatment. For metal items surveyed, the *objects* fell between four categories of condition: stable (8%), fair (16%), poor (28%) and not stable (48%). No *objects* were found to be deteriorated beyond treatment. The *objects* recorded as being fair were listed as a priority 2 or 3. The *objects* recorded as being in poor condition were also listed as a priority 2 or 3. Of the metal *objects* listed as being "not stable," and therefore requiring conservation treatment sooner rather than later, the majority was found to be a priority 2. This indicates that the artifacts are a high priority and are in the most need of treatment due to their deteriorated condition.

For inorganic *objects*, the priority 5 items recorded during the survey were all found to be in stable condition. These items were generally olive bottle glass and, as above, were recorded so that the staff at HSMC would be able to find the glass in the future and re-examine it to determine its conservation needs. Most of the inorganic items recorded as a priority 4 were found in fair condition (22%), indicating some level of treatment is recommended in the future, but not immediately. Five glass *objects* were found to be in poor condition (9%), and recorded as a priority 4 or 5.

The miscellaneous sites within Zone 1 yielded two organic artifacts (2.4%), which are a priority 3 shell button in fair condition and a priority 4 bone hair adornment in poor condition.

**TABLE I-5**
**CONDITION OF OBJECTS BY PRIORITY, ZONE 1 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 2 | 2 |
| Fair | 0 | 2 | 2 | 0 | 0 | 4 |
| Poor | 0 | 3 | 4 | 0 | 0 | 7 |
| Not Stable/Deteriorated | 1 | 11 | 0 | 0 | 0 | 12 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 1 | 0 | 0 | 1 |
| Poor | 0 | 0 | 0 | 1 | 0 | 1 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 33 | 33 |
| Fair | 0 | 4 | 0 | 12 | 0 | 16 |
| Poor | 0 | 0 | 0 | 4 | 1 | 5 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **20** | **7** | **17** | **36** | **81** |

## Treatment Recommendations

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table I-6. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[10] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, an *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. Of all the *objects* from the Zone 1 miscellaneous sites that were recommended for treatment (total 46), 63% require treatment by a conservator and only 37% can be treated by a staff member. For instance, 100% of all metals surveyed are in need of treatment by a conservator. Over half (74%) of the metals needing treatment were listed as either a priority 1 or 2 indicating that conservation treatment is needed sooner rather than later. Most (81%) of the inorganic materials listed for treatment can be treated by a staff member and are a priority 4, indicating that treatment can wait. This indicates that most priority 1 and 2 items in need of conservation will require treatment by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task.

**TABLE I-6**
**LEVEL OF CONSERVATION TREATMENT BY PRIORITY,**
**ZONE 1 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 1 | 16 | 6 | 0 | 0 | 23 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 0 | 1 | 1 | 0 | 2 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 4 | 0 | 0 | 0 | 4 (19%) |
| Staff | 0 | 0 | 0 | 16 | 1 | 17 (81%) |
| COMPOSITE | | | | | | |

[10] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

| | | | | | | |
|---|---|---|---|---|---|---|
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 1 | 20 | 7 | 17 | 1 | 46 |
| **Conservator** | 1 | 20 | 7 | 1 | 0 | 29 (63%) |
| **Staff** | 0 | 0 | 0 | 16 | 1 | 17 (37%) |

The conservation needs can also be reviewed according to artifact material (Table I-7). Data are grouped in Table I-7 under the broader headings of metal, organic, inorganic, composite, and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite, and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal and inorganic material groups contained the majority of artifacts in need of treatment. The majority of artifacts in need of immediate conservation treatment (priority 1 and 2) are iron (16%). A smaller number of copper alloy *objects* (7%) with a priority of 2 or 3 and lead alloy *objects* (4%) with a priority of 3 also require treatment. Almost all of the inorganic objects in need of treatment were found to be olive bottle glass and were recorded primarily as a priority 4 (20%). A large number of olive bottle glass (37%) was recorded as being present and stable, and therefore was given a priority 5 with no treatment recommended. Two bone objects were recorded as a priority 3 and 4, indicating treatment can wait until later.

**TABLE 1-7**
**ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ZONE 1 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 1 | 12 | 0 | 0 | 1 | 14 |
| Copper Alloy | 0 | 4 | 2 | 0 | 1 | 7 |
| Lead Alloy | 0 | 0 | 3 | 0 | 0 | 3 |
| White Metal Alloy | 0 | 0 | 1 | 0 | 0 | 1 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Metals | 1 | 16 | 6 | 0 | 2 | 25 |
| ORGANIC | 0 | 0 | 1 | 1 | 0 | 2 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 1 | 0 | 16 | 30 | 47 |
| Other Glass | 0 | 3 | 0 | 0 | 1 | 4 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Ceramics | 0 | 0 | 0 | 0 | 3 | 3 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Inorganic | 0 | 4 | 0 | 16 | 34 | 54 |
| COMPOSITE | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **20** | **7** | **17** | **36** | **81** |

The conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table I-8. The numbers listed in Table I-8 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.* General material groups containing no data were not tallied and listed.

For both metal and inorganic material types (primarily iron and olive green bottle glass), the majority of artifacts in need of treatment simply need to be cleaned and stabilized (31%) or cleaned only (20%). These treatments are relatively simple and straightforward and some of the artifacts will most likely be batch treated. The majority of glass *objects* listed represent a bag of glass and not one object. Once again, the metals represent *objects* which are considered a higher priority than the inorganic *objects*. A small number of priority 2 iron *objects* are in need of x-radiography (2.4%).

The inorganic *objects* in need of treatment are primarily priority 4, indicating that treatments can wait. One glass button was recorded during the survey and was given a priority 5. Thirty-three (37.5%) of the inorganic *objects* recorded as priority 5, primarily olive green bottle glass, were not recommended for treatment but may need to be re-examined in the future for treatment needs including repackaging.

Two organic *objects* were recorded during the survey requiring treatments such as cleaning and stabilization (1) and cleaning only (2). These were a shell button and a bone hair adornment respectively.

**TABLE I-8**
**TREATMENT RECOMMENDATIONS BY PRIORITY,**
**ZONE 1 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 1 | 3 | 0 | 0 | 4 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 1 | 15 | 3 | 0 | 0 | 19 |
| Re-package | 0 | 1 | 0 | 0 | 0 | 1 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 2 | 0 | 0 | 0 | 2 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 2 | 2 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 1 | 0 | 0 | 1 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 1 | 0 | 1 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 4 | 0 | 9 | 0 | 13 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 7 | 1 | 8 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 33 | 33 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **23** | **7** | **17** | **36** | **84** |

# APPENDIX II: ZONE 2 MISCELLANEOUS SITES

## SITE HISTORY

Zone 2, St. John's and St. Barbara's, encompasses the northernmost parts of the National Historic Landmark and in the 17th century were large plantation areas associated with the St. John's plantation started in 1638 by John Lewgar, first Secretary of the colony and St. Barbara's which was patented in the 1640s as a 50 acre tract and occupied by Mary Troughton. Most of the material from the early excavation at St. John's site (18ST1-23) was addressed by the 2002 report. The sites addressed as part of this survey representing Zone 2 are listed in Table II-1 below.

| Lot #Range | Site # | Site Name |
|---|---|---|
| 11015.00 | ST1-2 | St. John's Freehold/ Force Main |
| 11101, 11158, 11191, 11202 | ST1-22 | John Hick's Site |
| 11098-11100,11102, 11104-10, 11130-11138, 11144, 11147-9, 11153, 55-57, 11160-11171, 11181-82, 11188-89, 11208-12407 | ST1-23 | St. John's Site |
| 11016-11017 | ST1-24 | St. Barbara's |
| 11018-11019 | ST1-25 | Chapman House |
| 11020.00 | ST1-242 | St. Peter's Brick Yard |

*Table II-1. Archaeological Sites in Zone 2*

ST1-2, called St. John's Freehold/Force Main, is a small collection of isolated finds recovered in Zone 2 along Mattapany Road when a force main sewer system was installed for St. Mary's College in the late 1970s. The force main went from the campus to Pine Hill Run sewage treatment plant south of Lexington Park, Maryland. The portion of the force main located in Zone 2 was assigned to the general Zone 2 material collection but individual find sites are recorded.

The St. John's site (ST1-23) is located in the midst of the campus of St. Mary's College of Maryland. St. John's was explored by archaeologists from the Historic St. Mary's City Commission from 1972 to 1975. Additional work was conducted in 1982, 2001 and 2002. Excavations have generated over 350,000 artifacts, a group that comprises one of the premier collections of 17th-century materials in America. Analysis of the site has produced three Ph.D. dissertations, numerous reports and articles, and provided data for dozens of related studies. As one of the early large scale projects in historical archaeology, the site also led to the development of new approaches, research questions, and analytic methods.

ST1-22, the John Hicks site, was the first archaeological site professionally investigated in St. Mary's City. The site was discovered in advance of the construction of new dormitories on St. Mary's College's campus. The work was undertaken by a company called "Contract Archaeology" and was directed by Glen Little and Stephen Israel. The emphasis of the project was the recovery of artifacts from a trash filled cellar hole. The site had been the home of an English mariner and planter named John Hicks from approximately 1720 to 1740.

ST1-24 is the number assigned to the St. Barbara's site. In addition to the 17th-century occupation, there is a major later 18th-century dwelling associated with William Hicks and eventually ancestors of John M. Brome in the 19th century. The structure stood into the 20th century and existed as an open cellar hole at the time of the establishment of Historic St. Mary's City. The cellar was eventually filled with clean bank run gravel to stabilize it and protect against

potential injuries. The materials in our collection from this site resulted from unstructured collections over time.

The designation ST1-25 has been applied to a standing 20th-century structure on the College campus which now houses the colleges admission department but was originally a private residence of the Chapman family. The archaeological remains that occur there include outlying elements of the St. John's plantation (1638 to ca. 1720), prehistoric American Indian deposits, and twentieth century materials associated with the extant structure. This area was investigated as part of a major survey of college properties in preparation for campus development.

The final site in Zone 2 which is addressed in the current phase of the conservation survey is ST1-242, known as St. Peter's brickyard. It is located adjacent to the St. Barbara's site. This site was discovered by a field walkover which found large quantities of overfired brick. This brick is characteristic of a type of brick associated with two major structures in the city, the brick chapel (ST1-103) mentioned above and St. Peter's (ST1-31) which will be discussed below. This brickyard is assumed more likely related to the construction of St. Peter's rather than the Chapel since it is on property that was under the control of the builder of St. Peter's in the period under consideration.

## SURVEY RESULTS

The 2004-2005 Conservation Survey examined 5 boxes (10 lots) of artifacts from Zone 2 miscellaneous sites. The majority of the lots were surveyed in March 2005, with earlier lots surveyed in November 2004. The artifacts from this site are stored in Room 1 [Basement of the Archaeology Lab] on metal shelving and in Room 3 [HSMC Visitor Center Exhibit]. Six lots housed inside Room 1 are packaged in acid-free Hollinger boxes or acid-free Coroplast® boxes prior to the beginning of the survey. Four lots are on display at the Visitor Center. Four "metals only" boxes and one "mixed" box were included in this survey.[11]

### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the 2004-2005 conservation survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of metals in non-metal boxes, the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table II-2). The majority of the metals were housed separately in acid-free Coroplast® boxes and desiccated with indicating silica gel. Metals within "mixed" boxes were placed inside polyethylene microenvironments, which facilitated desiccation and separation from non-metals. Metals represent more than half (60%) of the lots surveyed within this site. No heavy objects or pull slips were present.

[11] A considerable amount of Hollinger boxes that contain miscellaneous sites within Zones 1-6 contain both metals and non-metals on account of the small number of artifacts retrieved from these sites. Therefore, the term "mixed" will refer to this anomaly. Nonetheless, the metals were re-packaged inside polyethylene microenvironments with indicating silica gel as they would have been in Coroplast® boxes.

**TABLE II-2**
**CURRENT SORTING CONDITION, ZONE 2 MISCELLANEOUS SITES**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 6 (60%) | 4 (40)% |
| HEAVY OBJECT PRESENT | 0 | 10 (100%) |
| PULL SLIP PRESENT | 0 | 10 (100%) |

## Materials Present

The materials present were recorded during the survey (Table II-3). The largest groups of artifact materials surveyed included metal (60%), architecture (30%), ceramics (20%), and glass (20%). The low number of ceramics is indicative of the survey including collections used for comparative study and research, which are housed within the Room 1 metal cabinets.

**TABLE II-3**
**MATERIALS PRESENT, ZONE 2 MISCELLANEOUS SITES**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 10 (100%) |
| BONE | 1 (10%) | 9 (90%) |
| CERAMICS | 2 (20%) | 8 (80%) |
| GLASS | 2 (20%) | 8 (80%) |
| METAL | 6 (60%) | 4 (40%) |
| ARCHITECTURE | 3 (30%) | 7 (70%) |
| SHELL | 2 (20%) | 8 (80%) |
| BY-PRODUCT | 1 (10%) | 9 (90%) |
| LITHICS | 2 (20%) | 8 (80%) |
| PREHISTORIC CERAMICS | 0 | 10 (100%) |
| SOIL SAMPLE | 1 (10%) | 9 (90%) |
| ORGANIC | 0 | 10 (100%) |
| PIPES | 1 (10%) | 9 (90%) |
| OTHER | 0 | 10 (100%) |

## Previous Treatment

All of the lots surveyed from this site have been washed, sorted, labeled, and catalogued. More than half (60%) have a paper label inside the bag (Table II-4). The low number of paper labels is due to almost half of the lots being on exhibition, and therefore they would not have a label. None of the artifacts have been crossmended, taped, or adhered. Almost half (40%) of the lots contain metal artifacts that have been previously conserved. These objects are currently on exhibit at the Visitor Center. No glass from the Zone 2 miscellaneous sites was previously treated.

**TABLE II-4**
**PREVIOUS TREATMENT INFORMATION, ZONE 2 MISCELLANEOUS SITES**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 10 (100%) | 0 | 0 |
| SORTED | 10 (100%) | 0 | 0 |
| LABELED | 10 (100%) | 0 | 0 |
| CATALOGUED | 10 (100%) | 0 | 0 |
| PAPER LABEL | 6 (60%) | 4 (40%) | 0 |
| CROSSMENDED | 0 | 10 (100%) | 0 |
| TAPED | 0 | 10 (100%) | 0 |
| ADHERED | 0 | 10 (100%) | 0 |
| METAL CONSERVED | 4 (40%) | 6 (60%) | 0 |
| GLASS CONSERVED | 0 | 10 (100%) | 0 |
| OTHER CONSERVED | 0 | 10 (100%) | 0 |

## Condition of Objects

Basic observations were made while surveying the collection regarding the condition of the *objects.* (Table II-5).

Metal (iron, copper alloy, and lead alloy) and inorganic comprise the *objects* designated for conservation treatment. For metal items surveyed, the *objects* fell into two categories of condition: poor (11%) and not stable (22%). Four *objects* were found to be stable and no objects were deteriorated beyond treatment. All of the *objects* recorded as being poor and unstable were listed as a priority 2. The two *objects* listed as being "not stable" are in the most need of treatment due to their deteriorated condition.

Two inorganic *objects* were found to be in stable condition and received a priority 5. These artifacts, a polyethylene bag of olive bottle glass and a glass marble, were recorded so that the staff at HSMC would be able to find the glass in the future and re-examine it to determine its conservation needs.

**TABLE II-5**
**CONDITION OF OBJECTS BY PRIORITY, ZONE 2 MISCELLANEOUS SITES**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 4 | 4 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 1 | 0 | 0 | 0 | 1 |
| Not Stable/Deteriorated | 0 | 2 | 0 | 0 | 0 | 2 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 2 | 2 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **0** | **3** | **0** | **0** | **6** | **9** |

## Treatment Recommendations

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported (Table II-6). Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[12] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, one *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

**TABLE II-6**
**LEVEL OF CONSERVATION TREATMENT BY PRIORITY,**
**ZONE 2 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 0 | 3 | 0 | 0 | 0 | 3 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |

[12] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

| | | | | | | |
|---|---|---|---|---|---|---|
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 0 | 3 | 0 | 0 | 0 | 3 |
| **Conservator** | 0 | 3 | 0 | 0 | 0 | 3 (100%) |
| **Staff** | 0 | 0 | 0 | 0 | 0 | 0 |

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. Three priority 2 metals (100%) comprise the total number of *objects* that require conservation. The three objects must be treated by a conservator. Therefore funding and resources will need to be obtained in the immediate future to accomplish this task.

The conservation needs can also be reviewed according to artifact materials (Table II-7). Data are grouped in Table II-7 under the broader headings of metal, organic, inorganic, composite and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

**TABLE II-7**
**ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ZONE 2 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 0 | 3 | 0 | 0 | 1 | 4 |
| Copper Alloy | 0 | 0 | 0 | 0 | 2 | 2 |
| Lead Alloy | 0 | 0 | 0 | 0 | 1 | 1 |
| White Metal Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Metals | 0 | 3 | 0 | 0 | 4 | 7 |
| ORGANIC | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 0 | 0 | 1 | 1 |
| Other Glass | 0 | 0 | 0 | 0 | 1 | 1 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Inorganic | 0 | 0 | 0 | 0 | 2 | 2 |
| COMPOSITE | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **0** | **3** | **0** | **0** | **6** | **9** |

Three metal *objects* comprise the total amount of artifacts in need of treatment. The artifacts in need of immediate conservation treatment (priority 2) are iron (33%). A number of stable metal and inorganic materials (67%) received a priority 5, with exactly two-thirds of these *objects* on exhibit at the Visitor Center.

Conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table II-8. The numbers listed in Table II-8 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.* General material groups containing no data were not tallied and listed.

Three metal *objects* (33%) comprise the total amount of artifacts that require treatment. These are priority 2 iron artifacts that need to be cleaned and stabilized. Four metal *objects* (44%) in stable condition require no treatment and are featured in the Visitor Center exhibit. Only two inorganic *objects* (22%) were recorded as being present within Zone 2 miscellaneous sites and are also found to be in stable condition. No *objects* are in need of x-radiography.

**TABLE II-8**
**TREATMENT RECOMMENDATIONS BY PRIORITY,**
**ZONE 2 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 3 | 0 | 0 | 0 | 3 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 4 | 4 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 2 | 2 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **0** | **3** | **0** | **0** | **6** | **9** |

# APPENDIX III: ZONE 3 MISCELLANEOUS SITES

## SITE HISTORY

### ZONE 3

Zone 3, St. Peter's, was originally designated as a tract patented in 1638, possibly by Jerome Hawley one of the original commissioners of the colony who arrived in 1634. In 1664, Philip Calvert repatented the parcel as 150 acres and built his great mansion house there (see ST1-31 below). The zone is located south of St. Barbara's and east of the Governor's Field. The collections from this zone encompassed in the survey are listed in Table III-1.

| Lot #Range | Site # | Site Name |
|---|---|---|
| 11050-11077 | ST1-31 | St. Peter's |
| 11021-11022 | ST1-32 | Brome Plantation Tenement house |
| 11023.00 | ST1-36 | Mrs. Brown's residence |
| 11024-11027 | ST1-37 | Klobusicky's Farm |
| 11028-11029 | ST1-38 | Klobusicky's Orchard |

*Table III-1. Archaeological sites in Zone 3*

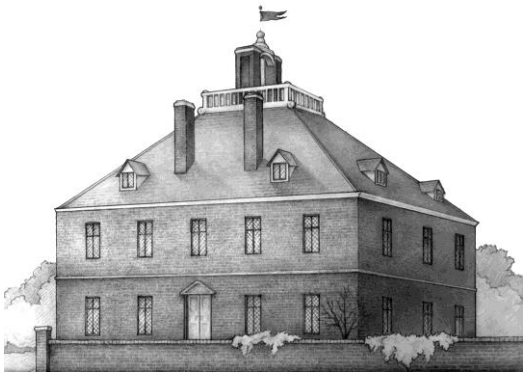

**Figure III-1. Artist's conception of St. Peter's**

ST1-31, St. Peter's (Figure III-1), as mentioned above, was the mansion house of Philip Calvert, Chancellor of the colony and Cecil, Lord Baltimore's, half brother. The site was originally identified and explored by H. Chandlee Forman in the 1940s. Excavations by HSMC on this site have been limited to brief investigation relating to a visit by the *Time Team*, a British television program that lends assistance to answering archaeological questions. Utilizing magnetometer and resistivity testing, a large brick-lined cellar was identified. As part of the project, limited testing confirmed the building location and recovered a small sample of artifacts. The site is not actually on property owned by HSMC so additional investigations have not been undertaken.

ST1-32, Brome Plantation tenement house, is a standing structure adjacent to the St. Peter's site. It was probably constructed in the 19th century and is the current residence of J. Spence Howard, Jr., Dr. John M. Brome's great-grandson. This property is also not owned by HSMC and the collection of material is limited to a few items donated by Mr. Howard.

ST1-36, Mrs. Brown's residence, is a standing structure located at the corner of Maryland Route 5 and Rosecroft Rd. across Route 5 from the Brome Plantation tenement (St1-36) above. It was built ca 1938 and was used as a residence until the late 1990s. It was subsequently converted into the Costume shop for the museum. The material found nearby was the result of an archaeologist being in residence before the conversion and relates to a small amount of surface collected artifacts.

ST1-37, Klobusicky's Farm, was the site of a small farmhouse built ca. 1917 by members of the National Slavonic Society which attempted to resettle Slavonic immigrants in St. Mary's City in the early 20th century. Numerous families moved to St. Mary's as part of this effort. The building was demolished in 1976 and samples of artifacts were collected at that time. ST1-38, Klobusicky's Orchard site, was a concentration of brick rubble identified at the site of an orchard associated with the farm above. The concentration was observed as a result of plowing and only a limited collection of material was retained. The artifact signature suggested a 20th-century date.

## SURVEY RESULTS

The 2004-2005 Conservation Survey examined three boxes (37 lots) of artifacts from Zone 3 miscellaneous sites. All of the 37 lots were surveyed in March 2005. The artifacts from this site were stored in Room 1 [Archaeological Laboratory] on metal shelving. All 37 lots were packaged in acid-free Hollinger boxes prior to the beginning of the survey. Two boxes of "metals only" and one "mixed" box were included in this survey.[13]

### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the 2004-2005 Conservation Survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of metals in non-metal boxes, the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table III-2). The majority of the metals were housed separately in acid-free Coroplast® boxes and desiccated with indicating silica gel. Metals within "mixed" boxes were placed inside polyethylene microenvironments, which facilitated desiccation and separation from non-metals. Metals represent almost half (43%) of the lots surveyed within this site. Other metals present, such as tin-foil and 20th-century items not recommended for treatment, do not require packaging in a dry environment and this was indicated during the survey. Out of 37 lots, only 6 (16%) contained pull slips to indicate that objects were removed from those lots.

**TABLE III-2**
**CURRENT SORTING CONDITION, ZONE 3 MISCELLANEOUS SITES**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 16 (43%) | 21 (57%) |
| HEAVY OBJECT PRESENT | 0 | 37 (100%) |
| PULL SLIP PRESENT | 6 (16%) | 31 (84%) |

### Materials Present

The materials present were recorded during the survey (Table III-3). The largest groups of artifact materials surveyed included ceramics (49%), metal (43%), and architecture (brick, mortar and plaster) at 41%.

[13] A considerable amount of Hollinger boxes that contain miscellaneous sites within Zones 1-6 contain both metals and non-metals on account of the small number of artifacts retrieved from these sites. Therefore, the term "mixed" will refer to this anomaly. Nonetheless, the metals were re-packaged inside polyethylene microenvironments with indicating silica gel as they would have been in Coroplast® boxes.

**TABLE III-3:**
**MATERIALS PRESENT, ZONE 3 MISCELLANEOUS SITES**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 37 (100%) |
| BONE | 5 (14%) | 32 (86%) |
| CERAMICS | 18 (49%) | 19 (51%) |
| GLASS | 9 (24%) | 28 (76%) |
| METAL | 16 (43%) | 21 (57%) |
| ARCHITECTURE | 15 (41%) | 22 (59%) |
| SHELL | 4 (11%) | 33 (89%) |
| BY-PRODUCT | 8 (22%) | 29 (78%) |
| LITHICS | 8 (22%) | 29 (78%) |
| PREHISTORIC CERAMICS | 1 (3%) | 36 (97%) |
| SOIL SAMPLE | 0 | 0 |
| ORGANIC | 0 | 0 |
| PIPES | 10 (27%) | 27 (73%) |
| OTHER | 0 | 37 (100%) |

## Previous Treatments

All of the lots surveyed from this site have been washed, sorted, labeled, catalogued and include a paper label inside the bag (Table III-4). None of the lots had been crossmended, taped, or adhered. No metal or glass *objects* were previously conserved.

**TABLE III-4**
**PREVIOUS TREATMENT INFORMATION, ZONE 3 MISCELLANEOUS SITES**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 37 (100%) | 0 | 0 |
| SORTED | 37 (100%) | 0 | 0 |
| LABELED | 37 (100%) | 0 | 0 |
| CATALOGUED | 37 (100%) | 0 | 0 |
| PAPER LABEL | 37 (100%) | 0 | 0 |
| CROSSMENDED | 0 | 37 (100%) | 0 |
| TAPED | 0 | 37 (100%) | 0 |
| ADHERED | 0 | 37 (100%) | 0 |
| METAL CONSERVED | 0 | 37 (100%) | 0 |
| GLASS CONSERVED | 0 | 37 (100%) | 0 |
| OTHER CONSERVED | 0 | 37 (100%) | 0 |

## Condition of Objects

Basic observations were made while surveying the collection regarding the condition of the *objects.* (Table III-5).

**TABLE III-5**
**CONDITION OF OBJECTS BY PRIORITY, ZONE 3 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 1 | 0 | 0 | 1 |
| Not Stable/Deteriorated | 0 | 1 | 0 | 0 | 0 | 1 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 2 | 2 |
| Fair | 0 | 0 | 0 | 2 | 0 | 2 |
| Poor | 0 | 0 | 0 | 1 | 0 | 1 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 1 | 0 | 0 | 0 | 0 | 1 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **1** | **1** | **3** | **2** | **8** |

The metals category (comprised of iron and lead alloy) and inorganics (comprised entirely of olive green bottle glass) represent most of the objects designated for conservation treatment. One composite artifact was also present, which were rosary beads composed of glass and a white metal alloy. For metal items surveyed, the *objects* fell between two categories of condition: poor (13%) and not stable (13%). They received a priority 2 and 3. Inorganic materials fell between three categories of condition: stable (25%), fair (25%), and poor (13%). The inorganic *objects* recorded as being in fair or poor condition received a priority 4, indicating that treatment will be required in the near future, but not immediately. The metal *object* that received a priority 2 will need to receive conservation treatment sooner rather than later. The composite artifact was found to be in fair condition and received a high rating of priority 1, as it requires the immediate attention of a conservator. This is due to the complexity of the conservation that must be performed on composite objects in order to effectively preserve each dissimilar material. The high priority usually given to composites is also due to the accelerated speed at which they can deteriorate.

## Treatment Recommendations

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table III-6. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[14] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, one *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. All the metals surveyed (100%) are in need of treatment by a conservator in the future and are listed as a priority 2 and 3. All (100%) of the inorganic materials listed for treatment can be treated by a staff member and are a priority 4, indicating that treatment can wait. The composite received a priority 1 rating and must be conserved by a professional. These results indicate that the *objects* with priority ratings 1-3 require treatment by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task.

**TABLE III-6**
**LEVEL OF CONSERVATION TREATMENT BY PRIORITY,**
**ZONE 3 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 0 | 1 | 1 | 0 | 0 | 2 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 3 | 0 | 3 (100%) |
| COMPOSITE | | | | | | |
| Conservator | 1 | 0 | 0 | 0 | 0 | 1 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 1 | 1 | 1 | 3 | 0 | 6 |
| **Conservator** | 1 | 1 | 1 | 0 | 0 | 3 (50%) |
| **Staff** | 0 | 0 | 0 | 3 | 0 | 3 (50%) |

[14] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact. For example, it may represent one or more bags of olive green bottle glass or a single find such as a copper alloy buckle.

The conservation needs can also be reviewed according to artifact material (Table III-7). Data are grouped in Table III-7 under the broader headings of metal, organic, inorganic, composite, and other, as well as by specific materials within the metal and inorganic groups. Although additional data was collected for more specific materials within the organic, composite and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal and inorganic material groups contained the majority of artifacts in need of treatment. A priority 2 iron (13%) is in need of immediate conservation treatment, while a priority 3 lead alloy will require treatment in the near future. All of the inorganic *objects* in need of treatment were found to be olive bottle glass and were recorded as a priority 4 (38%). Two inorganic *objects* received a priority 5 rating, indicating that treatment will not be required. One composite artifact was recorded and in need of treatment (priority 1). No *objects* in the "organic" and "other" categories were recommended for treatment.

**TABLE III-7**
**ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ZONE 3 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 0 | 1 | 0 | 0 | 0 | 1 |
| Copper Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Lead Alloy | 0 | 0 | 1 | 0 | 0 | 1 |
| White Metal Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Metals | 0 | 1 | 1 | 0 | 0 | 2 |
| ORGANIC | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 0 | 3 | 2 | 5 |
| Other Glass | 0 | 0 | 0 | 0 | 0 | 0 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Inorganic | 0 | 0 | 0 | 3 | 2 | 5 |
| COMPOSITE | 1 | 0 | 0 | 0 | 0 | 1 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **1** | **1** | **3** | **2** | **8** |

Conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. General material groups containing no data were not tallied and listed. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table III-8. The numbers listed in Table III-8 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.*

For all material types (metals, inorganics, and composites), the artifacts in need of treatment simply need to be cleaned and stabilized (37.5%) or cleaned only (37.5%). These treatments are relatively simple and straightforward and some of the artifacts will most likely be batch treated. The majority of glass *objects* listed represent bags of glass and not one *object*. Once again, the metals represent *objects* which are considered a higher priority than the inorganic *objects*. The inorganic *objects* in need of treatment are primarily priority 4 *objects*, indicating that conservation will be needed eventually. Two inorganic *objects* (25%) were not recommended for treatment, but may need to be re-examined in the future for needs including repackaging.

**TABLE III-8**
**TREATMENT RECOMMENDATIONS BY PRIORITY,**
**ZONE 3 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 1 | 1 | 0 | 0 | 2 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 2 | 0 | 2 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 1 | 0 | 1 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 2 | 2 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 1 | 0 | 0 | 0 | 0 | 1 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **1** | **1** | **3** | **2** | **8** |

# APPENDIX IV: ZONE 4 MISCELLANEOUS SITES

## SITE HISTORY

Zone 4, St. Thomas' represents a tract of land immediately south of Chapel Lands and bordering on the St. Mary's River. It was originally taken up by Giles Brent (the Whitehouse tract) and Margaret and Mary Brent (Sisters' Freehold) shortly after settlement began. The sites from Zone 4 covered by this study are listed in Table IV-1 below.

| Lot #Range | Site # | Site Name |
|---|---|---|
| 11030.00 | ST1-4 | Beach Below Commission Offices |
| 11031-11032 | ST1-42 | Visitor Center Parking lot & Ex |
| 11033.00 | ST1-43 | Beach NW of Hogaboom Resident |
| 11034-11035 | ST1-45 | Duerfeldt House |
| 11036.00 | ST1-46 | No Name (Merchant House) |
| 11037.00 | ST1-47 | Scheible's Field |
| 11038-11039 | ST1-406 | The Daffodil Site |

*Table IV-1 Archaeological Sites in Zone 4*

ST1-4 is the location of a series of isolated finds discovered along the beach of the St. Mary's River. This material was recovered by a student and donated to the Museum. The principal artifact signature was 19th and 20th centuries.

ST1-42 was a systematic surface collection of the area near the Visitors Center for HSMC. It was investigated in advance of the construction of parking lots in 1983. The material recovered was extremely dispersed and primarily 19th century and American Indian.

ST1-43, like the ST1-4 material above was collected along the shore of the St. Mary's River. This material was 19th and 20th century in nature and isolated to an area adjacent to the Hogaboom residence, a mid-20th-century residence.

ST1-46 is a standing structure known as the Merchant House that currently houses the administrative offices of Historic St. Mary's City. A small fragment of colonial earthenware was discovered there adjacent to the north basement window in 1976. ST1-47 is the site of the Scheible house which currently serves as the Archaeology Laboratory for HSMC. A small collection of mostly 19th-century material was donated by the former residents when the property was obtained by HSMC.

ST1-406, known as the daffodil site, was discovered based on blooming daffodils and associated artifacts which date to the 18th century. It is located in the extreme southeast of Zone 4 and only surface material was recovered.

## SURVEY RESULTS

The 2004-2005 Conservation Survey examined one box (ten lots) of artifacts from Zone 4 miscellaneous sites. The lots were surveyed in March 2005. The artifacts from this site were stored in Room 1 [Basement of the Archaeology Lab] on metal shelving. The ten lots were packaged in one acid-free Hollinger box prior to the beginning of the survey. This was a "mixed" box, as it contained non-metals and metals.[15] Metals within the "mixed" box were placed inside

[15] A considerable amount of Hollinger boxes that contain miscellaneous sites within Zones 1-6 contain both metals and non-metals on account of the small number of artifacts retrieved from these sites. Therefore, the

polyethylene microenvironments, which facilitated desiccation with indicating silica gel and separation from non-metals.

### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the conservation survey or it was completed as the survey progressed. This type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of metals in non-metal boxes, the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table IV-2). Modern ($20^{th}$ century) materials such as bottle caps and aluminum fragments were not recommended for desiccation. Metals represent over one-fourth (30%) of the lots surveyed within this site. No lots contained pull slips or heavy objects.

**TABLE IV-2**
**CURRENT SORTING CONDITION, ZONE 4 MISCELLANEOUS SITES**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 3 (30%) | 7 (70%) |
| HEAVY OBJECT PRESENT | 0 | 10 (100%) |
| PULL SLIP PRESENT | 0 | 10 (100%) |

### Materials Present

The materials present were recorded during the survey (Table IV-3). The largest group of artifact materials surveyed were ceramics (60%) with glass (30%), metals (30%), and architectural items (30%) all having the same amount. Lithics were also represented within this zone (20%). Metals from the Zone 4 miscellaneous sites were predominantly unstable.

**TABLE IV-3**
**MATERIALS PRESENT, ZONE 4 MISCELLANEOUS SITES**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 10 (100%) |
| BONE | 0 | 10 (100%) |
| CERAMICS | 6 (60%) | 4 (40%) |
| GLASS | 3 (30%) | 7 (70%) |
| METAL | 3 (30%) | 7 (70%) |
| ARCHITECTURE | 3 (30%) | 7 (70%) |
| SHELL | 0 | 10 (100%) |
| BY-PRODUCT | 0 | 10 (100%) |
| LITHICS | 2 (20%) | 8 (80%) |
| PREHISTORIC CERAMICS | 0 | 10 (100%) |
| SOIL SAMPLE | 0 | 10 (100%) |
| ORGANIC | 0 | 10 (100%) |
| PIPES | 0 | 10 (100%) |
| OTHER | 0 | 10 (100%) |

term "mixed" will refer to this anomaly. Nonetheless, the metals were re-packaged inside polyethylene microenvironments with indicating silica gel as they would have been in Coroplast® boxes.

## Previous Treatment

All of the lots surveyed from this zone have been washed, sorted, labeled, catalogued, and include a paper label inside the bag (Table IV-4). None of the artifacts had been crossmended, taped, or adhered. No previous conservation was performed on metals, glass, or artifacts grouped in the "other" category. For this particular site, it was assumed the glass was not treated unless the surveyor was sure it was.

**TABLE IV-4**
**PREVIOUS TREATMENT INFORMATION, ZONE 4 MISCELLANEOUS SITES**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 10 (100%) | 0 | 0 |
| SORTED | 10 (100%) | 0 | 0 |
| LABELED | 10 (100%) | 0 | 0 |
| CATALOGUED | 10 (100%) | 0 | 0 |
| PAPER LABEL | 10 (100%) | 0 | 0 |
| CROSSMENDED | 0 | 10 (100%) | 0 |
| TAPED | 0 | 10 (100%) | 0 |
| ADHERED | 0 | 10 (100%) | 0 |
| METAL CONSERVED | 0 | 10 (100%) | 0 |
| GLASS CONSERVED | 0 | 10 (100%) | 0 |
| OTHER CONSERVED | 0 | 10 (100%) | 0 |

## Condition of Objects

Basic observations were made while surveying the collection regarding the condition of the *objects* (Table IV-5).

Typically, as has been indicated by conservation activities at HSMC, metal (primarily iron) and inorganic comprise the *objects* designated for conservation treatment. For metal items surveyed, the *objects* that required treatment received a priority 2 rating. A copper alloy buckle fragment was considered to be in fair condition (25%), while two iron artifacts were found to be unstable (50%). One inorganic artifact, a blue glass bead, was considered to be in fair condition and received a priority 2 rating. Due to the high rating given to all of these artifacts, immediate conservation treatment is required.

**TABLE IV-5**
**CONDITION OF OBJECTS BY PRIORITY, ZONE 4 MISCELLANEOUS SITES**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 1 | 0 | 0 | 0 | 1 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 2 | 0 | 0 | 0 | 2 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 1 | 0 | 0 | 0 | 1 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **0** | **4** | **0** | **0** | **0** | **4** |

## Treatment Recommendations

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table IV-6. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[16] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, one *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. All of the objects require treatments performed by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task. All metals needing treatment were listed as a priority 2 indicating that conservation treatment is needed sooner rather than later. The blue glass bead received a priority 2 rating and is in need of immediate treatment. Although trained staff members are generally permitted to treat inorganic materials, a professional must conserve glass beads due to their fragile nature and significance.

[16] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact. For example, it may represent one or more bags of olive green bottle glass or a single find such as a copper alloy buckle.

**TABLE IV-6**
**LEVEL OF CONSERVATION TREATMENT BY PRIORITY,**
**ZONE 4 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 0 | 3 | 0 | 0 | 0 | 3 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 1 | 0 | 0 | 0 | 1 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 0 | 4 | 0 | 0 | 0 | 4 |
| **Conservator** | 0 | 4 | 0 | 0 | 0 | 4 (100%) |
| **Staff** | 0 | 0 | 0 | 0 | 0 | 0 |

The conservation needs can also be reviewed according to artifact material (Table IV-7). Data are grouped in Table IV-7 under the broader headings of metal, organic, inorganic, composite and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite, and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal and inorganic material groups comprised the artifacts in need of treatment. Two priority 2 iron artifacts (50%) are in need of immediate conservation treatment. One copper alloy artifact (25%) with a priority of 2 also requires treatment. One inorganic, a blue glass bead, in need of treatment was recorded as a priority 2 (50%).

**TABLE IV-7**
**ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY,**
**ZONE 4 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 0 | 2 | 0 | 0 | 0 | 2 |
| Copper Alloy | 0 | 1 | 0 | 0 | 0 | 1 |
| Lead Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| White Metal Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Metals | 0 | 3 | 0 | 0 | 0 | 3 |

| | | | | | | |
|---|---|---|---|---|---|---|
| ORGANIC | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Glass | 0 | 1 | 0 | 0 | 0 | 1 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Inorganic | 0 | 1 | 0 | 0 | 0 | 1 |
| COMPOSITE | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **0** | **4** | **0** | **0** | **0** | **4** |

Conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. General material groups containing no data were not tallied and listed. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table IV-8. The numbers listed in Table IV-8 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.*

The material types (iron, copper alloy, and glass) that require treatment need to be cleaned and stabilized (75%) or cleaned only (25%). These treatments are relatively simple and straightforward and each object will be treated individually, as they are all dissimilar. The metals received the same priority as the inorganic artifact, indicating that every object recorded in this zone requires conservation treatment sooner rather than later.

**TABLE IV-8**
**TREATMENT RECOMMENDATIONS BY PRIORITY,**
**ZONE 4 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 3 | 0 | 0 | 0 | 3 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 1 | 0 | 0 | 0 | 1 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **0** | **4** | **0** | **0** | **0** | **4** |

## APPENDIX V: ZONE 5 MISCELLANEOUS SITES

### SITE HISTORY

Zone 5, Clarke's Freehold, Lewis' neck, and St. Mary's Hill, are all parcels taken up during the 17th century. This zone includes the easternmost parts of the National Historic Landmark. Table V-1 (below) lists the sites from this zone.

| Lot #Range | Site # | Site Name |
|---|---|---|
| 11040-11041 | ST1-5 | Various |
| 11042.00 | ST1-51 | Clark's Freehold |
| 11043-11044 | ST1-52 | Deacon's Quarter/Fenwick Farm |

*Table V-1. Archaeological Sites in Zone 5*

ST1-5 represents a variety of isolated find collections in the fields around the Tilch/Milburn house by the resident in the 1980s. The material includes principally 19th-and early 20th-century material. Additionally, grouped with this generalized provenience are some isolated finds of prehistoric American Indian material from Zone 5.

**Figure V-1. House known as Fenwick Free, Leigh House or Keene residence.**

ST1-1-51 is a small collection of material from a shell scatter in a plowed field that includes a broken quartz projectile point and some historic material including 19th-century ceramic. Finally, ST1-52, Deacon's Quarter/Fenwick Farm is a collection of principally 19th-century material recovered following a tree blow-down near a standing early 19th-century private residence within the National Historic Landmark, known variously as the Leigh House, Fenwick Free, or the Keene residence.

### SURVEY RESULTS

The 2004-2005 Conservation Survey examined one box (five lots) of artifacts from Zone 5 miscellaneous sites. All of the lots were surveyed in March 2005 and housed inside Room 1 [Basement of the Archaeology Laboratory] on metal shelving. The five lots were packaged in a

"mixed" acid-free Hollinger box prior to the beginning of the survey.[17] One lot is a microenvironment for metal artifacts, which contains silica gel for desiccation purposes.

**Sorting Condition**

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the 2004-2005 Conservation Survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of metals in non-metal boxes, the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table V-2). Metals within the "mixed" box were placed inside a polyethylene microenvironment, which facilitated desiccation and separation from non-metals. Metals represent almost half (40%) of the lots surveyed within this site. Other metals present, such as tin foil and 20th-century items not recommended for treatment, do not require packaging in a dry environment and this was indicated during the survey. No lots contained heavy objects or pull slips.

**TABLE V-2: CURRENT SORTING CONDITION, ZONE 5 MISCELLANEOUS SITES**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 2 (40%) | 3 (60%) |
| HEAVY OBJECT PRESENT | 0 | 5 (100%) |
| PULL SLIP PRESENT | 0 | 5 (100%) |

## Materials Present

The materials present were recorded during the survey (Table V-3). The largest groups of artifact materials surveyed included ceramics (60%) with glass (40%), metal (40%), and lithics (40%) all close behind. Bone, shell, pipes, and "other" objects are also present in low numbers. As stated above, the artifacts date across a wide range from 17th-century occupation to 19th-and 20th-century surface finds.

**TABLE V-3: MATERIALS PRESENT, ZONE 5 MISCELLANEOUS SITES**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 5 (100%) |
| BONE | 1 (20%) | 4 (80%) |
| CERAMICS | 3 (60%) | 2 (40%) |
| GLASS | 2 (40%) | 3 (60%) |
| METAL | 2 (40%) | 3 (60%) |
| ARCHITECTURE | 0 | 5 (100%) |
| SHELL | 1 (20%) | 4 (80%) |
| BY-PRODUCT | 0 | 5 (100%) |
| LITHICS | 2 (40%) | 3 (60%) |
| PREHISTORIC CERAMICS | 0 | 5 (100%) |
| SOIL SAMPLE | 0 | 5 (100%) |
| ORGANIC | 0 | 5 (100%) |

[17] A considerable amount of Hollinger boxes that contain miscellaneous sites within Zones 1-6 contain both metals and non-metals on account of the small number of artifacts retrieved from these areas as surface collections. Therefore, the term "mixed" will refer to this anomaly. Nonetheless, the metals were packaged inside polyethylene microenvironments with indicating silica gel as they would have been in Coroplast® boxes.

| | | |
|---|---|---|
| PIPES | 1 (20%) | 4 (80%) |
| OTHER | 1 (20%) | 4 (80%) |

## Previous Treatment

All of the lots surveyed from this zone have been washed, sorted, labeled, catalogued and include a paper label inside the bag (Table V-4). None of the artifacts had been crossmended, taped, or adhered. No previous conservation was performed on metals, glass, or artifacts grouped under the "other" category. For this particular site, it was assumed the glass was not treated unless the surveyor was sure it was. Much of the glass from this site dates to the 20th century and was not pulled for conservation.

**TABLE V-4: PREVIOUS TREATMENT INFORMATION, ZONE 5 MISCELLANEOUS SITES**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 5 (100%) | 0 | 0 |
| SORTED | 5 (100%) | 0 | 0 |
| LABELED | 5 (100%) | 0 | 0 |
| CATALOGUED | 5 (100%) | 0 | 0 |
| PAPER LABEL | 5 (100%) | 0 | 0 |
| CROSSMENDED | 0 | 5 (100%) | 0 |
| TAPED | 0 | 5 (100%) | 0 |
| ADHERED | 0 | 5 (100%) | 0 |
| METAL CONSERVED | 0 | 5 (100%) | 0 |
| GLASS CONSERVED | 0 | 5 (100%) | 0 |
| OTHER CONSERVED | 0 | 5 (100%) | 0 |

## Condition of Objects

Basic observations were made while surveying the collection regarding the condition of the *objects.* (Table V-5).

Within Zone 5, metal (iron and copper alloy) represents the bulk of *objects* designated for conservation treatment (57%). For metal items surveyed, all of the artifacts that required treatment received a priority 2 rating. A 19th-century iron shutter latch was considered to be in poor condition, while a shutter adjustment bracket from the same period was found to be unstable. A 19th-century copper alloy serving spoon and decorative fragment were considered to be in fair condition. Two inorganic *objects* (29%), olive bottle glass shards and rim, were present but did not require conservation treatment. They were in stable condition and therefore received a priority 5 rating. One copper alloy and iron composite artifact was present (14%). It was found to be in poor condition and received a priority 1 rating.

**TABLE V-5: CONDITION OF OBJECTS BY PRIORITY, ZONE 5 MISCELLANEOUS SITES**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 2 | 0 | 0 | 0 | 2 |
| Poor | 0 | 1 | 0 | 0 | 0 | 1 |
| Not Stable/Deteriorated | 0 | 1 | 0 | 0 | 0 | 1 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 2 | 2 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 1 | 0 | 0 | 0 | 0 | 1 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **4** | **0** | **0** | **2** | **7** |

## Treatment Recommendations

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table V-6. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[18] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, one *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. All of the objects require treatments performed by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task. All metals needing treatment (100%) were listed as a priority 2 indicating that conservation treatment is needed sooner rather than later. The composite artifact received a priority 1 rating and is in need of immediate treatment. This is due to the complexity of the conservation that must be performed on composite objects in order to effectively preserve each

[18] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact. For example, it may represent one or more bags of olive green bottle glass or a single find such as a copper alloy buckle.

dissimilar material. The high priority usually given to composites is also due to the accelerated speed at which they can deteriorate.

**TABLE V-6: LEVEL OF CONSERVATION TREATMENT BY PRIORITY, ZONE 5 MISCELLANEOUS SITES**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 0 | 4 | 0 | 0 | 0 | 4 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Conservator | 1 | 0 | 0 | 0 | 0 | 1 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTALS | 1 | 4 | 0 | 0 | 0 | 5 |
| Conservator | 1 | 4 | 0 | 0 | 0 | 5 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |

The conservation needs can also be reviewed according to artifact material (Table V-7). Data are grouped in Table V-7 under the broader headings of metal, organic, inorganic, composite, and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite, and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal material group represents the bulk of the artifacts in need of treatment. Four priority 2 iron and copper alloy artifacts (57%) are in need of immediate conservation treatment. Two olive green bottle glass *objects* (29%) were found to be in stable condition, and thus received a priority 5 rating. One composite artifact (14%) with a priority of 1 also requires the immediate attention of a conservator. No organic or "other" objects within Zone 5 were in need of conservation treatment

**TABLE V-7: ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ZONE 5 MISCELLANEOUS SITES**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 0 | 2 | 0 | 0 | 0 | 2 |
| Copper Alloy | 0 | 2 | 0 | 0 | 0 | 2 |
| Lead Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| White Metal Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Metals | 0 | 4 | 0 | 0 | 0 | 4 |
| ORGANIC | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Olive bottle glass | 0 | 0 | 0 | 0 | 2 | 2 |
| Other Glass | 0 | 0 | 0 | 0 | 0 | 0 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Inorganic | 0 | 0 | 0 | 0 | 2 | 2 |
| COMPOSITE | 1 | 0 | 0 | 0 | 0 | 1 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **4** | **0** | **0** | **2** | **7** |

Conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. General material groups containing no data were not tallied and listed. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table V-8. The numbers listed in Table V-8 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.*

The material types that require treatment (metals and the composite) need to be cleaned and stabilized (43%) or cleaned only (29%). These treatments are relatively simple and straightforward and each object will be treated individually, as they are all dissimilar. All artifacts slated for conservation received a priority 1 or 2 rating, indicating that treatment is required immediately.

**TABLE V-8: TREATMENT RECOMMENDATIONS BY PRIORITY, ZONE 5 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 2 | 0 | 0 | 0 | 2 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 2 | 0 | 0 | 0 | 2 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 2 | 2 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 1 | 0 | 0 | 0 | 0 | 1 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **4** | **0** | **0** | **2** | **7** |

## APPENDIX VI: ZONE 6 MISCELLANEOUS SITES

### SITE HISTORY

Zone 6, Greene's Freehold, St. Peter's Key, St. Andrew's Freehold, and St. Inigoes Neck, is the last area in St. Mary's City to be discussed and includes parcels taken up by Maryland's second governor, Thomas Greene, and other early settlers. This zone is the southernmost within the National Historic Landmark and is bordered on the north by Zone 4 and on the south by the St. Mary's River and St. Inigoes Creek. Table 6 below lists the contexts from Zone VI-1.

| Lot #Range | Site # | Site Name |
|---|---|---|
| 11159 | ST1-62 | Wiseman Site-Chancellor's Point |
| 11045 | ST1-64 | 19th-Century Site in Center of Field |
| 11046 | ST1-65 | St. Andrew's |
| 11047 | ST1-69 | Aboriginal Site |
| 11048 | ST1-610 | Aboriginal Site |
| 11049 | ST1-652 | Found on the Trail |

*Table VI-1: Archaeological Sites in Zone 6*

ST1-62, the Chancellor's Point site, is part of a larger tract known as St. Inigoes Neck which was patented in 1639. By 1643, when it was sold, there was a house and plantation on the property. In the 1660s, the tract was purchased by Chancellor Philip Calvert and became known as Chancellor's Point. Calvert never lived here but rented the property out to tenants.

Only limited excavations have been completed on this site. They produced a wealth of artifacts dating to the period 1640-1680 as well as evidence of post holes and fence lines. These archaeological investigations were conducted in 1973, 1976, and 1980. The principal excavations were in 1973 when the site was explored as part of a program supported by Educational Expeditions International, a predecessor to Earth Watch. The site was heavily effected by erosion until the early 1980s when stone revetments were added to the downriver side of the Point. In addition to the domestic materials recovered from the site, a quantity of slag and other materials suggest that iron working was conducted at this site, possibly even a small bloomery operation producing wrought iron from the local bog iron deposits.

The artifacts recovered from Chancellor's Point were processed using the standard methods of St. Mary's City which included cleaning, labeling, and cataloging. Cleaning was undertaken with brush and water for less sensitive artifacts while fragile artifacts were cleaned without water. Artifacts were labeled directly on the fragments with permanent ink with the actual provenience of the material. The labels were overcoated with acrylic to protect the writing. The cataloging process at that time included basic inventory information recorded on paper forms. Catalog entries are generally descriptive in nature and evidence the then state-of-the-art knowledge of 17$^{th}$-century material culture. As part of a collections upgrade in 2002, all of these materials were re-housed into archival boxes and polyethylene bags with the metal artifacts isolated from the non-metal artifacts for micro-environmental control.

ST1-64 described as 19$^{th}$-century site in center of field, is a small surface collection of 19$^{th}$-century material recovered in 1976. It represents a small surface scatter with ceramics and glass. ST1-65 is an 18$^{th}$-century site occupied by the descendants of Daniel Clocker, an early resident of St. Mary's City. The materials from the site include a range of 18$^{th}$-century items. Both ST1-69 and ST1-610 are American Indian sites represented by isolated finds of projectile points. The point from ST1-69 is undiagnostic while the tool from ST1-610 appears to represent an Early Archaic, Kirk projectile point made of quartz. Finally, ST1-652 represents a scatter of colonial

material found along the developed nature trails on the Museum grounds. The material includes colonial ceramics and a brick of the type used in the construction of the Brick chapel but these bricks were often reused in the colonial period.

## SURVEY RESULTS

The 2004-2005 Conservation Survey examined two boxes (six lots) of artifacts from Zone 6 miscellaneous sites. The majority of the lots were surveyed in March 2005 and housed inside Room 1 [Basement of the Archaeology Laboratory] on metal shelving. One lot was surveyed earlier in November 2004 and is on exhibit in Room 3 [HSMC Visitor Center]. Five lots were packaged in an acid-free Hollinger box prior to the beginning of the survey. The lot that contains the metal object is within a climate-controlled exhibit case.

### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the 2004-2005 Conservation Survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of metals in non-metal boxes, the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table VI-2). Metals represent less than one-fourth (17%) of the lots surveyed within this site. Other metals present, such as tin foil and 20th-century items not recommended for treatment, do not require packaging in a dry environment and this was indicated during the survey. No lots contained heavy objects or pull slips.

**TABLE VI-2: CURRENT SORTING CONDITION, ZONE 6 MISCELLANEOUS SITES**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 1 (17%) | 5 (83%) |
| HEAVY OBJECT PRESENT | 0 | 6 (100%) |
| PULL SLIP PRESENT | 0 | 6 (100%) |

### Materials Present

The materials present were recorded during the survey (Table VI-3). The largest groups of artifact materials surveyed included ceramics (33%), glass (33%), architecture (33%), and lithics (33%). Metal, shell, and pipes are present in low numbers. As stated above, the artifacts primarily date to sites of 19th-century occupation.

**TABLE VI-3: MATERIALS PRESENT, ZONE 6 MISCELLANEOUS SITES**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 6 (100%) |
| BONE | 0 | 6 (100%) |
| CERAMICS | 2 (33%) | 4 (67%) |
| GLASS | 2 (33%) | 4 (67%) |
| METAL | 1 (17%) | 5 (83%) |
| ARCHITECTURE | 2 (33%) | 4 (67%) |
| SHELL | 1 (17%) | 5 (83%) |
| BY-PRODUCT | 0 | 6 (100%) |
| LITHICS | 2 (33%) | 4 (67%) |
| PREHISTORIC CERAMICS | 0 | 6 (100%) |
| SOIL SAMPLE | 0 | 6 (100% |
| ORGANIC | 0 | 6 (100%) |

| | | |
|---|---|---|
| PIPES | 1 (17%) | 5 (83%) |
| OTHER | 0 | 6 (100%) |

## Previous Treatment

All of the lots surveyed from this zone have been washed, sorted, labeled, and catalogued. Five lots (83%) include a paper label inside the bag (Table VI-4) and the lower percentage of lots with paper labels can be accounted for by including the objects surveyed on exhibit. None of the artifacts have been crossmended, taped, or adhered. One metal object, a lead cloth seal, was previously conserved and is currently on display at the Visitor Center. No previous conservation was performed on glass or artifacts grouped under the "other" category. For this particular site, it was assumed the glass was not treated unless the surveyor was sure it was.

**TABLE VI-4: PREVIOUS TREATMENT INFORMATION, ZONE 6 MISCELLANEOUS SITES**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 6 (100%) | 0 | 0 |
| SORTED | 6 (100%) | 0 | 0 |
| LABELED | 6 (100%) | 0 | 0 |
| CATALOGUED | 6 (100%) | 0 | 0 |
| PAPER LABEL | 5 (83%) | 1(17%) | 0 |
| CROSSMENDED | 0 | 6 (100%) | 0 |
| TAPED | 0 | 6 (100%) | 0 |
| ADHERED | 0 | 6 (100%) | 0 |
| METAL CONSERVED | 1(17%) | 5 (83%) | 0 |
| GLASS CONSERVED | 0 | 6 (100%) | 0 |
| OTHER CONSERVED | 0 | 6 (100%) | 0 |

## Condition of Objects

Basic observations were made while surveying the collection regarding the condition of the *objects.* (Table VI-5).

Within Zone 6, one 4x4 inch polyethylene bag of olive green bottle glass comprises the *objects* designated for conservation treatment (33%). It was found to be in fair condition and thus received a priority 4 rating. A 2x3 inch polyethylene bag of olive green bottle glass was considered stable and will not require treatment. A lead cloth seal comprises the metal within Zone 6. This artifact was previously treated and was also found to be in stable condition and received a priority 5 rating.

**TABLE VI-5: CONDITION OF OBJECTS BY PRIORITY, ZONE 6 MISCELLANEOUS SITES**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 1 | 1 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 1 | 1 |
| Fair | 0 | 0 | 0 | 1 | 0 | 1 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **0** | **0** | **0** | **1** | **2** | **3** |

## Treatment Recommendations

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table VI-6. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[19] that require treatment by a conservator or staff member, and these may or

[19] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object.* This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not

may not include more than one artifact. For example, one *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. The inorganic *object*, a polyethylene bag of olive green bottle glass, was listed as a priority 4 indicating that conservation treatment is required, but not immediately. A supervised staff member can perform conservation on the glass shards, which may be able to be batch treated.

**TABLE VI-6: LEVEL OF CONSERVATION TREATMENT BY PRIORITY, ZONE 6 MISCELLANEOUS SITES**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 1 | 0 | 1(100%) |
| COMPOSITE | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTALS | 0 | 0 | 0 | 1 | 0 | 1 |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 1 | 0 | 1(100%) |

The conservation needs can also be reviewed according to artifact material (Table VI-7). Data are grouped in Table VI-7 under the broader headings of metal, organic, inorganic, composite, and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite, and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal material group represents only one artifact out of four (25%) in need of treatment. The lead alloy cloth seal is a priority 5 object, indicating treatment can wait but it was noted due to its significance within the collection. Two olive green bottle glass *objects* (50%) were found to be in stable condition, and thus received a priority 5 rating. One olive green bottle glass *object* (25%) was given a priority 4 as treatment is necessary in order to stabilize the glass. No organic, composite, or "other" objects within Zone 6 were in need of conservation treatment.

include more than one artifact. For example, it may represent one or more bags of olive green bottle glass or a single find such as a copper alloy buckle.

**TABLE VI-7: ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ZONE 6 MISCELLANEOUS SITES**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 0 | 0 | 0 | 0 | 0 | 0 |
| Copper Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Lead Alloy | 0 | 0 | 0 | 0 | 1 | 1 |
| White Metal Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Metals | 0 | 0 | 0 | 0 | 1 | 1 |
| ORGANIC | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 0 | 1 | 2 | 3 |
| Other Glass | 0 | 0 | 0 | 0 | 0 | 0 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Inorganic | 0 | 0 | 0 | 1 | 2 | 3 |
| COMPOSITE | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **0** | **0** | **0** | **1** | **3** | **4** |

Conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. General material groups containing no data were not tallied and listed. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table VI-8. The numbers listed in Table VI-8 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.*

One priority 4 inorganic *object* needs to be cleaned only (33%) in the form of batch treatment, due to the similar composition of the olive green bottle glass shards. The olive green bottle glass that received a priority 5 rating was not recommended for treatment but may need to be re-examined in the near future for treatment needs including repackaging. The lead cloth seal on exhibit that was found to be in stable condition will also be closely monitored for changes in its physical appearance.

**TABLE VI-8: TREATMENT RECOMMENDATIONS BY PRIORITY, ZONE 6 MISCELLANEOUS SITES**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 1 | 1 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 1 | 0 | 1 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 1 | 1 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **0** | **0** | **0** | **1** | **2** | **3** |

## APPENDIX VII: ST1-11, TRINITY CHURCH

### SITE HISTORY

ST1-11 is the area surrounding the current Trinity Episcopal Church, which was constructed in the 1840s using brick from the original statehouse of 1676, which stood nearby (see ST1-17 below). Investigations here have been limited to minor excavations relating to church renovation, and testing related to the extent of 17th century occupation. These excavations relating to the addition of handicapped access to the church focused on the site of Gellie's Ordinary, a 17th-century tavern. Historical sources indicated that Gellie's was adjacent to the original brick statehouse since the business was ordered closed because it was an "unruly" house and a distraction to those participating in government at the statehouse. The principal signature of the site is late 17th-century domestic material.

### SURVEY RESULTS

The 2004-2005 Conservation Survey examined nine boxes (37 lots) of artifacts from the Trinity Church site. Most of the 37 lots were surveyed in February 2005. All of the artifacts from this site are stored in Room 1 [Basement of the Archaeology Lab] on metal shelving. All 37 lots were packaged in acid-free Hollinger boxes or acid-free Coroplast® boxes prior to the beginning of the survey. One "metals only" box was included in this survey.

### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the 2004-2005 conservation survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of a heavy object or the presence of a pull slip) were noted in a separate section of the Survey Form (Table VII-1). The metals were boxed separately in acid-free Coroplast® boxes and were desiccated using indicating silica gel. Metals represent 43% of the lots surveyed within this site. Out of 37 lots, three (8%) contained pull slips to indicate that objects were removed from those lots.

**TABLE VII-1: CURRENT SORTING CONDITION, ST1-11 TRINITY CHURCH**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 16 (43%) | 21 (57%) |
| HEAVY OBJECT PRESENT | 0 | 37 (100%) |
| PULL SLIP PRESENT | 3 (8%) | 34 (92%) |

### Materials Present

The materials present were recorded during the survey (Table VII-2). The largest groups of artifact materials surveyed included architecture (57%), glass (46%), metal (43%), and shell (41%). By-product (38%) and lithics (35%) are present in moderate numbers. Organics, ceramics, bone, pre-historic ceramics, pipes, and artifacts within the category of "other" are also present, but in low numbers.

**TABLE VII-2: MATERIALS PRESENT, ST1-11 TRINITY CHURCH**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 37 (100%) |
| BONE | 5 (14%) | 32 (86%) |
| CERAMICS | 7 (19%) | 30 (81%) |
| GLASS | 17 (46%) | 20 (54%) |

| | | |
|---|---|---|
| METAL | 16 (43%) | 21 (57%) |
| ARCHITECTURE | 21 (57%) | 16 (43%) |
| SHELL | 15 (41%) | 22 (59%) |
| BY-PRODUCT | 14 (38%) | 23 (62%) |
| LITHICS | 13 (35%) | 24 (65%) |
| PREHISTORIC CERAMICS | 2 (5%) | 35 (95%) |
| SOIL SAMPLE | 0 | 37 (100%) |
| ORGANIC | 7 (19%) | 30 (81%) |
| PIPES | 1 (3%) | 36 (97%) |
| OTHER | 4 (11%) | 33 (89%) |

### Previous Treatment

The majority of the lots surveyed from this site have been washed, sorted, labeled, catalogued, and include a paper label inside the bag (Table VII-3). One lot (3%) was not catalogued. None of the artifacts have been crossmended, taped, or adhered. Eight lots contained previously conserved glass (22%), such as olive bottle glass and lamp glass. No metals or "other" objects have been previously treated. Pipe bowl contents were also found and this data was entered into the conservation survey to facilitate future analysis by HSMC staff. The contents, namely ash, were processed following the HSMC laboratory procedures, and packaged separately inside a polyethylene bag.

**TABLE VII-3: PREVIOUS TREATMENT INFORMATION, ST1-11 TRINITY CHURCH**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 37 (100%) | 0 | 0 |
| SORTED | 37 (100%) | 0 | 0 |
| LABELED | 37 (100%) | 0 | 0 |
| CATALOGUED | 36 (97%) | 1 (3%) | 0 |
| PAPER LABEL | 37 (100%) | 0 | 0 |
| CROSSMENDED | 0 | 37 (100%) | 0 |
| TAPED | 0 | 37 (100%) | 0 |
| ADHERED | 0 | 37 (100%) | 0 |
| METAL CONSERVED | 0 | 37 (100%) | 0 |
| GLASS CONSERVED | 8 (22%) | 29 (78%) | 0 |
| OTHER CONSERVED | 0 | 37 (100%) | 0 |

## Condition of Objects

Basic observations were made while surveying the collection regarding the condition of the *objects* (Table VII-4).

Metals (iron, copper alloy, and silver) and one composite object comprise the *objects* designated for conservation treatment. For metal items surveyed, the artifacts fell between stable (17%), poor (33%), and not stable (50%). No objects were found deteriorated beyond treatment or in fair condition. The majority of the metal artifacts in need of treatment is considered to be in poor or unstable condition and received a priority 2 rating (67%). These artifacts are in the most need of treatment due to their deteriorated condition and therefore require conservation treatment sooner rather than later.

Olive green bottle glass and lamp glass represent the majority of inorganic *objects* from the Trinity Church site. Milk glass samples were also present. Although these were all considered to be in stable condition, they were recorded so that staff at HSMC would be able to find the glass in the future and re-examine it to determine its conservation needs.

One composite object, a button comprised of copper alloy and glass, was recommended for treatment. It was found to be in fair condition and received a priority 1 rating. A high rating is given due to both the complexity of the conservation that must be performed on composite objects in order to effectively preserve each dissimilar material and the nature of composites to deteriorate at an accelerated speed.

**TABLE VII-4: CONDITION OF OBJECTS BY PRIORITY, ST1-11 TRINITY CHURCH**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 1 | 1 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 1 | 0 | 1 | 0 | 2 |
| Not Stable/Deteriorated | 0 | 3 | 0 | 0 | 0 | 3 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 7 | 7 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 1 | 0 | 0 | 0 | 0 | 1 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **4** | **0** | **1** | **8** | **14** |

**Treatment Recommendations**

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table VII-5. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface

cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[20] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, an *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. All *objects* from the Trinity Church site that were recommended for treatment (total 6) must be conserved by a trained professional. For instance, a conservator must treat one hundred percent of the metals and the composite. Over half (80%) of the metals needing treatment were listed as a priority 2 indicating that conservation treatment is needed sooner rather than later. The composite copper alloy and glass button (priority 1) requires immediate attention. The priority 1 and 2 items in need of conservation will require treatment by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task. No organics, inorganics, or objects within the category of "other" were recommended for treatment.

**TABLE VII-5: LEVEL OF CONSERVATION TREATMENT BY PRIORITY, ST1-11 TRINITY CHURCH**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 0 | 4 | 0 | 1 | 0 | 5 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Conservator | 1 | 0 | 0 | 0 | 0 | 1 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 1 | 4 | 0 | 1 | 0 | 6 |
| **Conservator** | 1 | 4 | 0 | 1 | 0 | 6 (100%) |
| **Staff** | 0 | 0 | 0 | 0 | 0 | 0 |

The conservation needs can also be reviewed according to artifact material (Table VII-6). Data are grouped in Table VII-6 under the broader headings of metal, organic, inorganic, composite and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

[20] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

The metals and one composite represent the artifacts in need of treatment. The majority of artifacts in need of immediate conservation treatment (priority 2) are iron and copper alloy (15%). One iron button is included in this priority 2 grouping. A copper alloy coin (4%) received a priority 4 rating, indicating that treatment will be needed eventually. A 1910 silver dollar received a priority rating of 5, due to its inherently stable nature. All inorganic objects were found to be stable, as the majority had been previously treated. One composite object, priority 1, a button comprised of copper alloy and glass, was recommended for treatment.

**TABLE VII-6: ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ST1-11 TRINITY CHURCH**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 0 | 3 | 0 | 0 | 0 | 3 |
| Copper Alloy | 0 | 1 | 0 | 1 | 0 | 2 |
| Lead Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| White Metal Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 1 | 1 |
| Total Metals | 0 | 4 | 0 | 1 | 1 | 6 |
| ORGANIC | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 0 | 0 | 4 | 4 |
| Other Glass | 0 | 0 | 0 | 0 | 3 | 3 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Inorganic | 0 | 0 | 0 | 0 | 7 | 7 |
| COMPOSITE | 1 | 0 | 0 | 0 | 0 | 1 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **8** | **0** | **2** | **16** | **27** |

The conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8)Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table VII-7. The numbers listed in Table VII-7 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.* General material groups containing no data were not tallied and listed.

The majority of artifacts in need of treatment (metal and composite) simply need to be cleaned and stabilized (40%). These treatments are relatively simple and straightforward, with each artifact conserved separately, as they require individual attention. Priority 2 iron *objects*

(7%) in unstable condition were also slated for x-radiography. The metals represent *objects* that are considered a higher priority than the inorganic *objects*. A 1910 silver dollar received a priority 5 rating, as it is an inherently stable metal.

All inorganic *objects* (47%) received a rating of priority 5, as the majority was previously conserved. Although conservation treatment was not recommended, these artifacts may need to be re-examined in the future for treatment needs including repackaging. The majority of glass *objects* listed represents a bag of glass and not one object.

**TABLE VII-7: TREATMENT RECOMMENDATIONS BY PRIORITY, ST1-11 TRINITY CHURCH**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 4 | 0 | 1 | 0 | 5 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 1 | 0 | 0 | 0 | 1 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 1 | 1 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 7 | 7 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 1 | 0 | 0 | 0 | 0 | 1 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **1** | **5** | **0** | **1** | **8** | **15** |

## APPENDIX VIII: ST1-13, TOWN CENTER

### SITE HISTORY

The area known as the Town Center was the heart of the 17th-century community and the most complex of all the archaeological sites in St. Mary's City (Figure VIII-1). The Town Center contains four major properties: the Leonard Calvert House, Smith's Ordinary, Cordea's Hope, and the Lawyers' Messuage. In the 1840s a major plantation house and its outbuildings were superimposed on this 17th century landscape. John M. Brome created the Brome Plantation and his family occupied the site until the Museum acquired the property in the late 1970s. The Museum subsequently moved the house and its outbuildings to another location to simplify interpretation of the Town Center area. All of the excavations in this area produced large quantities of 19th and 20th century artifacts and deposits which are related to the Brome plantation period. These materials greatly complicate the conservation survey.

Archaeological excavations were conducted in the Town Center area from 1981-1984 and again in 1995. The material addressed by this study resulted from the 1981-1984 investigations which involved the excavations of a stratified random sample spread across the project area. The overall strategy of the project will be described, followed by a review of the history of each specific site. Each of these sites subsequently witnessed additional excavations which are beyond the scope of this current conservation survey.

Artifacts from the Town Center collection have undergone the least analysis of materials addressed by the current conservation survey. Some ceramics, pipes, glass, and selected metal objects, however, have been pulled for analysis and these are housed in the comparative collection.

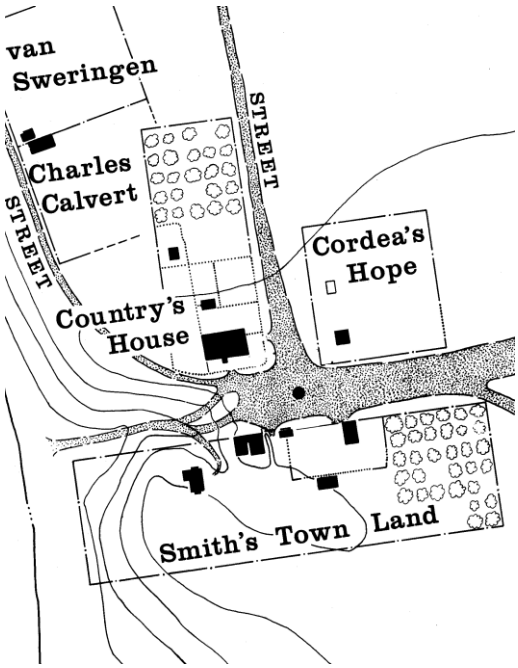


**Figure VIII-1. Map of the Town Center area showing the major sites included in the survey. Lawyer's Messuage not labeled.**

### Archaeological Sampling

The 1981 – 1984 program of investigations at the Town Center involved the excavation of a 7% stratified random sample of 5x5 ft. squares. The purpose of the project was to locate the center of the 17th-century capital of Maryland. This project was supported by a grant from the National Endowment for the Humanities. As part of this project several of the sites were tested more in depth. The excavations located numerous archaeological sites which constitute the core of the town including: Smiths Ordinary, Cordea's Hope, the Lawyers' Messuage and the Leonard Calvert House. As part of this project, Pope's Fort, an English Civil War fortification was found to surround the Leonard Calvert site. In addition to these specific buildings from the 17th century, considerable evidence of other 17th-century usage as well as prehistoric American Indian occupation was recovered. The 19th century saw the creation of a major plantation complex in what had been the 17th-century town center.

This complex was occupied into the 20th century and it left considerable archaeological remains that add complexity to the overall artifact assemblage.

### Leonard Calvert House

The Leonard Calvert House (also known as the Countries House) was constructed in the first decade of Maryland's settlement by the first Governor of Maryland. It was a large, 40 ft. by 67 ft., framed structure set on a stone and later brick foundation. This house had a long and exciting history. Several of the early assemblies in the 1640s were held here. In 1645, Nathaniel Pope, one of the leaders of a rebellion against Lord Baltimore, built a ditch-and-bank fort around the house. During the 1650 Assembly, the Act Concerning Religion, assuring religious toleration in Maryland, was approved by the freemen. The Province of Maryland purchased this structure in 1662 and it became the first State House of Maryland. Through most of its long life, the Calvert House also served as an ordinary. The last reference to the building dates to 1695 and it was likely torn down soon afterward.

### Smith's Ordinary

Smith's Ordinary represents the first planned development of the town of St. Mary's City. Built by William Smith in 1666, it was a 20 ft. by 30 ft. post-in-the-ground structure. As originally constructed, Smith's ordinary had an internal fire hood, a partially enclosed room with a fire in the center. There was a large, but as yet unexcavated addition to the west of the main building. Garrett van Sweringen took over this enterprise in 1672, ran it until 1677 and made a number of renovations. In 1678, Smith's Ordinary burned to the ground and was never replaced.

### Cordea's Hope

Mark Cordea, a French immigrant and prominent merchant, constructed a building on a one acre lot in the Town Center c. 1675. This property was known as Cordea's Hope. Very little historical information has been preserved about this structure. Archaeological investigations have shown it to be a 20 ft. by 24 ft post-in-the-ground building. No evidence of a chimney or other heating arrangement was found at this site. The lack of a heat source was puzzling but suggested a functional purpose. Cordea had a "storehouse" at St. Mary's. Such a structure would not need a heat source and it is likely that the archaeologically discovered building could be associated with this function. From this store, Cordea would barter or sell his imported goods to the Maryland planters.

### The Lawyers' Messuage

The last major 17th century property in the Town Center is known as the Lawyers' Messuage. This was a subdivision of Smith's Townland that contained a house rented to two lawyers in the 1670s. The building was constructed between 1667 and 1673. The Lawyers Messuage may have been used as an ordinary in the 1680s. It was still referenced in documents until 1692 and then it disappears. Very little archaeology has been done in this area. While a number of structural posts and paling fences have been observed, no attempt has yet been made to fully uncover these remains.

## SURVEY RESULTS

The 2004-2005 Conservation Survey examined 590 boxes (2424 lots) of artifacts from ST1-13.[21] All of the 2424 lots were surveyed between October 2004 and May 2005, with one updated in June 2005. The artifacts from this site were stored in Room 1 [Archaeological Laboratory] and Room 2 [Archaeological Annex] on metal shelving. A considerable amount of artifacts from ST1-13 are also currently on exhibit in Room 3 [HSMC Visitor Center]. All 2424 lots were packaged in acid-free Hollinger boxes or acid-free Coroplast® boxes prior to the beginning of the survey. One hundred and forty-two boxes of "metals only" were included in this survey.

### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the conservation survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table VIII-1). The metals were boxed separately in acid-free Coroplast® boxes and were desiccated using indicating silica gel. Metals represent 40% of the lots surveyed within this site. Out of 2424 lots, 382 (16%) contain pull slips to indicate that objects were removed from those lots. In some instances, pull slips indicated that whole lots were pulled for exhibit or x-radiography. Like these pulled lots, many other objects such as ceramics, table glass, window leads, and conserved iron and copper alloys were pulled for either exhibition or the comparative collection.

**TABLE VIII-1: CURRENT SORTING CONDITION, ST1-13**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 971 (40%) | 1453 (60%) |
| HEAVY OBJECT PRESENT | 4 (0.2%) | 2420 (99.8%) |
| PULL SLIP PRESENT | 382 (16%) | 2042 (84%) |

### Materials Present

The materials present were recorded during the survey (Table VIII-2). The largest groups of artifacts materials surveyed included metal (40%), architecture (39%), lithics (36%), and shell (34%). Materials such as bone (30%), by-product (28%), ceramics (25%), and glass (25%) were present in moderate numbers. "Other" materials (7%), soil samples (0.3%), and mixed groupings (0.1%) were also present but in very low numbers. Materials present within the category of "other" include 19th-century polymers, such as Bakelite plastic and Goodyear rubber.

**TABLE VIII-2: MATERIALS PRESENT, ST1-13**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 1 (0.1%) | 2423 (99.9%) |
| BONE | 721 (30%) | 1703 (70%) |
| CERAMICS | 607 (25%) | 1817 (75%) |
| GLASS | 598 (25%) | 1826 (75%) |
| METAL | 978 (40%) | 1446 (60%) |
| ARCHITECTURE | 951 (39%) | 1473 (61%) |
| SHELL | 828 (34%) | 1596 (66%) |
| BY-PRODUCT | 687 (28%) | 1737 (72%) |

[21] A number of different archaeological sites and projects comprise ST1-13. The majority of the objects surveyed were excavated from the Pope's Fort site. Additional sites incorporated into the conservation survey also yielded a large number of artifacts classified as being from ST1-13.

| | | |
|---|---|---|
| LITHICS | 884 (36%) | 1540 (64%) |
| PREHISTORIC CERAMICS | 282 (12%) | 2142 (88%) |
| SOIL SAMPLE | 8 (0.3%) | 2416 (99.7%) |
| ORGANIC | 306 (13%) | 2118 (87%) |
| PIPES | 651 (27%) | 1773 (73%) |
| OTHER | 170 (7%) | 2254 (93%) |

**Previous Treatment**

The majority of the lots surveyed from this site have been washed, sorted, labeled, catalogued, and include a paper label inside the bag (Table VIII-3). A pipe and glass beads were found not washed. Almost every lot (90%) contained a paper label. None of the artifacts surveyed on exhibition contain a paper label. Sixty-eight lots (2.8%) contain artifacts that were crossmended and four lots (0.2%) contain artifacts that have been taped. Adhered objects were found in 24 lots (1.0%). Eighty-three lots (3.4%) contain metals that have been previously treated. For this particular site, laboratory procedures in place when the site was excavated called for the treatment of all window glass but not necessarily all olive bottle glass as it was brought in from the field. The surveyor therefore assumed that the window glass had been treated unless its physical characteristics made it clear that no treatment had taken place. Therefore if glass was present, a "yes" was recorded by default in the "glass conservation" category, unless it was not treated. Three hundred and sixty-three lots (15%) contain glass that was previously conserved. The previous treatment figures reflect the incorporation of objects on exhibit and within the comparative collections (in addition to those surveyed within boxes) into the conservation survey.

Small samples of bone, shell, and byproduct received a conservation number and were recorded within the "other conservation" category. It was later discovered that these materials were never conserved, but were associated with bone that had been. Several of the lots surveyed contained water screen samples which had been processed in the normal way, and so were recorded under "yes" for having been washed, sorted, and labeled. Pipe bowl contents were also found and this data was entered into the conservation survey to facilitate future analysis by HSMC staff. The contents, namely ash, were usually packaged separately inside polyethylene bags. However, in the case of an unwashed pipe, the contents were found inside the bowl.

**TABLE VIII-3: PREVIOUS TREATMENT INFORMATION, ST1-13**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 2422 (99.9%) | 0 | 2 (0.1%) |
| SORTED | 2424 (100%) | 0 | 0 |
| LABELED | 2421 (99.9%) | 3 (0.1%) | 0 |
| CATALOGUED | 2299 (95%) | 125 (5%) | 0 |
| PAPER LABEL | 2177 (90%) | 202 (8%) | 45 (2%) |
| CROSSMENDED | 68 (2.8%) | 2350 (97%) | 6 (0.2%) |
| TAPED | 4 (0.2%) | 2418 (99.8%) | 2 (<0.1%) |
| ADHERED | 24 (1.0%) | 2365 (98%) | 35 (1.0%) |
| METAL CONSERVED | 83 (3.4%) | 2330 (96.1%) | 11 (0.5%) |
| GLASS CONSERVED | 363 (15%) | 2041 (84%) | 20 (1%) |
| OTHER CONSERVED | 11 (0.5%) | 2413 (99.5%) | 0 |

**Condition of Objects**

Basic observations were made while surveying the collection regarding the condition of the *objects* (Table VIII-4).

Typically, as has been indicated by conservation activities at HSMC, metal (primarily iron) and inorganic (primarily olive bottle glass) represent the bulk of *objects* designated for

conservation treatment. For metal items surveyed, the *objects* fell into all five categories of condition: stable (16%), fair (14%), poor (25%), not stable (44%), and deteriorated beyond treatment (1%). Most of the *objects* recorded as being fair received a priority 3 rating (9%). The *objects* recorded as being in poor condition were scattered between priorities 1-4 with the majority being a priority 3. Of the metal *objects* listed as being "not stable," and therefore requiring conservation treatment sooner rather than later, the majority were found to be a priority 1 or 2, indicating that the artifacts are a high priority and are in the most need of treatment due to their deteriorated condition.

For inorganic *objects*, the priority 5 items recorded during the survey were almost always found in stable condition. These items were generally olive bottle glass and, as above, were recorded so that the staff at HSMC would be able to find the glass in the future and re-examine it to determine its conservation needs. Small samples of table glass (0.3%) were deteriorated beyond treatment. Most of the inorganic items recorded as a priority 4 were found in stable condition (12%). This pairing is unique to the 2004-2005 survey, as it directly involves the incorporation of the study collections data into the conservation database. A considerable number of inorganics, namely tin-glazed and "other" ceramics, housed inside the metal cabinets were found to be physically stable. However, at the time this information was entered into the database, the objects had been packaged in acidic cardboard boxes without archival lining, which thus relegated the overall condition to fair on account of the deteriorating effects the acid would have on the artifacts. This condition rating alerted HSMC staff to the repackaging needs of the artifacts and ensured the implementation of this task. A handful of inorganic *objects* received a priority 2 rating and range between stable to poor, with the majority being in fair condition (2%). This grouping was comprised of an assortment of glass beads and table glass (namely Façon de Venise and Roemer vessels).

Most of the organic *objects* requiring treatment were found to be in fair condition and received priority ratings of 3 or 4 (57%). The majority of the organic *objects* are comprised of modified shell and bone (i.e. beads, buttons, and comb fragments). Several priority 1 and 2 composites were recommended for treatment. Their condition was noted, and was recorded as ranging from fair to not stable. The majority of the composite objects recorded (44%) were not stable. The majority of "other" *objects* recorded were listed as a priority 4 and in fair condition. Many of these are stable 19th-century polymers (plastics and rubber), which were noted for monitoring purposes in the future.

**TABLE VIII-4: CONDITION OF OBJECTS BY PRIORITY, ST1-13**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 92 | 92 |
| Fair | 1 | 17 | 54 | 6 | 2 | 80 |
| Poor | 4 | 35 | 104 | 3 | 0 | 146 |
| Not Stable/Deteriorated | 63 | 183 | 4 | 3 | 1 | 254 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 3 | 3 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 3 | 0 | 3 | 6 |
| Fair | 0 | 2 | 18 | 10 | 0 | 30 |
| Poor | 0 | 0 | 3 | 3 | 0 | 6 |
| Not Stable/Deteriorated | 0 | 0 | 1 | 6 | 0 | 7 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 1 | 0 | 85 | 502 | 588 |
| Fair | 0 | 14 | 8 | 62 | 0 | 84 |
| Poor | 0 | 9 | 4 | 14 | 0 | 27 |
| Not Stable/Deteriorated | 0 | 0 | 1 | 1 | 0 | 2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 2 | 2 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 1 | 1 |
| Fair | 4 | 0 | 0 | 0 | 0 | 4 |
| Poor | 3 | 1 | 1 | 0 | 0 | 5 |
| Not Stable/Deteriorated | 8 | 0 | 0 | 0 | 0 | 8 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 4 | 4 |
| Fair | 0 | 0 | 0 | 12 | 0 | 12 |
| Poor | 0 | 0 | 0 | 6 | 0 | 6 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **83** | **262** | **201** | **211** | **610** | **1367** |

**Treatment Recommendations**

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table VIII-5. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[22] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, an *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. Of all the *objects* from ST1-13 that were recommended for treatment (total 745), three-quarters (79%) require treatment by a conservator and only 21% can be treated by a staff member. For example: 100% of all metals, organics, composite artifacts, and objects within the category of "other" surveyed are in need of treatment by a conservator. Over half (64%) of the metals needing treatment were listed as either a priority 1 or 2 indicating that conservation treatment is needed sooner rather than later. All of the composite *objects* in need of treatment (priority 1 and 3) must be treated by a conservator. Most (79%) of the inorganic materials listed for treatment can be treated by a staff member and are a priority 4, indicating treatment can wait. This indicates that most priority 1 and 2 items in need of conservation will require treatment by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task.

[22] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

**TABLE VIII-5: LEVEL OF CONSERVATION TREATMENT BY PRIORITY, ST1-13**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 68 | 235 | 154 | 12 | 1 | 470 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 2 | 25 | 19 | 0 | 46 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 23 | 11 | 7 | 1 | 42 (21%) |
| Staff | 0 | 1 | 1 | 152 | 0 | 154 (79%) |
| COMPOSITE | | | | | | |
| Conservator | 15 | 0 | 1 | 0 | 0 | 16 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 17 | 0 | 17 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 83 | 261 | 192 | 207 | 2 | 745 |
| **Conservator** | 83 | 260 | 191 | 55 | 2 | 591 (79%) |
| **Staff** | 0 | 1 | 1 | 152 | 0 | 154 (21%) |

The conservation needs can also be reviewed according to artifact material (Table VIII-6). Data are grouped in Table VIII-6 under the broader headings of metal, organic, inorganic, composite, and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite, and "other" categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal and inorganic material groups contained the majority of artifacts in need of treatment. The majority of objects in need of immediate conservation treatment (priority 1 and 2) are iron (19%). A considerable number of these are extremely corroded and require x-radiography to reveal the core morphology of potentially significant, diagnostic artifacts. A smaller number of copper alloy artifacts (11%) with priorities 2-4 and lead alloy artifacts (5%) with priorities 1-4 also require treatment. A number of previously treated lead alloys (4%) were given a priority 5 to record their presence. Most of the inorganic *objects* requiring treatment (olive bottle glass) received a priority 4 rating (2%). A large number of olive bottle glass (21%) was recorded as being present and stable, and therefore was given a priority 5 with no treatment recommended. A number of organic artifacts, primarily shell and bone buttons, received ratings of priority 3, indicating treatment will be needed in the near future.

**TABLE VIII-6: ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ST1-13**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 63 | 188 | 0 | 0 | 26 | 277 |
| Copper Alloy | 0 | 40 | 97 | 8 | 20 | 165 |
| Lead Alloy | 4 | 5 | 53 | 3 | 51 | 116 |
| White Metal Alloy | 0 | 2 | 2 | 0 | 0 | 4 |
| Other | 0 | 0 | 2 | 1 | 1 | 4 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Total Metals | 67 | 235 | 154 | 12 | 98 | 566 |
| ORGANIC | 0 | 2 | 25 | 19 | 3 | 49 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 1 | 28 | 285 | 314 |
| Other Glass | 0 | 24 | 11 | 44 | 202 | 281 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 20 | 0 | 20 |
| Other Ceramics | 0 | 0 | 0 | 43 | 8 | 51 |
| Other | 0 | 0 | 0 | 26 | 9 | 35 |
| Total Inorganic | 0 | 24 | 12 | 161 | 504 | 702 |
| COMPOSITE | 15 | 1 | 1 | 0 | 1 | 18 |
| OTHER | 0 | 0 | 0 | 18 | 4 | 22 |
| **TOTALS** | **82** | **262** | **192** | **210** | **610** | **1356** |

Seventeen composite artifacts (1%), comprised of materials such as iron/copper alloy, iron/bone, and copper alloy/textile, were recorded as needing treatment (priorities 1-3) and 18 objects (1%) in the "other" category were recommended for treatment (priority 4). A large number of the "other" category is comprised of 19th-century polymer products, such as rubber and plastic. These treatments involve analysis and identification of these materials.

The conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table VIII-7. The numbers listed in Table VIII-7 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.* General material groups containing no data were not tallied and listed.

For metal material types (primarily iron), the majority of artifacts that require treatment need to be cleaned and stabilized (32%). A number of iron artifacts also require x-radiography (3%). Several metal artifacts were not recommended for treatment (7%), with 12 previously treated artifacts (1%) on exhibit at the Visitor Center.

For inorganic material types, the majority that require treatment need to be repackaged (6%). Several also need to be cleaned and stabilized (3%), cleaned only (3%), or stabilized only (2%). These treatments are relatively simple and straightforward and some of the artifacts will most likely be batch treated, as the majority of glass *objects* listed represent a bag of glass and not one object. A large number of inorganics were not recommended for treatment but may need to be re-examined in the future for treatment needs including repackaging.

Thirty-six organic artifacts (2%), primarily shell and bone buttons, need to be cleaned and stabilized. Several leather artifacts, namely shoe fragments, also require cleaning and

stabilization. Sixteen composite artifacts (1%) need to be cleaned and stabilized. Many of these artifacts are a combination of two metals such as iron and copper alloy, as well as metal and textile. Two previously conserved samples of silver thread require re-treatment (0.1%). Many of these artifacts received a priority 1 rating and therefore require immediate attention, as their complex composition is aiding in their degradation.

**TABLE VIII-7: TREATMENT RECOMMENDATIONS BY PRIORITY, ST1-13**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 1 | 0 | 0 | 1 |
| Stabilize Only | 0 | 1 | 1 | 0 | 0 | 2 |
| Clean and Stabilize | 68 | 234 | 151 | 12 | 0 | 465 |
| Re-package | 1 | 8 | 1 | 3 | 20 | 33 |
| Re-treatment | 0 | 3 | 2 | 2 | 1 | 8 |
| X-ray | 20 | 29 | 0 | 0 | 0 | 49 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 97 | 97 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 6 | 4 | 0 | 10 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 2 | 19 | 15 | 0 | 36 |
| Re-package | 0 | 0 | 1 | 6 | 0 | 7 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 3 | 3 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 1 | 0 | 5 | 6 |
| Cleaning Only | 0 | 2 | 0 | 39 | 1 | 42 |
| Stabilize Only | 0 | 1 | 2 | 20 | 0 | 23 |
| Clean and Stabilize | 0 | 21 | 9 | 15 | 0 | 45 |
| Re-package | 0 | 1 | 0 | 87 | 1 | 89 |
| Re-treatment | 0 | 0 | 1 | 0 | 0 | 1 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 503 | 503 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 15 | 0 | 1 | 0 | 0 | 16 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 2 | 0 | 0 | 0 | 0 | 2 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 1 | 0 | 0 | 1 | 2 |
| OTHER | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 4 | 0 | 4 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 13 | 0 | 13 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 1 | 4 | 5 |
| **TOTALS** | **106** | **303** | **196** | **221** | **636** | **1462** |

## APPENDIX IX: ST1-14, SLAVE QUARTER

### SITE HISTORY

ST1-14 represents a site initially related with an extant 19th-century slave quarter. Subsequent investigations identified a second quarter adjacent to the surviving building and a complex of 17th- and prehistoric American Indian deposits (Figure IX-1). The extant quarter was removed from the site as part of the project which moved the Brome House and the Carriage House. Subsequent excavations discovered the remains of a print shop operated here in the late 17th century. This 17th-century structure was begun to be reconstructed in the fall of 2005.

***Figure IX-1. 19th century photograph of Slave Quarters.***

### SURVEY RESULTS

The 2004-2005 Conservation Survey examined 39 boxes (577 lots) of artifacts from the Slave Quarter site. All of the 577 lots were surveyed between February 2005 and March 2005. The artifacts from this site were stored in Room 1 [Archaeological Laboratory] on metal shelving. All 577 lots were packaged in acid-free Hollinger boxes or acid-free Coroplast® boxes prior to the beginning of the survey. Five boxes of "metals only" were included in this survey.

#### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the conservation survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table IX-1). The metals were boxed separately in acid-free Coroplast® boxes and were desiccated using indicating silica gel. Metals represent almost half (45%) of the lots surveyed within this site. Out of 577 lots, 134 (23%) contain pull slips to indicate that objects were removed from those lots. In some instances, pull slips indicated that whole lots were pulled for exhibit or x-radiography. Like these pulled lots, many other objects such as ceramics, table glass, window leads, and conserved iron and copper alloys were pulled for either exhibition or the comparative collection.

**TABLE IX-1: CURRENT SORTING CONDITION, ST1-14 SLAVE QUARTER**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 261 (45%) | 316 (55%) |
| HEAVY OBJECT PRESENT | 0 | 577 (100%) |
| PULL SLIP PRESENT | 134 (23%) | 443 (77%) |

**Materials Present**

The materials present were recorded during the survey (Table IX-2). The largest groups of artifacts materials surveyed included metal (45%), architecture (35%), shell (34%), and glass (29%). Bone (28%), ceramics (23%), by-product samples (23%), and organics (18%) were present in moderate numbers. Very low percentages of pipes (14%), "other" objects (12%), and prehistoric ceramics (7%) were recorded.

**TABLE IX-2: MATERIALS PRESENT, ST1-14 SLAVE QUARTER**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 577 (100%) |
| BONE | 159 (28%) | 418 (72%) |
| CERAMICS | 132 (23%) | 445 (77%) |
| GLASS | 168 (29%) | 409 (71%) |
| METAL | 261 (45%) | 316 (55%) |
| ARCHITECTURE | 200 (35%) | 377 (65%) |
| SHELL | 197 (34%) | 380 (66%) |
| BY-PRODUCT | 132 (23%) | 445 (77%) |
| LITHICS | 154 (27%) | 423 (73%) |
| PREHISTORIC CERAMICS | 41 (7%) | 536 (93%) |
| SOIL SAMPLE | 11 (2%) | 566 (98%) |
| ORGANIC | 106 (18%) | 471 (82%) |
| PIPES | 79 (14%) | 498 (86%) |
| OTHER | 67 (12%) | 510 (88%) |

**Previous Treatment**

The majority of the lots surveyed from this site have been washed, sorted, labeled, catalogued, and include a paper label inside the bag (Table IX-3). Almost every lot (99.8%) contained a paper label. No lots contained artifacts that had been previously crossmended or taped. Adhered ceramics and pipes were found in two lots (0.3%). Ten samples of lamp glass and table glass (2%) were recorded as being previously conserved, while no lots contained metals or objects within the category of "other" that had been conserved. For this particular site, laboratory procedures in place when the site was excavated called for the treatment of all window glass and not all olive bottle glass as it was brought in from the field. The surveyor therefore assumed that the window glass had been treated unless its physical characteristics made it clear that no treatment had taken place. Therefore if glass was present, a "yes" was recorded by default in the "glass conservation" category, unless it was not treated.

One lot contained a flotation sample, which had been processed in the normal way, and so was recorded under "yes" for having been washed, sorted, and labeled. Pipe bowl contents were also found and this data was entered into the conservation survey to facilitate future analysis by HSMC staff. The contents, namely ash, were packaged separately inside polyethylene bags.

**TABLE IX-3: PREVIOUS TREATMENT INFORMATION, ST1-14 SLAVE QUARTER**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 577 (100%) | 0 | 0 |
| SORTED | 577 (100%) | 0 | 0 |
| LABELED | 577 (100%) | 0 | 0 |
| CATALOGUED | 577 (100%) | 0 | 0 |
| PAPER LABEL | 576 (99.8%) | 1 (0.2%) | 0 |
| CROSSMENDED | 0 | 577 (100%) | 0 |
| TAPED | 0 | 577 (100%) | 0 |
| ADHERED | 0 | 575 (99.7%) | 2 (0.3%) |
| METAL CONSERVED | 0 | 577 (100%) | 0 |
| GLASS CONSERVED | 10 (2%) | 567 (98%) | 0 |
| OTHER CONSERVED | 0 | 577 (100%) | 0 |

**Condition of Objects**

Basic observations were made while surveying the collection regarding the condition of the *objects* (Table IX-4).

Metal (primarily iron and copper alloy) and organic (primarily shell and bone) represent the bulk of *objects* designated for conservation treatment. For metal items surveyed, the *objects* fell into four categories of condition: stable (2%), fair (13%), poor (34%), and not stable (51%). Most of the *objects* recorded as being fair received a priority 2 rating. The *objects* recorded as being in poor condition were scattered between priorities 1-4 with the majority being a priority 2. Of the metal *objects* listed as being "not stable," and therefore requiring conservation treatment sooner rather than later, the majority were found to be a priority 2, indicating that the artifacts are a high priority and are in the most need of treatment due to their deteriorated condition. A large number of hardware, implement fragments, and metals associated with clothing (such as hooks, snaps, and buttons) were present.

For inorganic *objects*, the priority 5 items recorded during the survey were found in stable condition. These items were generally 19$^{th}$-century table glass and were recorded so that the staff at HSMC would be able to find the glass in the future and re-examine it to determine its conservation needs. A considerable amount of 19$^{th}$-century lamp glass and an assortment of glass beads were also present. No inorganic artifacts were deteriorated beyond treatment. All of the inorganic items recorded as a priority 4 were found in either fair or poor condition (23%). A small amount of inorganic artifacts received a priority 2 or 3 rating and were found to be in fair condition (4%). These were a glass bead and button.

Most of the organic *objects* requiring treatment were found to be in fair condition and received priority ratings of 3 or 4 (65%). The majority of the organic *objects* are comprised of modified shell and bone (i.e. beads and buttons). A number of wood and leather artifacts were also present and recorded as a priority 4. A handful of priority 1 composites were recommended for treatment. A large number of these composites, which includes Bapterosses buttons and a book clasp, were comprised of iron, copper alloy, and porcelain. Their conditions were recorded as either fair (50%) or not stable (50%).

**TABLE IX-4: CONDITION OF OBJECTS BY PRIORITY, ST1-14 SLAVE QUARTER**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 2 | 2 |
| Fair | 0 | 10 | 3 | 4 | 0 | 17 |
| Poor | 2 | 28 | 12 | 1 | 0 | 43 |
| Not Stable/Deteriorated | 10 | 53 | 1 | 0 | 0 | 64 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 7 | 7 |
| Fair | 0 | 0 | 12 | 14 | 0 | 26 |
| Poor | 0 | 1 | 0 | 4 | 0 | 5 |
| Not Stable/Deteriorated | 0 | 1 | 0 | 1 | 0 | 2 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 41 | 41 |
| Fair | 0 | 1 | 1 | 6 | 0 | 8 |
| Poor | 0 | 0 | 0 | 7 | 0 | 7 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 4 | 0 | 0 | 0 | 0 | 4 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 4 | 0 | 0 | 0 | 0 | 4 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 8 | 8 |
| Fair | 0 | 0 | 0 | 17 | 0 | 17 |
| Poor | 0 | 0 | 0 | 4 | 0 | 4 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **20** | **94** | **29** | **58** | **58** | **259** |

**Treatment Recommendations**

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table IX-5. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[23] that require treatment by a conservator or staff member, and these may or

[23] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object.* This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

may not include more than one artifact. For example, an *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. Of all the objects from ST1-14 that were recommended for treatment (total 200), 93% require treatment by a conservator and only 7% can be treated by a staff member. For instance, 100% of all metals, composites, and "other" *objects* surveyed are in need of treatment by a conservator. Over half (83%) of the metals needing treatment were listed as either a priority 1 or 2 indicating that conservation treatment is needed sooner rather than later. All of the composite *objects* in need of treatment (priority 1) must be treated by a conservator. Out of the organic and inorganic categories, 30% of the *objects* listed for treatment can be treated by a staff member and are a priority 4, indicating treatment can wait. Most priority 1 and 2 items in need of conservation will require treatment by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task.

**TABLE IX-5: LEVEL OF CONSERVATION TREATMENT BY PRIORITY, ST1-14 SLAVE QUARTER**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 12 | 91 | 16 | 5 | 0 | 124 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 2 | 12 | 17 | 0 | 31 (97%) |
| Staff | 0 | 0 | 0 | 1 | 0 | 1 (3%) |
| INORGANIC | | | | | | |
| Conservator | 0 | 1 | 1 | 0 | 0 | 2 (13%) |
| Staff | 0 | 0 | 0 | 13 | 0 | 13 (87%) |
| COMPOSITE | | | | | | |
| Conservator | 8 | 0 | 0 | 0 | 0 | 8 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 21 | 0 | 21 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 20 | 94 | 29 | 57 | 0 | 200 |
| **Conservator** | 20 | 94 | 29 | 43 | 0 | 186 (93%) |
| **Staff** | 0 | 0 | 0 | 14 | 0 | 14 (7%) |

The conservation needs can also be reviewed according to artifact material (Table IX-6). Data are grouped in Table IX-6 under the broader headings of metal, organic, inorganic, composite and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal and inorganic material groups contained the majority of artifacts in need of treatment. The majority of artifacts in need of immediate conservation treatment (priority 1 and 2) are iron (24%). A considerable amount of copper alloy *objects* (20%) with priorities 2-4 and a smaller amount of lead alloy *objects* (3%) with a priority 1 or 3 also require treatment. Most of the inorganic *objects* requiring treatment received a priority 4 rating (5%). A large number of 19$^{th}$-century table glass, lamp glass, and beads (16%) were recorded as being present and stable, and therefore was given a priority 5 with no treatment recommended. A number of shell and

bone objects, such as buttons, received ratings of priority 3 or 4, indicating treatment will be needed eventually. Leather and wood artifacts (mainly shoe fragments and thread spools) were also present in small numbers. All eight composite artifacts (3%) received a priority rating of 1, indicating that immediate treatment performed by a conservator is required. A high rating is given due to both the complexity of the conservation that must be performed on composite objects in order to effectively preserve each dissimilar material and the nature of composites to deteriorate at an accelerated speed. Twenty-one objects within the category of "other" (8%), primarily 19th-century polymers, such as plastic and rubber, received a priority 4 rating. Eight "other" objects (3%) were given a priority 5 with no treatment recommended.

**TABLE IX-6: ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ST1-14 SLAVE QUARTER**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 10 | 51 | 1 | 0 | 0 | 62 |
| Copper Alloy | 0 | 37 | 9 | 5 | 0 | 51 |
| Lead Alloy | 2 | 0 | 6 | 0 | 0 | 8 |
| White Metal Alloy | 0 | 3 | 0 | 0 | 1 | 4 |
| Other | 0 | 0 | 0 | 0 | 1 | 1 |
| Total Metals | 12 | 91 | 16 | 5 | 2 | 126 |
| ORGANIC | 0 | 2 | 12 | 19 | 7 | 40 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 0 | 9 | 3 | 12 |
| Other Glass | 0 | 1 | 1 | 4 | 32 | 38 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 6 | 6 |
| Total Inorganic | 0 | 1 | 1 | 13 | 41 | 56 |
| COMPOSITE | 8 | 0 | 0 | 0 | 0 | 8 |
| OTHER | 0 | 0 | 0 | 21 | 8 | 29 |
| **TOTALS** | **20** | **94** | **29** | **58** | **58** | **259** |

The conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table IX-7. The numbers listed in Table IX-7 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.* General material groups containing no data were not tallied and listed.

For metal material types (primarily iron and copper alloy), the majority of artifacts that require treatment need to be cleaned and stabilized (47%). A large number of these were hardware, implement fragments, and metals associated with clothing (such as hooks, snaps, and buttons). Four iron *objects* also require x-radiography (2%) and have been recorded as a priority 1 or 2. Two priority 5 metal artifacts, a clothing snap and a clasp possibly composed of silver, were stable and therefore not recommended for treatment (0.8%).

For inorganic material types, all that need treatment require cleaning and stabilization (2%) or cleaning only (3%). These treatments are relatively simple and straightforward and some of the artifacts will most likely be batch treated, as the majority of glass *objects* listed represent a bag of glass and not one object. A large number of inorganics, primarily table glass and lamp glass, were not recommended for treatment but may need to be re-examined in the future for treatment needs including repackaging.

Nineteen organic artifacts (7%), primarily shell and bone buttons, need to be cleaned and stabilized. A small amount of leather and wood artifacts, namely shoe fragments and thread spools, also require cleaning and stabilization. Seven composite artifacts (3%) need to be cleaned and stabilized, while one requires cleaning only (0.4%). Many of these artifacts are Bapterosses buttons composed of iron, copper alloy, and porcelain. Two iron and copper alloy clasps are also present. These objects received a priority 1 rating, as their complex composition is aiding in their degradation.

**TABLE IX-7: TREATMENT RECOMMENDATIONS BY PRIORITY, ST1-14 SLAVE QUARTER**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 12 | 91 | 16 | 5 | 0 | 124 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 2 | 2 | 0 | 0 | 0 | 4 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 2 | 2 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 3 | 11 | 0 | 14 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 2 | 9 | 8 | 0 | 19 |
| Re-package | 0 | 0 | 0 | 3 | 0 | 3 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 7 | 7 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 1 | 0 | 8 | 0 | 9 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 1 | 5 | 0 | 6 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 41 | 41 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 1 | 0 | 0 | 0 | 0 | 1 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 7 | 0 | 0 | 0 | 0 | 7 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 13 | 0 | 13 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 8 | 0 | 8 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 8 | 8 |
| **TOTALS** | **22** | **96** | **29** | **61** | **58** | **266** |

## APPENDIX X: ST1-19, VAN SWERINGEN

### SITE HISTORY

The earliest structure on this site was a post-in-the-ground building known as the Council Chamber and Secretary's Office, built c. 1664 (Figures X-1 and X-2). This was a one story, two room building constructed by William Smith at the request of the General Assembly of Maryland. After the State House of 1676 was completed, this building stood empty. About 1678, Garrett van Sweringen, a Dutch immigrant, occupied the structure, repaired and expanded it and made it into a private house for lodgers during the time the Provincial Court or Assembly was meeting. Van Sweringen added a room to the building, built a new double sided chimney and added a brick veneer to the wooden exterior. In keeping with the new domestic functions, he constructed a kitchen, a dairy, and an arbor. Through much of the 1680s and 1690s, the Governor's Council met in this elegant structure. Sometime in the 1680s, Van Sweringen built another structure that was intended to produce bread and beer for ships in the harbor. This venture did not prosper and he later converted the structure into the first known English coffee house in North America. It was referred to as the "English Coffee House" in his inventory. Van Sweringen died in 1698 and the site began to decline. In the 18th century, it was occupied by tenants and seems to have disappeared by 1750.

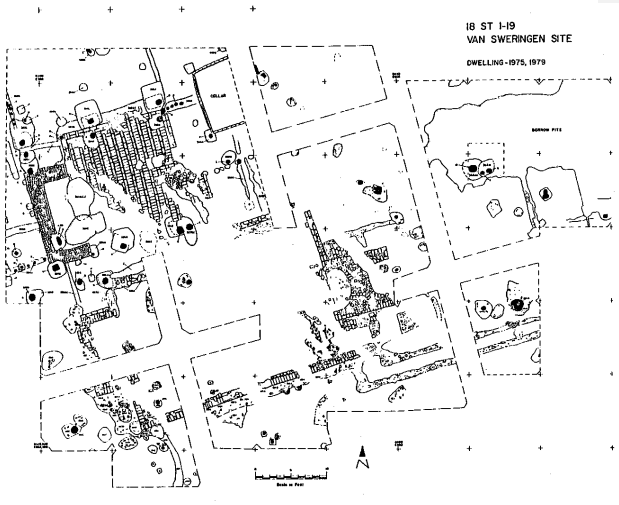


**Figure X-1. Planview of the Van Sweringen site, showing the foundations and features that were exposed by archaeological excavations.**

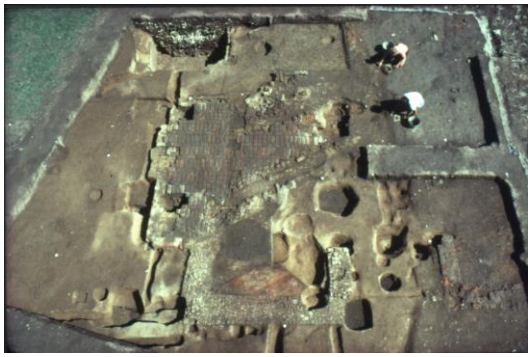

**Figure X-2. Excavations at the Van Sweringen site uncovered several features, including partial foundations.**

Dr. H. Chandlee Forman conducted exploratory excavations at this site in the late 1930s. Dr. Forman, a pioneer in historic sites investigations, had worked previously at Jamestown, Virginia in the 1930s and had explored numerous sites in St. Mary's City. Prior to Dr. Forman's excavations at the Van Sweringen site, some remains had been exposed by local individuals with an avocational interest in early Maryland in the early 1930s as part of the preparations for the 300 Anniversary of the founding of Maryland in 1934.

Modern archaeological excavations were conducted on this site in 1974-1980, 1982, and 1985 (Figures X-1 and X-2). The principal excavations in the 1970s were directed by Garry

Wheeler Stone and Alexander H. Morrison. The intensive archaeological excavations at the Van Sweringen site were part of an overall project to locate specific properties within the historic city and begin the process of identifying street locations by examining buildings known to have been located on one of the principal streets in the town, Aldermanbury Street. The excavations uncovered the foundations and artifactual remains of what was eventually interpreted as an inn and its outbuildings. It occupies a strategic location on Aldermanbury Street, midway between the State House of 1676 and the town center, where other important public buildings were clustered.

The Van Sweringen artifact collection has undergone considerable archaeological analysis. Ceramics have been divided into vessels and are stored within the comparative collection. Selected metal, glass, and tobacco related artifacts are also stored in the comparative collection.

## SURVEY RESULTS

The 2004-2005 Conservation Survey examined 29 boxes (244 lots) of artifacts from the Van Sweringen site that were missed in 2002. The 244 lots were surveyed between October 2004 and March 2005, with one updated in June 2005. The artifacts from this site were stored in Room 1 [Archaeological Laboratory] on metal shelving and on exhibit in Room 3 [HSMC Visitor Center]. The majority of the lots were packaged in acid-free Hollinger boxes or acid-free Coroplast® boxes prior to the beginning of the survey. The 22 lots on display at the Visitor Center are housed within glass and UV filtering Plexiglas® cases. The exhibition space is climate-controlled and monitored regularly. Eleven boxes of "metals only" were included in this survey.

### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the conservation survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table X-1). The metals were boxed separately in acid-free Coroplast® boxes and were desiccated using indicating silica gel. Metals represent 42% of the lots surveyed within this site. Out of 244 lots, 24 (10%) contain pull slips to indicate that objects were removed from those lots. In some instances, pull slips indicated that whole lots were pulled for exhibit or x-radiography. Like these pulled lots, many other objects such as ceramics, table glass, window leads, and conserved iron and copper alloys were pulled for either exhibition or the comparative collection.

**TABLE X-1: CURRENT SORTING CONDITION, ST1-19 VAN SWERINGEN**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 102 (42%) | 142 (58%) |
| HEAVY OBJECT PRESENT | 0 | 244 (100%) |
| PULL SLIP PRESENT | 24 (10%) | 220 (90%) |

### Materials Present

The materials present were recorded during the survey (Table X-2). The largest groups of artifacts materials surveyed included architecture (43%), metal (42%), bone (39%), and shell (38%). Lithics (37%), ceramics (31%), glass (30%), and pipes (26%) were also present in moderate numbers. The artifacts from this site primarily date to the mid-to-late-17$^{th}$ century.

**TABLE X-2: MATERIALS PRESENT, ST1-19 VAN SWERINGEN**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 244 (100%) |
| BONE | 95 (39%) | 149 (61%) |
| CERAMICS | 76 (31%) | 168 (69%) |
| GLASS | 72 (30%) | 172 (70%) |
| METAL | 102 (42%) | 142 (58%) |
| ARCHITECTURE | 106 (43%) | 138 (57%) |
| SHELL | 92 (38%) | 152 (62%) |
| BY-PRODUCT | 61 (25%) | 183 (75%) |
| LITHICS | 91 (37%) | 153 (63%) |
| PREHISTORIC CERAMICS | 25 (10%) | 219 (90%) |
| SOIL SAMPLE | 0 | 244 (100%) |
| ORGANIC | 29 (12%) | 215 (88%) |
| PIPES | 64 (26%) | 180 (74%) |
| OTHER | 1 (0.4%) | 243 (99.6%) |

**Previous Treatment**

The majority of the lots surveyed from this site have been washed, sorted, labeled, catalogued, and include a paper label inside the bag (Table X-3). One lot contained artifacts that had not been previously labeled (0.4%). Forty-one lots (16.8%) were not catalogued, while one lot contained some artifacts that were. Ninety-one percent of the lots from this site contained a paper label. The remaining nine percent of the objects surveyed are currently on exhibit and therefore lack paper labels. Three lots (1%) contain ceramics, glass, and a pipe currently on exhibit that have been previously crossmended. No artifacts were previously taped, while four lots (1.6%) contain artifacts that have been adhered. These adhered objects are modified bone, ceramics, glass, shell, lithics, and pipes. A small number of lots (3%) contain previously conserved metals, while 55 lots contain previously conserved glass *objects* (23%). A handful of objects outside of metal and glass have also been previously conserved, such as bone, ceramics, and pipes. For this particular site, laboratory procedures in place when the site was excavated called for the treatment of all glass as it was brought in from the field. The surveyor therefore assumed that the glass had been treated unless its physical characteristics made it clear that no treatment had taken place. Therefore if glass was present, a "yes" was recorded by default in the "glass conservation" category, unless it was not treated.

One lot contained a human hair sample, which had been processed in the normal way, and so was recorded under "yes" for having been washed, sorted, and labeled.

**TABLE X-3: PREVIOUS TREATMENT INFORMATION, ST1-19 VAN SWERINGEN**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 244 (100%) | 0 | 0 |
| SORTED | 244 (100%) | 0 | 0 |
| LABELED | 243 (99.6%) | 0 | 1 (0.4%) |
| CATALOGUED | 202 (82.8%) | 41 (16.8%) | 1 (0.4%) |
| PAPER LABEL | 222 (91%) | 22 (9%) | 0 |
| CROSSMENDED | 3 (1%) | 241 (99%) | 0 |
| TAPED | 0 | 244 (100%) | 0 |
| ADHERED | 4 (1.6%) | 239 (98%) | 1 (0.4%) |
| METAL CONSERVED | 8 (3%) | 236 (97%) | 0 |
| GLASS CONSERVED | 55 (23%) | 189 (77%) | 0 |
| OTHER CONSERVED | 4 (2%) | 240 (98%) | 0 |

**Condition of Objects**

Basic observations were made while surveying the collection regarding the condition of the *objects* (Table X-4).

Metal (primarily iron, copper alloy, lead alloy) and inorganic (primarily olive bottle glass) represent the bulk of *objects* designated for conservation treatment. For metal items surveyed, the *objects* fell into four categories of condition: stable (11%), fair (14%), poor (41%), and not stable (35%). The *objects* recorded as being fair received ratings of priorities 1-5. Most of the *objects* recorded as being in poor condition were listed as a priority 3, with a handful receiving a priority 1 or 2. Of the metal *objects* listed as being "not stable," and therefore requiring conservation treatment sooner rather than later, the majority were found to be a priority 2, while several received a priority 1. A priority rating of 1 or 2 indicates that a number of these artifacts are a high priority and are in the most need of treatment due to their deteriorated condition. A considerable amount of the iron and copper alloy artifacts recorded were implement fragments, horse trappings and horseshoe fragments, and buckles. A number of printing type, a window lead, and lead shot comprised the lead alloys recorded.

For inorganic *objects*, the priority 5 items recorded during the survey were found in stable condition. These items, primarily 17$^{th}$-century olive green bottle glass and table glass, were recorded so that the staff at HSMC would be able to find the glass in the future and re-examine it to determine its conservation needs. Small samples of lamp glass, milk glass, and prehistoric sherds on exhibit at the Visitor Center were also found to be in stable condition. No inorganic artifacts were deteriorated beyond treatment. All of the inorganic items recorded as a priority 4 were found in either fair or poor condition (18%).

Two organic artifacts were recorded as being present. One organic composed of bone, a possible wind instrument fragment, was found to be in fair condition and received a priority rating of 4 (50%). Another organic composed of bone, a walking cane fragment, was considered stable and therefore received a priority 5 rating. Two composite items in fair condition were recommended for treatment. A glass and lead alloy composite bottle received a priority 4, while a bone and copper alloy brush head received a priority 1.

**TABLE X-4: CONDITION OF OBJECTS BY PRIORITY, ST1-19 VAN SWERINGEN**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 7 | 7 |
| Fair | 1 | 3 | 3 | 1 | 1 | 9 |
| Poor | 2 | 8 | 17 | 0 | 0 | 27 |
| Not Stable/Deteriorated | 7 | 16 | 0 | 0 | 0 | 23 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 1 | 1 |
| Fair | 0 | 0 | 0 | 1 | 0 | 1 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 74 | 74 |
| Fair | 0 | 0 | 0 | 3 | 0 | 3 |
| Poor | 0 | 0 | 0 | 13 | 0 | 13 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 1 | 0 | 0 | 1 | 0 | 2 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **11** | **27** | **20** | **19** | **83** | **160** |

**Treatment Recommendations**

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table X-5. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[24] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, an *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. Of all the objects from ST1-19 that were recommended for treatment (total 75), 80% require treatment by a conservator and only 20% can be treated by a staff member. For instance, 100% of all metals, organics, and composites surveyed are in need of treatment by a conservator. Over half (63%) of the metals needing treatment were listed as either a priority 1 or 2 indicating that conservation treatment is needed sooner rather than later. The bone wind instrument fragment that received a priority 4 must be treated by a conservator. Both composite objects (priority 1 and 3) must also be treated by a conservator. Within the inorganic category, 94% of the *objects* listed for treatment can be treated by a staff member and are a priority 4, indicating treatment can wait. Six percent of the inorganic materials require the attention of a trained professional, which also received a priority 4 rating. Most priority 1 and 2 items in need of conservation will require treatment by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task.

[24] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object.* This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

**TABLE X-5: LEVEL OF CONSERVATION TREATMENT BY PRIORITY, ST1-19 VAN SWERINGEN**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 9 | 26 | 20 | 1 | 0 | 56 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 1 | 0 | 1 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 1 | 0 | 1 (6%) |
| Staff | 0 | 0 | 0 | 15 | 0 | 15 (94%) |
| COMPOSITE | | | | | | |
| Conservator | 1 | 0 | 0 | 1 | 0 | 2 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 10 | 26 | 20 | 19 | 0 | 75 |
| **Conservator** | 10 | 26 | 20 | 4 | 0 | 60 (80%) |
| **Staff** | 0 | 0 | 0 | 15 | 0 | 15 (20%) |

The conservation needs can also be reviewed according to artifact material (Table X-6). Data are grouped in Table X-6 under the broader headings of metal, organic, inorganic, composite, and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite, and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal and inorganic material groups contained the majority of artifacts in need of treatment. The majority of artifacts in need of immediate conservation treatment (priority 1 and 2) are iron and copper alloy (21%). These include implement fragments, horse trappings and horseshoe fragments, and buckles. A considerable amount of copper alloy *objects* (8%) with priorities 3 and 4 and a smaller amount of lead alloy *objects* (6%) with a priority 1 or 3 also require treatment. Most of the inorganic *objects* requiring treatment (namely olive bottle glass) received a priority 4 rating (10%). A large number of 17$^{th}$-century olive bottle glass and table glass (40%) was recorded as being present and stable, and therefore received a priority 5 with no treatment recommended. Two organic objects, a bone walking cane fragment and a bone wind instrument fragment, were present and found to be in fair condition (1%). One received a rating of priority 4, while the other received a priority 5 rating as it was considered stable. A bone and copper alloy composite brush head (0.6%) in fair condition received a priority rating of 1, indicating that immediate treatment performed by a conservator is required. A glass and lead alloy composite bottle received a priority 4 rating. No objects within the category of "other" were present.

**TABLE X-6: ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ST1-19 VAN SWERINGEN**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 7 | 17 | 0 | 0 | 0 | 24 |
| Copper Alloy | 0 | 10 | 12 | 1 | 3 | 26 |
| Lead Alloy | 2 | 0 | 8 | 0 | 5 | 15 |
| White Metal Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Metals | 9 | 27 | 20 | 1 | 8 | 65 |
| ORGANIC | 0 | 0 | 0 | 1 | 1 | 2 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 0 | 16 | 41 | 57 |
| Other Glass | 0 | 0 | 0 | 0 | 23 | 23 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 3 | 3 |
| Other Ceramics | 0 | 0 | 0 | 0 | 5 | 5 |
| Other | 0 | 0 | 0 | 0 | 2 | 2 |
| Total Inorganic | 0 | 0 | 0 | 16 | 74 | 90 |
| COMPOSITE | 1 | 0 | 0 | 1 | 0 | 2 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **10** | **27** | **20** | **19** | **83** | **159** |

The conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table X-7. The numbers listed in Table X-7 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.* General material groups containing no data were not tallied and listed.

For metal material types (primarily iron and copper alloy), the majority of artifacts that require treatment need to be cleaned and stabilized (32%). A number of iron artifacts also require x-radiography (4%) and have been recorded as a priority 1 or 2. Eight copper alloy and lead alloy artifacts (bell and print types) on exhibit at the Visitor Center were found in stable condition and therefore not recommended for treatment (5%).

For inorganic material types, all that need treatment require cleaning and stabilization (9%) or cleaning only (0.6%). These treatments are relatively simple and straightforward and some of the artifacts will most likely be batch treated, as the majority of glass *objects* listed represent a bag of glass and not one object. A large number of inorganics (44%), primarily olive bottle glass

and table glass, were not recommended for treatment but may need to be re-examined in the future for treatment needs including repackaging.

One organic artifact (0.6%), a wind instrument fragment, needs to be cleaned and stabilized. The other organic, a walking cane fragment, was considered stable and therefore received a priority 5 rating. Two composite artifacts, a glass and lead alloy bottle and a bone and copper alloy brush head (1%) need to be cleaned and stabilized, with one also requiring re-treatment. The glass and lead alloy bottle received a priority 4, while the bone and copper alloy brush head received a priority 1 rating. No objects within the category of "other" were present.

**TABLE X-7: TREATMENT RECOMMENDATIONS BY PRIORITY, ST1-19 VAN SWERINGEN**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 1 | 1 | 1 | 0 | 3 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 9 | 25 | 19 | 0 | 0 | 53 |
| Re-package | 0 | 1 | 1 | 0 | 0 | 2 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 2 | 5 | 0 | 0 | 0 | 7 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 8 | 8 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 1 | 0 | 1 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 1 | 1 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 1 | 0 | 1 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 15 | 0 | 15 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 74 | 74 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 1 | 0 | 0 | 1 | 0 | 2 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 1 | 0 | 1 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| OTHER | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **12** | **32** | **21** | **20** | **83** | **168** |

## APPENDIX XI: ST1-23, ST. JOHN'S SITE

### SITE HISTORY

The St. John's site represents one of the first large houses built in the Maryland colony. John Lewger, the first Provincial Secretary, came to Maryland in 1637. He constructed a typical English hall and parlor house on this site by 1638 (Figure XI-1). It had a stone foundation, a stone lined cellar and was 52 ft. long by 20.5 ft. wide. The building was a story and a half high. A large, H-shaped chimney divided the first floor into two rooms. The cellar was reached by a trap door and the second story by a ladder. During the first decades of the settlement, the General Assembly of Maryland often met at St. John's. It was home to a Dutch merchant, Simon Overzee in the 1650s and to Governor Charles Calvert from 1662-1667. After considerable renovations in 1678, the structure served as an Ordinary for many years. These renovations included a new, large chimney, the addition of a pantile roof, the creation of a staircase at the entrance and a bulkhead entrance into the cellar. In addition to the main house, there was a separate kitchen and servants quarters. The structure seems to have been abandoned shortly after the capital moved to Annapolis. By 1720, all of the buildings appear to have decayed or been pulled down.

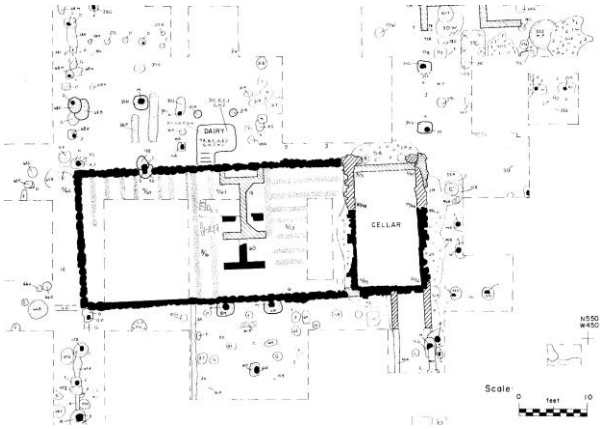


**Figure XI-1. Planview of the St. John's site showing the foundations and features revealed by excavations conducted in the 1970s.**

The first archaeological excavations at the St. John's site were undertaken by Dr. H. Chandlee Forman in the late 1960s. Forman's focus was to discover information concerning the architectural form of the St. John's house. Dr. Forman's excavations were limited to the actual house foundations and partial excavation of the building's cellar.

The main area of the St. John's site has been owned by the Historic St. Mary's City Commission since the early 1970s. The site is located in the midst of the campus of St. Mary's College of Maryland, a four year liberal arts honors state college which memorializes the site of Maryland's 17th-century capital. St. John's was explored by archaeologists from the Historic St. Mary's City Commission from 1972 to 1975, with the cooperation of St. Mary's College of Maryland, George Washington University, and the Smithsonian Institution. Additional work was conducted in 1982, 2001, and 2002. Excavations have generated over 350,000 artifacts, a group that comprises one of the premier collections of 17th-century materials in America. Analysis of the site has produced three Ph.D. dissertations, numerous reports and articles, and provided data for dozens of related studies. As one of the early large-scale projects in historical archaeology, the site also led to the development of new approaches, research questions and analytic methods. St. John's continues to yield new insights into early America as scholars re-study the collections and ask new questions. As part of a major exhibit development on the site, additional archaeological investigations are currently underway.

The artifact assemblage from the St. John's site has had the greatest amount of analysis undertaken of all of the sites included in this survey. Ceramics, pipes, glass, and assorted metal objects have often been pulled from their proveniences and are stored separately in HSMC's comparative collection. The greatest portion of the St. John's assemblage was investigated by the

earlier survey while the focus of this project as it concerns St. John's focused on material on exhibition or in the comparative collection.

## SURVEY RESULTS

The 2004-2005 Conservation Survey examined 1222 boxes (1236 lots) of artifacts from the St. John's site. The 1236 lots were surveyed between November 2004 and April 2005. The artifacts from this site were stored in Room 1 [Archaeological Laboratory] within the metal cabinets as a part of the study collection and on exhibit in Room 3 [HSMC Visitor Center]. The majority of the lots were packaged in brown, acidic boxes prior to the beginning of the survey. The 32 lots on display at the Visitor Center are housed within glass and UV filtering Plexiglas® cases. The exhibition space is climate-controlled and monitored regularly. One hundred and eighty-one boxes of "metals only" were included in this survey.

### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the conservation survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table XI-1). The metals are boxed separately from the non-metals, but are not currently being desiccated. Metals only represent 16% of the lots surveyed within this site. Out of 1236 lots, 57 (5%) contain pull slips to indicate that objects were removed from those lots. In some instances, pull slips indicated that whole lots were pulled for exhibit or x-radiography. Like these pulled lots, many other objects such as ceramics, table glass, window leads, and conserved iron and copper alloys were pulled for either exhibition or the comparative collection.

**TABLE XI-1: CURRENT SORTING CONDITION, ST1-23 ST. JOHN'S**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 192 (16%) | 1044 (84%) |
| HEAVY OBJECT PRESENT | 1 (0.1%) | 1235 (99.9%) |
| PULL SLIP PRESENT | 57 (5%) | 1179 (95%) |

### Materials Present

The materials present were recorded during the survey (Table XI-2). The largest groups of artifacts materials surveyed included ceramics (55%), glass (17%), metal (16%), and pipes (13%). Bone (1%), architecture (0.2%), and artifacts within the category of "other" (0.2%) were present in very low numbers. The high percentage of ceramics, compared to other sites surveyed, is accounted for by the majority of the St. John's collections surveyed being located in the comparative study collection cabinets. The artifacts from this site primarily date to the mid to late 17$^{th}$ century.

**TABLE XI-2: MATERIALS PRESENT, ST1-23 ST. JOHN'S**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 1236 (100%) |
| BONE | 14 (1%) | 1222 (99%) |
| CERAMICS | 675 (55%) | 561 (45%) |
| GLASS | 206 (17%) | 1030 (83%) |
| METAL | 192 (16%) | 1044 (84%) |
| ARCHITECTURE | 3 (0.2%) | 1233 (99.8%) |

| | | |
|---|---|---|
| SHELL | 0 | 1236 (100%) |
| BY-PRODUCT | 0 | 1236 (100%) |
| LITHICS | 0 | 1236 (100%) |
| PREHISTORIC CERAMICS | 0 | 1236 (100%) |
| SOIL SAMPLE | 0 | 1236 (100%) |
| ORGANIC | 0 | 1236 (100%) |
| PIPES | 155 (13%) | 1081 (87%) |
| OTHER | 2 (0.2%) | 1234 (99.8%) |

**Previous Treatment**

The majority of the lots surveyed from this site have been washed, sorted, labeled, catalogued, and include a paper label inside the bag (Table XI-3). One lot (0.1%) was not sorted, labeled or catalogued. Four hundred and ten lots (33.2%) lacked paper labels, while eight lots (0.6%) contained some. Five hundred and forty-nine lots (44.4%) contain ceramics, glass, and a pipe that were previously crossmended. Six of these lots are currently on exhibit at the Visitor Center. Five lots (0.4%) contain artifacts that were previously taped (ceramics, glass, and one pipe), while 50 lots (4%) contain artifacts that have been adhered. These adhered objects are modified bone, ceramics, glass, and pipes. A considerable number of lots (9%) contain conserved metals, while 17 lots contain conserved glass *objects* (1.4%). A handful of objects outside of metal and glass have also been previously conserved, such as bone, ceramics, and pipes. For this particular site, laboratory procedures in place when the site was excavated called for the treatment of most glass and lead alloys as they were brought in from the field. The surveyor therefore assumed that the glass had been treated unless its physical characteristics made it clear that no treatment had taken place. Therefore if glass was present, a "yes" was recorded by default in the "glass conservation" category, unless it was not treated. Lead alloys were recorded as "previously conserved" if they contained a conservation laboratory number or it was obvious to the surveyor that they were treated previously.

**TABLE XI-3: PREVIOUS TREATMENT INFORMATION, ST1-23 ST. JOHN'S**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 1236 (100%) | 0 | 0 |
| SORTED | 1235 (99.9%) | 1 (0.1%) | 0 |
| LABELED | 1235 (99.9%) | 1 (0.1%) | 0 |
| CATALOGUED | 1235 (99.9%) | 1 (0.1%) | 0 |
| PAPER LABEL | 818 (66.2%) | 410 (33.2%) | 8 (0.6%) |
| CROSSMENDED | 549 (44.4%) | 685 (55.4%) | 2 (0.2%) |
| TAPED | 5 (0.4%) | 1220 (98.7%) | 11 (0.9%) |
| ADHERED | 50 (4%) | 982 (79%) | 204 (17%) |
| METAL CONSERVED | 113 (9%) | 1094 (89%) | 29 (2%) |
| GLASS CONSERVED | 17 (1.4%) | 1216 (98.4%) | 3 (0.2%) |
| OTHER CONSERVED | 15 (1.2%) | 1219 (98.6%) | 2 (0.2%) |

**Condition of Objects**

Basic observations were made while surveying the collection regarding the condition of the *objects* (Table XI-4).

Metal (primarily iron, copper alloy, lead alloy) and inorganic (primarily olive bottle glass and table glass) represent the bulk of *objects* designated for conservation treatment. For metal items surveyed, the *objects* fell into four categories of condition: stable (64%), fair (21%), poor (11%), and not stable (4%). A large number of the metals (cloth seals, sewing implements, and coin weights) were found to be stable, as they were previously treated prior to being incorporated into

the study collection or placed on exhibit. Two iron artifacts received a priority 1 rating, but were considered stable. This pairing is unique to the 2004-2005 survey, as it is directly involves the incorporation of the study collections data into the conservation database. These two artifacts, housed inside the metal cabinets, were found to be physically stable. However, at the time this information was entered into the database, the objects had been packaged in acidic cardboard boxes without archival lining, which thus relegated the overall condition to fair on account of the deteriorating effects the acid would have on the artifacts. This condition and rating alerted HSMC staff to the repackaging needs of the artifacts and ensured the implementation of this task. The *objects* recorded as being fair received ratings of priorities 2-5, with the majority receiving priority 2 and 3 ratings. Most of the *objects* recorded as being in poor condition were listed as a priority 3, with a handful receiving a priority 1, 2, 4, or 5. Of the metal *objects* listed as being "not stable," and therefore requiring conservation treatment sooner rather than later, the majority were found to be a priority 2, while several received a priority 1. A priority rating of 1 or 2 indicates that a number of these artifacts are a high priority and are in the most need of treatment due to their deteriorated condition.

For inorganic *objects*, the majority of the priority 5 items recorded during the survey were found in stable condition. A number of inorganic *objects*, (table glass fragments) were found deteriorated beyond treatment. Artifacts in this condition also received a priority 5 rating. One table glass fragment on exhibit was considered fair and yet received a priority 5 rating, as it will need to be monitored regularly. These priority 5 items, primarily 17$^{th}$-century olive green bottle glass and table glass, were recorded so that the staff at HSMC would be able to find the glass in the future and re-examine it to determine its conservation needs. Although a large number of ceramics were present at this site, a conservation treatment form was completed only if these inorganics required treatment. A large number of ceramics, glass, and pipes were found to be in stable or fair condition and received a priority 4. A stable object receiving a priority 4 is unique to the 2004-2005 survey, as it is directly involves the incorporation of the study collections data into the conservation database. A considerable number of these inorganics housed inside the metal cabinets were found to be physically stable. However, at the time this information was entered into the database, the objects had been packaged in acidic cardboard boxes without archival lining, which thus relegated the overall condition to fair on account of the deteriorating effects the acid would have on the artifacts. This condition and rating alerted HSMC staff to the repackaging needs of the artifacts and ensured the implementation of this task. A few small samples of olive bottle glass that received a priority 3 rating (5%) comprise the majority of *objects* considered to be in poor condition.

Four organic artifacts were recorded as being present. One organic composed of bone, a comb fragment, was found to be in fair condition and received a priority rating of 4 (25%). Three additional organics composed of bone: a die, a chess piece, and a needle case; were considered stable and therefore received a priority 5 rating. These three artifacts are currently on exhibit at the Visitor Center. Fourteen composite items ranging from fair to not stable condition were recommended for treatment. The majority received a priority 1 rating, while a handful fell between priority 2 and 3. A considerable amount of these artifacts are buttons composed of iron, copper alloy, lead alloy, and glass. Three composite items were found to be in stable condition and therefore not recommended for treatment. Two of these artifacts are on exhibit and are a gold/copper alloy earring, and copper alloy/glass rosary beads. The last artifact is a lead/copper alloy button housed inside of Room 1. No objects within the category of "other" were present.

**TABLE XI-4: CONDITION OF OBJECTS BY PRIORITY, ST1-23 ST. JOHN'S**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 2 | 0 | 0 | 0 | 222 | 224 |
| Fair | 0 | 23 | 46 | 2 | 1 | 72 |
| Poor | 1 | 9 | 24 | 1 | 2 | 37 |
| Not Stable/Deteriorated | 5 | 8 | 0 | 0 | 2 | 15 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 3 | 3 |
| Fair | 0 | 0 | 0 | 1 | 0 | 1 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 151 | 105 | 256 |
| Fair | 0 | 1 | 15 | 89 | 1 | 106 |
| Poor | 0 | 1 | 19 | 4 | 0 | 24 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 1 | 1 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 3 | 3 |
| Fair | 5 | 2 | 1 | 0 | 0 | 8 |
| Poor | 4 | 0 | 0 | 0 | 0 | 4 |
| Not Stable/Deteriorated | 2 | 0 | 0 | 0 | 0 | 2 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **19** | **44** | **105** | **248** | **340** | **756** |

**Treatment Recommendations**

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table XI-5. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[25] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, an *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

[25] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object.* This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. Of all the *objects* from ST1-23 that were recommended for treatment (total 412), 46% require treatment by a conservator and 54% can be treated by a staff member. The high percentage of objects that can be treated by a staff member is directly connected to the large amount of inorganics present at this site. One hundred percent of all metals, organics, and composites surveyed must be treated by a conservator. However, staff members are allowed to perform conservation on non-diagnostic inorganics such as olive bottle glass, and this material usually receives the highest number of conservation treatment forms. However, a large number of pipes and ceramics under the category of "inorganic other" received treatment forms (primarily due to rehousing needs) and these materials can also be treated by staff members. The incorporation of the metal cabinet study collection into the conservation survey has increased the number of artifacts that can be treated by a staff member, as it contains high concentrations of non-diagnostic inorganics. Forty-one percent of the metals needing treatment were listed as either a priority 1 or 2 indicating that conservation treatment is needed sooner rather than later. However, over half (56%) of the metals received a priority 3 rating, indicating that treatment has to be performed in the near future. A large portion of the priority 3 metals were non-diagnostic copper alloy and lead alloy artifacts. One organic, a bone comb fragment, received a priority 4 rating and requires the attention of a conservator. All fourteen composite objects (priorities 1-3) must also be treated by a conservator. Within the inorganic category, 79% of the *objects* listed for treatment can be treated by a staff member and are a priority 4, indicating treatment can wait. Twenty-one percent of the inorganic materials received a priority 4 rating, requiring the attention of a trained professional conservator. Most priority 1 and 2 items in need of conservation will require treatment by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task.

**TABLE XI-5: LEVEL OF CONSERVATION TREATMENT BY PRIORITY, ST1-23 ST. JOHN'S**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 7 | 40 | 65 | 3 | 1 | 116 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 1 | 0 | 1 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 2 | 34 | 22 | 1 | 59 (21%) |
| Staff | 0 | 0 | 0 | 222 | 0 | 222 (79%) |
| COMPOSITE | | | | | | |
| Conservator | 11 | 2 | 1 | 0 | 0 | 14 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 18 | 44 | 100 | 248 | 2 | 412 |
| **Conservator** | 18 | 44 | 100 | 26 | 2 | 190 (46%) |
| **Staff** | 0 | 0 | 0 | 222 | 0 | 222 (54%) |

The conservation needs can also be reviewed according to artifact material (Table XI-6). Data are grouped in Table XI-6 under the broader headings of metal, organic, inorganic, composite, and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite, and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of

the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal and inorganic material groups contained the majority of artifacts in need of treatment. The majority of artifacts in need of immediate conservation treatment (priority 1 and 2) are iron and copper alloy (39%). A considerable amount of priority 3 copper alloys (7%) and a smaller amount of lead alloys (3%) with priorities 1-3 also require treatment. A large number of metals (30%) received a priority 5 rating and were not recommended for treatment. Most of the inorganic *objects* requiring treatment (namely pipes, ceramics, and olive bottle glass) received a priority 4 rating (33%). A considerable number of 17$^{th}$-century olive bottle glass and table glass (13%) was recorded as being present and stable, and therefore received a priority 5 with no treatment recommended. Four organic objects (a bone comb fragment, chess piece, gaming die, and needle case) were present (0.5%). The comb fragment in fair condition received a rating of priority 4, while the other artifacts received a priority 5 rating, as they were considered stable. Fourteen composites (2%), primarily iron/copper alloy buttons, range from fair to not stable condition and received priority ratings of 1-3. Most will require the immediate attention of a conservator. No objects within the category of "other" were present.

**TABLE XI-6: ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ST1-23 ST. JOHN'S**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 7 | 13 | 0 | 1 | 123 | 144 |
| Copper Alloy | 0 | 19 | 49 | 2 | 29 | 99 |
| Lead Alloy | 1 | 5 | 16 | 0 | 67 | 89 |
| White Metal Alloy | 0 | 2 | 0 | 0 | 4 | 6 |
| Other | 0 | 0 | 0 | 0 | 4 | 4 |
| Total Metals | 8 | 39 | 65 | 3 | 227 | 342 |
| ORGANIC | 0 | 0 | 0 | 1 | 3 | 4 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 0 | 49 | 10 | 59 |
| Other Glass | 0 | 2 | 33 | 13 | 87 | 135 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 10 | 3 | 13 |
| Other Ceramics | 0 | 0 | 0 | 21 | 3 | 24 |
| Other | 0 | 0 | 0 | 151 | 3 | 154 |
| Total Inorganic | 0 | 2 | 33 | 244 | 106 | 385 |
| COMPOSITE | 11 | 2 | 1 | 0 | 3 | 17 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **19** | **43** | **99** | **248** | **339** | **748** |

The conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table XI-7. The numbers listed in Table XI-7 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.* General material groups containing no data were not tallied and listed.

For metal material types (primarily iron and copper alloy), the majority of artifacts that require treatment need to be cleaned and stabilized (14%). The majority of these objects are hardware fragments, implement blades, and buckle fragments. Three metals (0.4%) need to be cleaned only, while a larger number of artifacts require re-treatment (0.9%) and have received priority ratings of 1-3.

For inorganic material types, the majority needs to be repackaged (20%) and have received a priority 4 rating. These are primarily pipes and ceramics found within the metal cabinet study collection. A considerable number of artifacts (glass and ceramics) also require cleaning (9%) and were recorded as a priority 3 or 4, while a smaller amount require cleaning and stabilization (7%). These treatments are relatively simple and straightforward and some of the artifacts will most likely be batch treated, as the majority of glass *objects* listed represent a bag of glass and not one object. A considerable number of inorganics (14%), primarily olive bottle glass and table glass, were not recommended for treatment but may need to be re-examined in the future for treatment needs including repackaging.

One organic artifact (0.1%), a bone comb fragment, requires cleaning only. Three additional organics, a bone chess piece, gaming die, and needle case, were considered stable and therefore received a priority 5 rating. Fourteen composite artifacts (2%), primarily iron and copper alloy buttons, need to be cleaned and stabilized. Three composite artifacts, a gold/glass earring, copper alloy/glass rosary beads, and a copper alloy/lead alloy button, were considered stable and received a priority 5 rating with no treatment recommended. No objects within the category of "other" were present.

**TABLE XI-7: TREATMENT RECOMMENDATIONS BY PRIORITY, ST1-23 ST. JOHN'S**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 2 | 0 | 1 | 0 | 3 |
| Stabilize Only | 0 | 0 | 0 | 0 | 1 | 1 |
| Clean and Stabilize | 7 | 38 | 64 | 2 | 0 | 111 |
| Re-package | 1 | 0 | 0 | 0 | 0 | 1 |
| Re-treatment | 1 | 4 | 2 | 0 | 0 | 7 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 1 | 0 | 0 | 0 | 225 | 226 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 1 | 0 | 1 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 3 | 3 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 12 | 0 | 12 |
| Cleaning Only | 0 | 0 | 3 | 70 | 0 | 73 |
| Stabilize Only | 0 | 0 | 0 | 1 | 0 | 1 |
| Clean and Stabilize | 0 | 2 | 31 | 19 | 1 | 53 |
| Re-package | 0 | 0 | 0 | 150 | 1 | 151 |
| Re-treatment | 0 | 0 | 0 | 3 | 1 | 4 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 1 | 0 | 1 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 105 | 105 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 11 | 2 | 1 | 0 | 0 | 14 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 3 | 3 |
| OTHER | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **21** | **48** | **101** | **260** | **340** | **770** |

## APPENDIX XII: ST1-103, CHAPEL SITE

### SITE HISTORY

ST1-103 is the site of the Roman Catholic brick chapel built sometimes around 1667 and demolished in the early 18th century. This site has been the focus of a number of projects over the past 20 years. The first investigations were limited test excavations in 1984. Subsequently, starting in 1988, a major campaign of investigations uncovered a massive, cross shaped brick foundations, two other colonial loci, and a major 17th-century cemetery (Figure XII-1). The colonial domestic sites include an earlier chapel house and residence built together, and a structure which has been called the Priest's House, which appears to date to the end of the 17th century and into the 18th century. ST1-103 was the location where three lead coffins were excavated in the early 1990s. Currently the brick building is being reconstructed on its original foundations using period techniques and materials. Plans call for the cemetery to be restored and the building know as the Priest's House reconstructed to serve as a gallery space for interpreting the site.

***Figure XII-1. Chapel foundations before reconstruction.***

### SURVEY RESULTS

The 2004-2005 Conservation Survey examined 111 boxes (1594 lots) of artifacts from the Chapel site. The 1594 lots were surveyed between October 2004 and March 2005. The artifacts from this site were stored in Room 2 [Archaeological Annex] on metal shelving and on exhibit in Room 3 [HSMC Visitor Center]. The majority of the lots were packaged in acid-free Hollinger boxes or acid-free Coroplast® boxes prior to the beginning of the survey. The eight lots on display at the Visitor Center are housed within glass and UV filtering Plexiglas® cases. The exhibition space is climate-controlled and monitored regularly. Nine boxes of "metals only" were included in this survey.

#### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the conservation survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table XII-1). The metals were

boxed separately in acid-free Coroplast® boxes and were desiccated using indicating silica gel. Metals represent almost half (45%) of the lots surveyed within this site. Out of 1594 lots, 665 (42%) contain pull slips to indicate that objects were removed from those lots. In some instances, pull slips indicated that whole lots were pulled for exhibit or x-radiography. Like these pulled lots, many other objects such as ceramics, table glass, window leads, and conserved iron and copper alloys were pulled for either exhibition or the comparative collection.

**TABLE XII-1: CURRENT SORTING CONDITION, ST1-103 CHAPEL**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 712 (45%) | 882 (55%) |
| HEAVY OBJECT PRESENT | 0 | 1594 (100%) |
| PULL SLIP PRESENT | 665 (42%) | 929 (58%) |

**Materials Present**

The materials present were recorded during the survey (Table XII-2). The largest groups of artifacts materials surveyed included architecture (48%), metal (45%), lithics (40%), and by-product (37%). Shell (36%), glass (32%), pipes (25%), and bone (14%) were present in moderate numbers. Low percentages of organics, ceramics, prehistoric ceramics, and objects within the category of "other" were also recorded. The artifacts from this site primarily date to the mid-to-late 17$^{th}$ century and the early 18$^{th}$ century.

**TABLE XII-2: MATERIALS PRESENT, ST1-103 CHAPEL**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 1594 (100%) |
| BONE | 221 (14%) | 1373 (86%) |
| CERAMICS | 71 (4%) | 1523 (96%) |
| GLASS | 512 (32%) | 1082 (68%) |
| METAL | 713 (45%) | 881 (55%) |
| ARCHITECTURE | 758 (48%) | 836 (52%) |
| SHELL | 576 (36%) | 1018 (64%) |
| BY-PRODUCT | 583 (37%) | 1011 (63%) |
| LITHICS | 640 (40%) | 954 (60%) |
| PREHISTORIC CERAMICS | 20 (1.3%) | 1574 (98.7%) |
| SOIL SAMPLE | 3 (0.2%) | 1591 (99.8%) |
| ORGANIC | 80 (5%) | 1514 (95%) |
| PIPES | 396 (25%) | 1198 (75%) |
| OTHER | 44 (3%) | 1550 (97%) |

**Previous Treatment**

The majority of the lots surveyed from this site have been washed, sorted, labeled, catalogued, and include a paper label inside the bag (Table XII-3). Two lots contained artifacts that (0.1%) were not catalogued, while three lots contained some artifacts that were. Eleven lots (0.7%) lacked paper labels. More than half of the objects without paper labels are currently on exhibit at the Visitor Center. Two lots (0.1%) contain a number of artifacts including ceramics, glass, architecture, and shell that have been previously crossmended. One lot (0.1%) contains artifacts that were previously taped (ceramics, glass, and pipes), while three lots (0.2%) contain artifacts that have been adhered. These adhered objects include modified bone, ceramics, glass, and pipes. Only two lots (0.1%) contain conserved metals, while 447 lots contain conserved glass *objects* (28%). A handful of objects outside of metal and glass have also been previously conserved, such as bone, ceramics, and glass. For this particular site, laboratory procedures in

place when the site was excavated called for the treatment of all glass as it was brought in from the field. The surveyor therefore assumed that the glass had been treated unless its physical characteristics made it clear that no treatment had taken place. Therefore if glass was present, a "yes" was recorded by default in the "glass conservation" category, unless it was not treated.

**TABLE XII-3: PREVIOUS TREATMENT INFORMATION, ST1-103 CHAPEL**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 1594 (100%) | 0 | 0 |
| SORTED | 1594 (100%) | 0 | 0 |
| LABELED | 1594 (100%) | 0 | 0 |
| CATALOGUED | 1589 (99.7%) | 2 (0.1%) | 3 (0.2%) |
| PAPER LABEL | 1583 (99.3%) | 11 (0.7%) | 0 |
| CROSSMENDED | 2 (0.1%) | 1591 (99.8%) | 1 (0.1%) |
| TAPED | 1 (0.1%) | 1593 (99.9%) | 0 |
| ADHERED | 3 (0.2%) | 1588 (99.6%) | 3 (0.2%) |
| METAL CONSERVED | 2 (0.1%) | 1592 (99.9%) | 0 |
| GLASS CONSERVED | 447 (28%) | 1143 (71.7%) | 4 (0.3%) |
| OTHER CONSERVED | 2 (0.1%) | 1592 (99.9%) | 0 |

**Condition of Objects**

Basic observations were made while surveying the collection regarding the condition of the *objects* (Table XII-4).

Metal (primarily iron coffin nails and copper alloy grave clothing pins) and inorganic (mainly olive bottle glass and table glass) represent the bulk of *objects* designated for conservation treatment. For metal items surveyed, the *objects* fell into three categories of condition: fair (1%), poor (37%), and not stable (61%). No metals were found in stable condition. The *objects* recorded as being fair received ratings of priority 3 and 4. Most of the *objects* recorded as being in poor condition were listed as a priority 2, with a small number receiving a priority 3. A window lead in poor condition received a priority 1. Of the metal *objects* listed as being "not stable," and therefore requiring conservation treatment sooner rather than later, the majority were found to be a priority 1, while several received a priority 2. A priority rating of 1 or 2 indicates that a number of these artifacts are a high priority and are in the most need of treatment due to their deteriorated condition.

For inorganic *objects*, the majority of the priority 5 items recorded during the survey were found in stable condition. A number of inorganic *objects*, olive bottle glass sherds, were found deteriorated beyond treatment. Artifacts in this condition also received a priority 5 rating. These priority 5 items, primarily 17$^{th}$-century olive green bottle glass and table glass, were recorded so that the staff at HSMC would be able to find the glass in the future and re-examine it to determine its conservation needs. The majority of inorganics in need of treatment, an assortment of glass beads, were found to be in fair condition and received a priority 2 rating (3%). A few small samples of olive bottle glass that received a priority 4 rating (1%) were considered to be in either fair or poor condition.

Three organic artifacts were recorded as being present, with two requiring treatment. One organic composed of bone with signs of coming into contact with a copper alloy object was found to be in fair condition and received a priority rating of 3 (33%). The other organic artifact was a linen fragment that might have originally been associated with a grave clothing pin. This artifact was considered to be in poor condition and received a priority 2 rating due to its possible significance. The third organic artifact, a bone handle fragment, was found stable and therefore received a priority 5 rating with no treatment recommended. One composite item, a bone and

copper alloy pin, was considered unstable and received a priority 1 rating. Eight objects within the category of "other" were recorded as being present, with seven requiring treatment. These items were mainly comprised of 19th-century polymers, which included a Bakelite plastic comb fragment. The majority (63%) was in fair condition and received a priority 4 rating.

**TABLE XII-4: CONDITION OF OBJECTS BY PRIORITY, ST1-103 CHAPEL**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 2 | 1 | 0 | 3 |
| Poor | 1 | 46 | 35 | 0 | 0 | 82 |
| Not Stable/Deteriorated | 78 | 55 | 1 | 0 | 0 | 134 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 1 | 1 |
| Fair | 0 | 0 | 1 | 0 | 0 | 1 |
| Poor | 0 | 1 | 0 | 0 | 0 | 1 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 456 | 456 |
| Fair | 0 | 16 | 0 | 4 | 0 | 20 |
| Poor | 0 | 2 | 0 | 1 | 0 | 3 |
| Not Stable/Deteriorated | 0 | 0 | 1 | 0 | 0 | 1 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 1 | 1 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 1 | 0 | 0 | 0 | 0 | 1 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 1 | 1 |
| Fair | 0 | 0 | 0 | 5 | 0 | 5 |
| Poor | 0 | 0 | 2 | 0 | 0 | 2 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **80** | **120** | **42** | **11** | **459** | **712** |

**Treatment Recommendations**

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table XII-5. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent

the number of *objects*[26] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, an *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. Of all the *objects* from the Chapel site that were recommended for treatment (total 253), 98% require treatment by a conservator and only 2% can be treated by a staff member. One hundred percent of all metals, organics, composites, and objects within the category of "other" surveyed must be treated by a conservator. Eighty-two percent of the metals needing treatment, primarily iron and copper alloy, were listed as either a priority 1 or 2 indicating that conservation treatment is needed sooner rather than later. A smaller number of metals (17%) received a priority 3 rating, indicating that treatment must be performed in the near future. A large portion of the priority 3 metals were non-diagnostic copper alloy and lead alloy artifacts. Two organics, a priority 2 textile fragment and priority 3 bone samples, require the attention of a conservator. One bone and copper alloy pin recorded as a composite (priority 1) must also be treated by a conservator. Within the inorganic category, 79% of the *objects* listed for treatment must be treated by a conservator with the majority given a priority 2, indicating treatment is needed sooner rather than later. Twenty-one percent of the inorganic materials can be treated by a staff member. All of these items are olive bottle glass and the majority has received a priority 4 rating. Most priority 1 and 2 items in need of conservation will require treatment by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task.

**TABLE XII-5: LEVEL OF CONSERVATION TREATMENT BY PRIORITY, ST1-103 CHAPEL**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 79 | 101 | 38 | 1 | 0 | 219 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 1 | 1 | 0 | 0 | 2 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 18 | 0 | 1 | 0 | 19 (79%) |
| Staff | 0 | 0 | 1 | 4 | 0 | 5 (21%) |
| COMPOSITE | | | | | | |
| Conservator | 1 | 0 | 0 | 0 | 0 | 1 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 2 | 5 | 0 | 7 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 80 | 120 | 42 | 11 | 0 | 253 |
| **Conservator** | 80 | 120 | 41 | 7 | 0 | 248 (98%) |
| **Staff** | 0 | 0 | 1 | 4 | 0 | 5 (2%) |

The conservation needs can also be reviewed according to artifact material (Table XII-6). Data are grouped in Table XII-6 under the broader headings of metal, organic, inorganic, composite, and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite and other categories, the surveyor did not find as many "different" types of artifacts within those

[26] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal and inorganic material groups contained the majority of artifacts in need of treatment. The majority of artifacts in need of immediate conservation treatment (priority 1 and 2) are iron and copper alloy (25%). These are predominantly coffin nails and grave clothing pins. A small number of priority 3 copper alloy *objects* (1%) and a larger amount of lead alloy *objects* (5%) with priorities 1-3 also require treatment. No metals were considered stable. Most of the inorganic *objects* requiring treatment (an assortment of glass beads) received a priority 2 rating (3%). A handful of olive bottle glass samples received a priority 3 or 4 (0.8%). A large number of olive bottle glass and table glass (64%) was recorded as being present and stable, and therefore received a priority 5 with no treatment recommended. Three organic objects (bone samples possibly once associated with a copper alloy artifact, a textile fragment, and a bone handle fragment) were present (0.4%). The bone samples were in fair condition and received a rating of priority 3, while the textile fragment was found to be in poor condition and received a priority 2. The bone handle fragment received a priority 5 rating, as it was considered stable. One composite (0.1%), a bone and copper alloy pin, received a priority 1 rating. Eight objects within the category of "other" were present. All of these items are 19th-century polymers, which are plastics and rubber. Seven (1%) require conservation treatment and the majority received a priority 4 rating.

**TABLE XII-6: ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ST1-103 CHAPEL**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 77 | 54 | 0 | 0 | 0 | 131 |
| Copper Alloy | 0 | 45 | 7 | 0 | 0 | 52 |
| Lead Alloy | 2 | 2 | 31 | 0 | 0 | 35 |
| White Metal Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 1 | 0 | 1 |
| Total Metals | 79 | 101 | 38 | 1 | 0 | 219 |
| ORGANIC | 0 | 1 | 1 | 0 | 1 | 3 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 1 | 5 | 366 | 372 |
| Other Glass | 0 | 18 | 0 | 0 | 89 | 107 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Inorganic | 0 | 18 | 1 | 5 | 455 | 479 |
| COMPOSITE | 1 | 0 | 0 | 0 | 0 | 1 |
| OTHER | 0 | 0 | 2 | 5 | 1 | 8 |
| **TOTALS** | **80** | **120** | **42** | **11** | **457** | **710** |

The conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment

7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table XII-7. The numbers listed in Table XII-7 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.* General material groups containing no data were not tallied and listed.

For metal material types (primarily iron and copper alloy), the majority of artifacts that require treatment need to be cleaned and stabilized (25%). One metal (0.1%) needs to be cleaned only, while a larger number of artifacts require x-radiography (2%) and have received priority ratings of 1 or 2. A considerable number of metals (5%), primarily copper alloy pins associated with grave clothing, need to be analyzed. Staff at HSMC discovered that these copper alloy artifacts preserve microscopic textile fragments, which are researched for additional information on 17th-century mortuary practices.

For inorganic material types, the majority needs to be clean and stabilized (1%) or cleaned only (2%) and have received a priority 2 or 4 rating. These are primarily olive bottle glass and glass beads. The treatments are relatively simple and straightforward and some of the artifacts will most likely be batch treated. A considerable number of inorganics (63%), primarily olive bottle glass and table glass, were not recommended for treatment but may need to be re-examined in the future for treatment needs including repackaging.

An organic *object* (0.1%), priority 3 bone samples once associated with a copper alloy artifact, requires cleaning and stabilization. Another organic, a priority 2 textile fragment, requires analysis. A third organic, a bone handle fragment, was considered stable and therefore received a priority 5 rating. One composite artifact (0.1%), a bone and copper alloy pin, requires analysis. Seven priority 4 objects within the category of "other" require cleaning and stabilization (0.5%) or cleaning only (0.4%). These are 19th-century polymers, which include a Bakelite plastic comb fragment.

**TABLE XII-7: TREATMENT RECOMMENDATIONS BY PRIORITY, ST1-103 CHAPEL**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 1 | 0 | 1 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 79 | 68 | 38 | 0 | 0 | 185 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 11 | 5 | 0 | 0 | 0 | 16 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 33 | 0 | 0 | 0 | 33 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Clean and Stabilize | 0 | 0 | 1 | 0 | 0 | 1 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 1 | 0 | 0 | 0 | 1 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 1 | 1 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 9 | 0 | 4 | 0 | 13 |
| Stabilize Only | 0 | 0 | 1 | 0 | 0 | 1 |
| Clean and Stabilize | 0 | 9 | 0 | 1 | 0 | 10 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 1 | 0 | 0 | 1 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 456 | 456 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 1 | 0 | 0 | 0 | 0 | 1 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 3 | 0 | 3 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 2 | 2 | 0 | 4 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 1 | 1 |
| **TOTALS** | **91** | **125** | **43** | **11** | **458** | **728** |

## APPENDIX XIII: ST1-104, ALDERMANBURY STREET

### SITE HISTORY

ST1-104, Aldermanbury Street, was the number originally used to demark a site area along one of the original streets of the city. This site area was adjacent to the Van Sweringen site (ST1-19) which was described above. ST1-110 is the designation for an earlier colonial site near the current location of Anne Arundel Hall (see ST1-18 above) but not directly related to the Mackall plantation. ST1-111 is a colonial site associated with a small 18th-and 19th-century cemetery that holds the remains of Mackalls and Bromes and their relatives.

### SURVEY RESULTS

The 2004-2005 Conservation Survey examined five boxes (162 lots) of artifacts from the Aldermanbury Street site. All 162 lots were surveyed in March 2005. The artifacts from this site were stored in Room 1 [Archaeological Laboratory] on metal shelving. All lots were packaged in acid-free Hollinger boxes or acid-free Coroplast® boxes prior to the beginning of the survey. One box of "metals only" was included in this survey.

#### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the conservation survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table XIII-1). The metals were boxed separately in acid-free Coroplast® boxes and were desiccated using indicating silica gel. Metals represent 38% of the lots surveyed within this site. Out of 162 lots, three (2%) contain pull slips to indicate that objects were removed from those lots. In some instances, pull slips indicated that whole lots were pulled for exhibit or x-radiography. Like these pulled lots, many other objects such as ceramics, table glass, window leads and conserved iron and copper alloys were pulled for either exhibition or the comparative collection.

**TABLE XIII-1: CURRENT SORTING CONDITION, ST1-104 ALDERMANBURY STREET**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 62 (38%) | 100 (62%) |
| HEAVY OBJECT PRESENT | 0 | 162 (100%) |
| PULL SLIP PRESENT | 3 (2%) | 159 (98%) |

#### Materials Present

The materials present were recorded during the survey (Table XIII-2). The largest groups of artifacts materials surveyed included metal (38%), architecture (38%), lithics (38%), and ceramics (33%). Shell (31%), glass (28%), by-product (15%), and pipes (14%) were present in moderate numbers. Low percentages of bone, organics, and prehistoric ceramics were also recorded.

**TABLE XIII-2: MATERIALS PRESENT, ST1-104 ALDERMANBURY STREET**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 162 (100%) |
| BONE | 13 (8%) | 149 (92%) |
| CERAMICS | 53 (33%) | 109 (67%) |
| GLASS | 46 (28%) | 116 (72%) |
| METAL | 62 (38%) | 100 (62%) |
| ARCHITECTURE | 61 (38%) | 101 (62%) |
| SHELL | 51 (31%) | 111 (69%) |
| BY-PRODUCT | 25 (15%) | 137 (85%) |
| LITHICS | 61 (38%) | 101 (62%) |
| PREHISTORIC CERAMICS | 8 (5%) | 154 (95%) |
| SOIL SAMPLE | 0 | 162 (100%) |
| ORGANIC | 11 (7%) | 151 (93%) |
| PIPES | 22 (14%) | 140 (86%) |
| OTHER | 0 | 162 (100%) |

**Previous Treatment**

The majority of the lots surveyed from this site have been washed, sorted, labeled, catalogued, and include a paper label inside the bag (Table XIII-3). One lot (1%) contained shell and architectural fragments that were not previously washed or labeled. This same lot lacked paper labels. Twenty-eight lots (82.1%) contained artifacts that had not been previously catalogued. No lots contain artifacts that have been previously crossmended or taped. One lot (1%) contains artifacts that have been previously adhered, such as ceramics, glass, lithics, and pipes. Six lots (3.7%) contain conserved metals, while no lots contain conserved glass *objects*.

**TABLE XIII-3: PREVIOUS TREATMENT INFORMATION, ST1-104 ALDERMANBURY STREET**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 161 (99%) | 1 (1%) | 0 |
| SORTED | 162 (100%) | 0 | 0 |
| LABELED | 161 (99%) | 1 (1%) | 0 |
| CATALOGUED | 133 (82.1%) | 28 (17.3%) | 1 (0.6%) |
| PAPER LABEL | 161 (99%) | 1 (1%) | 0 |
| CROSSMENDED | 0 | 162 (100%) | 0 |
| TAPED | 0 | 162 (100%) | 0 |
| ADHERED | 0 | 161 (99%) | 1 (1%) |
| METAL CONSERVED | 2 (1.2%) | 156 (96.3%) | 4 (2.5%) |
| GLASS CONSERVED | 0 | 162 (100%) | 0 |
| OTHER CONSERVED | 0 | 162 (100%) | 0 |

**Condition of Objects**

Basic observations were made while surveying the collection regarding the condition of the *objects* (Table XIII-4).

Metal (primarily iron) and inorganic (olive bottle glass and table glass) comprise the *objects* designated for conservation treatment. For metal items surveyed, the *objects* fell into four categories of condition: stable (20%), fair (10%), poor (20%), and not stable (50%). Two previously treated iron artifacts were found in stable condition and therefore not recommended for treatment. A copper alloy cuff link, recorded as being fair, received a rating of priority 2. Iron horse trappings (priority 1) and a buffalo nickel (priority 4) were both recorded as being in poor

condition. The majority of the metals requiring treatment were considered unstable and received a priority 1 or 2, indicating conservation treatment is needed sooner rather than later. These items are composed of iron and include a horse trappings fragment, a lock plate, and a door hinge.

For inorganic *objects*, all of the priority 5 items recorded during the survey were found in stable condition. These priority 5 items, primarily 17th-century olive green bottle glass, were recorded so that the staff at HSMC would be able to find the glass in the future and re-examine it to determine its conservation needs. The majority of inorganics in need of treatment, olive bottle glass samples, were found to be in fair condition and received a priority 4 rating (27%). Priority 3 table glass fragments and a priority 2 glass bead (12%) were considered to be in fair condition. One olive bottle glass sample considered stable received a priority 4, as it was not previously conserved and needs to be monitored. No organics, composites, or artifacts within the category of "other" were recorded as being present.

**TABLE XIII-4: CONDITION OF OBJECTS BY PRIORITY, ST1-104 ALDERMANBURY STREET**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 2 | 2 |
| Fair | 0 | 1 | 0 | 0 | 0 | 1 |
| Poor | 1 | 0 | 0 | 1 | 0 | 2 |
| Not Stable/Deteriorated | 3 | 2 | 0 | 0 | 0 | 5 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 1 | 16 | 17 |
| Fair | 0 | 1 | 2 | 5 | 0 | 8 |
| Poor | 0 | 0 | 0 | 1 | 0 | 1 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **4** | **4** | **2** | **8** | **18** | **36** |

**Treatment Recommendations**

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table XIII-5. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[27] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, an *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. Of all the *objects* from the Aldermanbury Street site that were recommended for treatment (total 17), 53% require treatment by a conservator and 47% can be treated by a staff member. The high percentage of objects that can be treated by a staff member is directly connected to the large amount of inorganics present at this site. One hundred percent of all metals surveyed must be treated by a conservator. However, staff members are allowed to perform conservation on non-diagnostic inorganics, such as olive bottle glass. This material received the highest number of conservation treatment forms. Eighty-eight percent of the metals needing treatment, primarily iron and copper alloy, were listed as either a priority 1 or 2 indicating that conservation treatment is needed sooner rather than later. One copper alloy coin (13%) received a priority 4 rating, indicating that treatment can wait. Within the inorganic category, 11% of the *objects* listed for treatment must be treated by a conservator received a priority 2, indicating treatment is needed sooner rather than later. This was a blue glass bead in fair condition that was not previously treated. A staff member can treat 89% of the inorganic materials. Most of these items are olive bottle glass, which received a priority 4 rating. Small samples of non-diagnostic table glass sherds that received a priority 3 rating can also be treated by a staff member. Most priority 1 and 2 items in need of conservation will require treatment by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task.

**TABLE XIII-5: LEVEL OF CONSERVATION TREATMENT BY PRIORITY, ST1-104 ALDERMANBURY STREET**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 4 | 3 | 0 | 1 | 0 | 8 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 1 | 0 | 0 | 0 | 1 (11%) |
| Staff | 0 | 0 | 2 | 6 | 0 | 8 (89%) |
| COMPOSITE | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |

[27] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

| | | | | | | |
|---|---|---|---|---|---|---|
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 4 | 4 | 2 | 7 | 0 | 17 |
| | | | | | | |
| **Conservator** | 4 | 4 | 0 | 1 | 0 | 9 (53%) |
| **Staff** | 0 | 0 | 2 | 6 | 0 | 8 (47%) |

The conservation needs can also be reviewed according to artifact material (Table XIII-6). Data are grouped in Table XIII-6 under the broader headings of metal, organic, inorganic, composite, and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal and inorganic material groups contained the artifacts in need of treatment. The majority of artifacts in need of immediate conservation treatment (priority 1 and 2) are iron and copper alloy (19%). Two iron artifacts were considered stable and received a priority 5 rating. One priority 4 copper alloy coin (3%) also requires treatment. Most of the inorganic *objects* requiring treatment (olive bottle glass) received a priority 4 rating (19%). A small amount of "other" glass samples, namely a glass bead and table glass fragments, received a priority 2 and 3 (8%). A considerable number of olive bottle glass (42%) was recorded as being present and stable, and therefore received a priority 5 with no treatment recommended. No organics, composites, or objects within the category of "other" were recorded as needing treatment.

**TABLE XIII-6: ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ST1-104 ALDERMANBURY STREET**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 4 | 2 | 0 | 0 | 2 | 8 |
| Copper Alloy | 0 | 1 | 0 | 1 | 0 | 2 |
| Lead Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| White Metal Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Metals | 4 | 3 | 0 | 1 | 2 | 10 |
| ORGANIC | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 0 | 7 | 15 | 22 |
| Other Glass | 0 | 1 | 2 | 0 | 1 | 4 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Inorganic | 0 | 1 | 2 | 7 | 16 | 26 |
| COMPOSITE | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **4** | **4** | **2** | **8** | **18** | **36** |

The conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table XIII-7. The numbers listed in Table XIII-7 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.* General material groups containing no data were not tallied and listed.

For metal material types (primarily iron and copper alloy), the majority of the artifacts that require treatment need to be cleaned and stabilized (20%). Two previously conserved iron artifacts (5%), horse trappings and a lock plate, need to be re-treated, while an iron hinge and a horse trappings fragment require x-radiography (20%). These four objects have all received a priority 1 rating. Two other iron objects (20%) that have also been previously treated received a priority 5 rating with no treatment recommended.

For inorganic material types, the majority needs to be cleaned only (20%) with one object requiring cleaning and stabilization (3%). These artifacts, namely olive bottle glass and table glass have received priority ratings of 2-4. The treatments are relatively simple and straightforward and some of the artifacts will most likely be batch treated. A considerable number of inorganics (43%), primarily olive bottle glass and table glass, were not recommended for treatment but may need to be re-examined in the future for treatment needs including repackaging. No organics, composites, or objects within the category of "other" required treatment.

**TABLE XIII-7: TREATMENT RECOMMENDATIONS BY PRIORITY, ST1-104 ALDERMANBURY STREET**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 4 | 3 | 0 | 1 | 0 | 8 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 2 | 0 | 0 | 0 | 0 | 2 |
| X-ray | 2 | 0 | 0 | 0 | 0 | 2 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 2 | 2 |
| ORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 1 | 2 | 5 | 0 | 8 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 1 | 0 | 1 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 1 | 16 | 17 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **8** | **4** | **2** | **8** | **18** | **40** |

# APPENDIX XIV: ST1-126, MIDDLE STREET SOUTH

## SITE HISTORY

ST1-126, Middle Street South, is a colonial occupation near the Van Sweringen site that was uncovered as part of an investigation relating to a visit by the Time Team, a British television program that lends assistance to answering archaeological questions. Utilizing magnetometer and resistivity testing, a small feature was identified and subsequently explored by an archaeological field school from Historic St. Mary's City and St. Mary's College of Maryland.

## SURVEY RESULTS

The 2004-2005 Conservation Survey examined 13 boxes (164 lots) of artifacts from the Middle Street South site. All 164 lots were surveyed in February 2005. The artifacts from this site were stored in Room 1 [Archaeological Laboratory] on metal shelving. All lots were packaged in acid-free Hollinger boxes or acid-free Coroplast® boxes prior to the beginning of the survey. One box of "metals only" was included in this survey.

### Sorting Condition

Sorting of the artifacts by materials was accomplished during the repackaging project prior to the conservation survey and this type of sorting was recorded in the "Previous Treatment" section of the database. Other sorting conditions (i.e. the presence of a heavy object, or the presence of a pull slip) were noted in a separate section of the Survey Form (Table XIV-1). The metals were boxed separately in acid-free Coroplast® boxes and were desiccated using indicating silica gel. Metals represent almost half (48%) of the lots surveyed within this site. Out of 164 lots, 12 (7%) contain pull slips to indicate that objects were removed from those lots. In some instances, pull slips indicated that whole lots were pulled for exhibit or x-radiography. Like these pulled lots, many other objects such as ceramics, table glass, window leads and conserved iron and copper alloys were pulled for either exhibition or the comparative collection.

**TABLE XIV-1: CURRENT SORTING CONDITION, ST1-126 MIDDLE STREET SOUTH**

| CURRENT SORTING CONDITION | YES | NO |
|---|---|---|
| METALS PRESENT | 78 (48%) | 86 (52%) |
| HEAVY OBJECT PRESENT | 0 | 164 (100%) |
| PULL SLIP PRESENT | 12 (7%) | 152 (93%) |

### Materials Present

The materials present were recorded during the survey (Table XIV-2). The largest groups of artifact materials surveyed included architecture (49%), metal (48%), glass (46%), and ceramics (46%). Pipes (43%), bone (24%), and prehistoric ceramics (12%) were present in moderate numbers. Low percentages of objects within the category of "other" (9%) and organics materials (0.6%) were also recorded.

**TABLE XIV-2: MATERIALS PRESENT, ST1-126 MIDDLE STREET SOUTH**

| MATERIALS PRESENT | YES | NO |
|---|---|---|
| MIXED | 0 | 164 (100%) |
| BONE | 39 (24%) | 125 (76%) |
| CERAMICS | 76 (46%) | 88 (54%) |
| GLASS | 75 (46%) | 89 (54%) |
| METAL | 78 (48%) | 86 (52%) |
| ARCHITECTURE | 81 (49%) | 83 (51%) |
| SHELL | 76 (46%) | 88 (54%) |
| BY-PRODUCT | 78 (48%) | 86 (52%) |
| LITHICS | 81 (49%) | 83 (51%) |
| PREHISTORIC CERAMICS | 20 (12%) | 144 (88%) |
| SOIL SAMPLE | 0 | 164 (100%) |
| ORGANIC | 1 (0.6%) | 163 (99.4%) |
| PIPES | 70 (43%) | 94 (57%) |
| OTHER | 14 (9%) | 150 (91%) |

**Previous Treatment**

All of the lots surveyed from this site have been washed, sorted, labeled, catalogued, and include a paper label inside the bag (Table XIV-3). One lot (0.6%) contains a ceramic that has been taped. No lots contain artifacts that were previously crossmended or adhered. One lot (0.6%) contains some metals that have been treated. Sixty-eight lots (41%) contain conserved glass *objects*, while six lots (4%) contain only some glass that has been conserved.

**TABLE XIV-3: PREVIOUS TREATMENT INFORMATION, ST1-126 MIDDLE STREET SOUTH**

| PREVIOUS TREATMENT | YES | NO | SOME |
|---|---|---|---|
| WASHED | 164 (100%) | 0 | 0 |
| SORTED | 164 (100%) | 0 | 0 |
| LABELED | 164 (100%) | 0 | 0 |
| CATALOGUED | 164 (100%) | 0 | 0 |
| PAPER LABEL | 164 (100%) | 0 | 0 |
| CROSSMENDED | 0 | 164 (100%) | 0 |
| TAPED | 0 | 163 (99.4%) | 1 (0.6%) |
| ADHERED | 0 | 164 (100%) | 0 |
| METAL CONSERVED | 0 | 163 (99.4%) | 1 (0.6%) |
| GLASS CONSERVED | 68 (41%) | 90 (55%) | 6 (4%) |
| OTHER CONSERVED | 0 | 164 (100%) | 0 |

**Condition of Objects**

Basic observations were made while surveying the collection regarding the condition of the *objects* (Table XIV-4).

Metal (primarily iron, copper alloy, and lead alloy) and inorganic (olive bottle glass, table glass, and ceramics) comprise the majority of *objects* designated for conservation treatment. Two composite objects also require treatment. For metal items surveyed, the *objects* fell into four categories of condition: stable (3%), fair (3%), poor (44%), and not stable (51%). A previously treated copper alloy book clasp was found in stable condition and therefore not recommended for treatment. One copper alloy furniture tack, recorded as being fair, received a rating of priority 3. The majority of artifacts found to be in poor condition (copper alloy furniture tacks and lead alloy shots) received a priority 3 rating (33%), while a handful of objects (primarily copper alloy

buttons) received a priority 2 rating (10%). The majority of the metals requiring treatment were considered unstable due to their deteriorated state and received a priority 1 or 2, indicating conservation treatment is needed sooner rather than later. These items are composed of iron and include knife blades, buttons, and a tenterhook.

For inorganic *objects*, all of the priority 5 items recorded during the survey were found in stable condition. These priority 5 items, primarily 17th-century olive green bottle glass and table glass, were recorded so that the staff at HSMC would be able to find the glass in the future and re-examine it to determine its conservation needs. Small samples of olive bottle glass, glass beads, and ceramics comprise the inorganic artifacts in need of treatment (5%). These were considered to be in fair or poor condition, with the majority receiving a priority 4 rating. One inorganic artifact, a glass bead in fair condition, received a priority 2 rating. Two composites received a priority 1 rating. They are a glass/enamel jewelry set in fair condition and an iron/textile strap fragment in poor condition. No organics or artifacts within the category of "other" were recorded as being present.

**TABLE XIV-4: CONDITION OF OBJECTS BY PRIORITY, ST1-126 MIDDLE STREET SOUTH**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METAL | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 1 | 1 |
| Fair | 0 | 0 | 1 | 0 | 0 | 1 |
| Poor | 0 | 4 | 13 | 0 | 0 | 17 |
| Not Stable/Deteriorated | 6 | 14 | 0 | 0 | 0 | 20 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 79 | 79 |
| Fair | 0 | 1 | 0 | 2 | 0 | 3 |
| Poor | 0 | 0 | 0 | 1 | 0 | 1 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| COMPOSITE | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 1 | 0 | 0 | 0 | 0 | 1 |
| Poor | 1 | 0 | 0 | 0 | 0 | 1 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Stable | 0 | 0 | 0 | 0 | 0 | 0 |
| Fair | 0 | 0 | 0 | 0 | 0 | 0 |
| Poor | 0 | 0 | 0 | 0 | 0 | 0 |
| Not Stable/Deteriorated | 0 | 0 | 0 | 0 | 0 | 0 |
| Deteriorated Beyond Treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **8** | **19** | **14** | **3** | **80** | **124** |

**Treatment Recommendations**

To assess the condition of the artifacts, a quantitative ranking system was chosen based on conservation needs of the materials. A ranking system from 1-5 was used with 1 being the highest priority and 5 being the lowest (i.e. does not require conservation treatment). Data collected on the artifacts represent the condition of the materials being surveyed as well as their significance as an archaeological find or in relation to its archaeological provenience. A summary of the material groups needing differing levels of treatment is reported in Table XIV-5. Within each of the lots of artifacts recommended for treatment, it is important to show the level of treatment needed for each material group, and whether a conservator or staff member (i.e. simple surface cleaning) is needed to perform these treatments in the future. "Staff member" also represents treatments that can be performed by supervised students and volunteers. The numbers represent the number of *objects*[28] that require treatment by a conservator or staff member, and these may or may not include more than one artifact. For example, an *object* may represent multiple bags of olive green bottle glass or a single find such as a copper alloy buckle.

These data are important in determining the resources and funding needed to treat objects at HSMC in the future. Of all the *objects* from the Middle Street South site that were recommended for treatment (total 44), 95% require treatment by a conservator and only 5% can be treated by a staff member. For instance, 100% of all metals and composites surveyed must be treated by a conservator. Sixty-three percent of the metals needing treatment, primarily iron and copper alloy, were listed as either a priority 1 or 2 indicating that conservation treatment is needed sooner rather than later. A considerable number of non-diagnostic copper and lead alloys (37%), mainly furniture tacks and shots, received a priority 3 rating, indicating that treatment would be required in the near future. Within the inorganic category, 50% of the *objects* listed for treatment must be treated by a conservator. This includes a priority 2 glass bead that requires treatment sooner rather than later. Fifty percent of the inorganic materials can also be treated by a staff member. They are priority 4 olive bottle glass samples, as well as ceramics that have been taped. Two priority 1 composites (a glass/enamel jewelry set and an iron/textile strap fragment) will need to be conserved by a trained professional. Most priority 1 and 2 items in need of conservation will require treatment by a conservator and therefore funding and resources will need to be obtained in the immediate future to accomplish this task.

**TABLE XIV-5: LEVEL OF CONSERVATION TREATMENT BY PRIORITY, ST1-126 MIDDLE STREET SOUTH**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Conservator | 6 | 18 | 14 | 0 | 0 | 38 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| ORGANIC | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Conservator | 0 | 1 | 0 | 1 | 0 | 2 (50%) |
| Staff | 0 | 0 | 0 | 2 | 0 | 2 (50%) |
| COMPOSITE | | | | | | |
| Conservator | 2 | 0 | 0 | 0 | 0 | 2 (100%) |
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Conservator | 0 | 0 | 0 | 0 | 0 | 0 |

[28] Each *Conservation Treatment* form surveyed for a lot and/ or provenience represents one *object*. This represents the minimum amount of artifacts requiring conservation treatment. One *object* may or may not include more than one artifact.

| | | | | | | |
|---|---|---|---|---|---|---|
| Staff | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | 8 | 19 | 14 | 3 | 0 | 44 |
| **Conservator** | 8 | 19 | 14 | 1 | 0 | 42 (95%) |
| **Staff** | 0 | 0 | 0 | 2 | 0 | 2 (5%) |

The conservation needs can also be reviewed according to artifact material (Table XIV-6). Data are grouped in Table XIV-6 under the broader headings of metal, organic, inorganic, composite and other, as well as by specific materials within the metal and inorganic groups. Although additional data were collected for more specific materials within the organic, composite and other categories, the surveyor did not find as many "different" types of artifacts within those groups requiring conservation. These groupings were established at the beginning of the survey in consultation with HSMC staff and represent the categories used by the archaeology department to sort and catalogue their collections. The numbers represent the number of *objects* requiring conservation within each of the lots.

The metal and inorganic material groups contained the majority of the artifacts in need of treatment. Two composite objects also require treatment. The majority of artifacts in need of immediate conservation treatment (priority 1 and 2) are iron and copper alloy (19%). One previously treated copper alloy book clasp was considered stable and therefore received a priority 5 rating. Several non-diagnostic copper and lead alloys, primarily furniture tacks and shots, received a priority 3 rating. Most of the inorganic *objects* requiring treatment (mainly olive bottle glass and ceramics) received a priority 4 rating (2%). One glass bead received a priority 2 rating (1%). A considerable number of olive bottle glass and table glass (64%), which includes Façon de Venise, was recorded as being present and stable, and therefore received a priority 5 with no treatment recommended. Two composites, a glass/enamel jewelry set and an iron/textile strap fragment, received a priority 1 rating. No organics or objects within the category of "other" were recorded as needing treatment.

**TABLE XIV-6: ARTIFACT MATERIALS REQUIRING CONSERVATION BY PRIORITY, ST1-126 MIDDLE STREET SOUTH**

| **PRIORITY** | **1** | **2** | **3** | **4** | **5** | **Total** |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Iron | 6 | 14 | 0 | 0 | 0 | 20 |
| Copper Alloy | 0 | 4 | 5 | 0 | 1 | 10 |
| Lead Alloy | 0 | 0 | 9 | 0 | 0 | 9 |
| White Metal Alloy | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Metals | 6 | 18 | 14 | 0 | 1 | 39 |
| ORGANIC | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Olive bottle glass | 0 | 0 | 0 | 1 | 70 | 71 |
| Other Glass | 0 | 1 | 0 | 1 | 9 | 11 |
| Tin-Glazed Ceramics | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Ceramics | 0 | 0 | 0 | 1 | 0 | 1 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Inorganic | 0 | 1 | 0 | 3 | 79 | 83 |
| COMPOSITE | 2 | 0 | 0 | 0 | 0 | 2 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **8** | **19** | **14** | **3** | **80** | **124** |

The conservation requirements of the individual lots of artifacts were broken down further using the following descriptions:

1) Remove Tape
2) Cleaning only
3) Stabilize only
4) Clean and Stabilize
5) Re-package
6) Re-treatment
7) X-ray
8) Other
9) Analysis
10) No treatment needed

These categories represent treatments required in the future on specific *objects* by priority. This information helps in assessing the complexity of the treatments needed and therefore provides a general idea of the time and cost of such treatments in the future. Results are provided in Table XIV-7. The numbers listed in Table XIV-7 represent the number of *objects*, not individual artifacts, to be treated. Some materials surveyed require more than one treatment per *object*, so multiple treatments may be recorded for a single *object.* General material groups containing no data were not tallied and listed.

For metal material types (primarily iron and copper alloy), all of the artifacts that require treatment need to be cleaned and stabilized (30%). The iron items include knife blades, buttons, and a tenterhook, while the copper alloy artifacts recorded include buttons. One previously conserved copper alloy book clasp (0.8%) was found to be in stable condition and was not recommended for treatment.

For inorganic material types, priority 4 olive bottle glass samples require re-treatment and need to be cleaned and stabilized only (2%). Priority 4 whiteware sherds need tape removed from surfaces and require cleaning (2%). The treatments for glass are relatively simple and straightforward and some of the artifacts will most likely be batch treated. The priority 2 glass bead in fair condition requires cleaning and stabilization (0.8%). A considerable number of inorganics (63%), primarily olive bottle glass and table glass, were not recommended for treatment but may need to be re-examined in the future for treatment needs including repackaging. Two composites, a glass/enamel jewelry set and an iron/textile strap fragment, will need cleaning and stabilization (2%). No organics or objects within the category of "other" required treatment.

**TABLE XIV-7: TREATMENT RECOMMENDATIONS BY PRIORITY, ST1-126 MIDDLE STREET SOUTH**

| PRIORITY | 1 | 2 | 3 | 4 | 5 | Total |
|---|---|---|---|---|---|---|
| METALS | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 6 | 18 | 14 | 0 | 0 | 38 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 1 | 1 |
| ORGANIC | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| INORGANIC | | | | | | |
| Remove Tape | 0 | 0 | 0 | 1 | 0 | 1 |
| Cleaning Only | 0 | 0 | 0 | 1 | 0 | 1 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 1 | 0 | 2 | 0 | 3 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 1 | 0 | 1 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 79 | 79 |
| COMPOSITE | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 2 | 0 | 0 | 0 | 0 | 2 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | | | | | | |
| Remove Tape | 0 | 0 | 0 | 0 | 0 | 0 |
| Cleaning Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Stabilize Only | 0 | 0 | 0 | 0 | 0 | 0 |
| Clean and Stabilize | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-package | 0 | 0 | 0 | 0 | 0 | 0 |
| Re-treatment | 0 | 0 | 0 | 0 | 0 | 0 |
| X-ray | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| Analysis | 0 | 0 | 0 | 0 | 0 | 0 |
| No Treatment Needed | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTALS** | **8** | **19** | **14** | **5** | **80** | **126** |

# Appendix XI

# PROCEDURAL MANUAL:
# 2002 IMLS CONSERVATION ASSESSMENT

**Introduction**

The purpose of this manual is to outline a procedure for conducting a detailed survey of the condition and conservation needs of archaeological materials excavated in Historic St. Mary's City (HSMC) prior to 1988. The survey will be conducted by the laboratory director, an archaeological conservator, and a conservation assistant. The 2002 IMLS Conservation Assessment has several goals. These include:

- The creation of a computerized database to document the condition of archaeological collections
- The identification of objects in need of conservation treatment
- The prioritization of conservation projects based upon the needs of the museum and the condition of artifacts

**Procedural Summary**

The first step in the conservation survey will be to create a database within Microsoft Access to accommodate the information collected as the survey is conducted. The survey itself will include the systematic examination of artifacts in the HSMC collection.

Each provenience within each box will be given a lot number and the provenience information as well as the location of the lot within HSMC storage facilities will be recorded. Previous treatments and the current sorting condition of the artifacts will then be entered into the database. Materials present will be noted and if silica gel is present, it will also be noted.

The conservation needs of metals, organic, and inorganic objects will be documented according to the procedures outlined in this manual. The conservation needs of the materials will then be given a priority rating which will help with planning future conservation tasks for both HSMC staff and conservators.

In addition to the database, the conservation assistant will keep a notebook to record issues such as the packaging needs of the collections, readings on humidity indicating strips, and special questions and issues that may need to be addressed by the lab director or conservator. Some re-packaging tasks may be assigned to interns as the survey progresses.

Once the survey is complete, it will be possible to run queries in the database by provenience, by different materials, by priority levels, and many other useful variables. These queries may be turned into tables that will act as task lists to assist in the ongoing tracking and conservation of collections.

## THE COMPUTERIZED SURVEY FORM

**LOT NUMBER**

A lot number will be assigned to each provenience within each box.

A provenience is a particular stratum from an area of a site. For example, "ST1-23-12A" represents a provenience where "ST1" is the site number within St. Mary's County (in this case, Historic St. Mary's City as defined by the borders of the National Historic Landmark), "23" represents the site number within Historic St. Mary's City, "12" is the area or horizontal location of the provenience, and "A" represents the stratum. For more detail on the provenience numbers please see the "Historic St. Mary's City Archaeology Laboratory Manual" (Appendix B).

The lot number is a numeric field that has five digits (_ _ _ _ _). The lot numbers are assigned in the order that they are surveyed. Every provenience assessed has its own unique lot number. Although the database keeps track of lot numbers, a **Lot Number Log** is also kept in the **Survey Notebook** (See below) as a back-up record to ensure that no lot numbers are duplicated.

Once a lot number is assigned, use a black acid-free permanent marker (i.e. Sharpie) to mark the lot number on the outermost bag. Place this number on the side of the bag opposite the side with the provenience information on it. Precede the number with the abbreviation "C.S. Lot#" so that the number is clearly recognizable as the Conservation Survey lot number. On the bags, the lot numbers therefore start with "C.S. Lot # 00001" and continue sequentially.

**NUMBER OF BAGS**

**Number of Bags** does not refer to the total number of polyethylene bags enclosed in a lot, but rather the number of independent bags per lot within a box. For lots with high number of artifacts, there may be more than one large bag. For example, if there are 2 bags in a lot, they should be labeled "Bag 1 of 2" and "Bag 2 of 2," etc., and the number "2" should be entered into the database in the **Number of Bags** field.

**SITE NUMBER**

The **site number** field can have up to eight characters and it includes both the state-assigned site number and the site number within Historic St. Mary's City. "ST1-23" is an example of a site number. The **site number** field is a character field, so no zeros are needed to fill in extra spaces.

**Deltas.** In some instances in the collection, a "Δ" appears in the site number. A delta signifies an unknown provenience. For example, "ST Δ" means that the objects were found at some unknown location in St. Mary's County. "ST1- Δ" means that artifacts were found at some unknown location in HSMC, and so on. In the database, all of these delta symbols will be replaced with zeros. For example, "STΔ" = "ST0," "ST1- Δ" = "ST1- 0," etc.

**AREA**

The **area** is the horizontal location of the provenience. At HSMC, an **area** is generally a 10 x 10 foot square. For more detail about area designations, see the "Historic St. Mary's City Archaeology Laboratory Manual" (Appendix B).

In the database, **area** is a numeric field with five digits and all digits must be filled. In the example, "ST1-23-12A," "12" is the area. In the database, it is entered as "00012."

**STRATUM**

The stratum designation is generally one letter, though some strata are deep enough to warrant multiple letters (See Appendix B). For the number "ST1-23-12A," the "A" is the stratum designation. In some cases, there is no letter for strata. Where no letter is given, the stratum field should be left blank.

**LOCATION**

The location of a lot has four parts: Room, Bank, Shelf, and Box.

**Room:**

The room is the storage area within Historic St. Mary's City. Each room has a number designation as follows:

01 = Basement of the Archaeology Lab
02 = Detached Garage
03 = Visitor's Center Exhibit
04 = Conservation Lab
05 = Design Studio Storage
06 = Archaeology Annex (Trailer)
07 = St. John's Exhibit*
08 = Chapel Exhibit*
09 = Other

* The St. John's and Chapel exhibits do not yet exist as of 1 October 2002, but because they are projected projects, they have been built into the database.

**Bank:** A bank is an individual shelving unit. Bank size varies in the HSMC storage facilities. Most banks have 5 or 6 shelves which each hold 2 boxes although some banks are wide enough to allow three boxes on a shelf, and some shelves have enough room for boxes to be to stacked two or three high.

Banks are numbered consecutively by storage space (See Maps). For example, the Archaeology Lab basement has 108 banks numbered 1-108, and the Detached Garage has 40 banks numbered 1-40.

In the Archaeology Lab Basement there are also cabinets for the storage of study collections. Each cabinet is numbered as if it is a **bank** of shelves. Generally, however, the cabinets are stacked two high. Cabinets on top have been assigned the even numbers from 80 to 98, while lower cabinets have odd numbers from 81-99. The Maps in this Manual as well as labels on shelves and cabinets will assist in clarifying locations.

**Shelf:** Each shelf within a bank has a number. Numbering starts at the top shelf within a bank. Therefore the top shelf is "1" the next one down is "2" and so on. Ideally, boxes should not be kept on the very top shelf (shelf "1"), so as more room becomes available for storage, the shelf "1" designation may become obsolete because no boxes will be kept on it.

In cabinets, the "shelf" field will actually indicate drawers within cabinets. Like with shelves, drawers will be numbered starting with "1" at the top. If drawers are added to cabinets after the Conservation Survey, they will be added to the bottom of the cabinet so as not to disrupt the location numbers of the drawers already present.

**Box:** The box is the individual Hollinger, Acid-Free, or Coroplast box that the lot can be found in. Box numbers are assigned in the order that the survey progresses and every box has its own unique number. Every box will be assigned a number, including each small acid-free box found in the study collection cabinets. Large items that stand alone on shelves (i.e. lead coffins, large iron barrel rings, etc.) also receive box numbers.

**Box, Drawer, Loose, or Exhibit**

Underneath the fields for specific location information are the options **Box, Drawer, Loose** and **Exhibit.** In this section, one option should always be checked. **Box** indicates a Hollinger or Coroplast box, **Drawer** indicates a drawer in the study collection cabinets, and **Loose** indicates loose bags, large objects without containers (such as a lead coffin), etc. Exhibit indicates any objects in the Visitor's Center or other exhibits to be built in the future. When **Drawer** is checked, then it will indicate that the numbers in the fields for **Bank** and **Shelf** actually designate cabinets and drawers.

As each box is surveyed, it should be labeled with its Conservation Survey box number and the range of lot numbers enclosed in the box. For example, "C.S. Box# 1, C.S. Lot #: 00001-00020"

**PREVIOUS TREATMENT**

The **Previous Treatment** section is used to note whether all, none, or some of the artifacts in a lot have been washed, sorted, marked, catalogued, labeled, cross-mended, taped, adhered, and conserved.

**Definitions:**

**Washed-** Object has been washed with water and a soft toothbrush, or in the case of metals, mortar, and other fragile items, items have been dry brushed as called for in the "Historic St. Mary's City Archaeology Laboratory Manual" (Appendix B). **Washed** documents a past treatment, so it should be used even if some dirt remains on artifacts.

**Sorted**- Objects have been separated by material type. i.e. bone is in one bag, glass in another, ceramic in another, etc.

**Labeled Artifact-** Each artifact has its provenience written on it in ink as called for in the "Historic St. Mary's City Archaeology Laboratory Manual" (Appendix B).

**Catalogued**- Artifacts in the lot have been catalogued and some have been assigned alphas as outlined in the "Historic St. Mary's City Archaeology Laboratory Manual" (Appendix B).

**Paper Label**- Each bag of artifacts has in it an acid-free paper label with provenience information on it.

**Cross Mended**- Items such as ceramic and glass from different proveniences have been mended to re-create vessel forms.

**Taped**- Tape is in direct contact with an object.

**Adhered**- An adhesive is in direct contact with an object, for mending purposes. Adhered does not apply to objects which have been impregnated with consolidants for stabilization purposes.

**Conserved**- Separate categories are included for conserved metal, glass, and other items. Conserved artifacts include anything that has undergone a documented or undocumented treatment that was aimed at preserving the object. These may include coating of glass, stripping of metals, consolidation with inert adhesives, impregnation of glass, mending of ceramics, the use of in-fill in ceramic vessels, etc. If no metal is present, pick "no" for **metal conserved**. Likewise for glass and other items.

Some conservation treatments are accompanied by documentation and many of these have conservation numbers. Conservation numbers have two parts: the year, and a number assigned to the object in the lab (i.e. 92-10 or 89-111). Notes need not be made of these conservation numbers in the database, but if one of these numbers appears in the collection, then **conserved** definitely needs to be checked. Some conservation treatments may not be readily apparent on the objects, however, and they may not have conservation numbers. If there is any question as to whether an object has been conserved, it should be examined by the lab director and/or conservator.

**CURRENT SORTING CONDITION**

The **Current Sorting Condition** section notes whether metals, heavy objects, or pull slips are present in a given lot. This section is designed to alert staff to possible sorting needs in the collection. For example, if metals are present in a lot that contains other materials and is not desiccated, then they should be removed to desiccated storage. Heavy objects may crush other items and may also need to be packed separately. Finally, the presence of pull slips indicates that there are artifacts in the lot that have been routed to analysis, exhibit, conservation, or study collection, and these items may need re-integration in the lot. If metals, heavy objects, or pull slips are present, they should be checked in the database accordingly.

**SILICA GEL**

In the database, note whether silica gel is present and what the date is on it. A date should be placed on each bag of silica when it is replaced so that staff can keep track of how long the silica will last before it needs reconditioning.

Other silica gel variables should be recorded in a separate notebook (See **Survey Notebook: Silica Gel Documentation Log**). These may include the amount of silica gel, the size of the bag the silica is desiccating, whether the outer bag is 2 mil or 4 mil in thickness, and humidity indicator strip readings.

**SURVEYOR INFORMATION**

Enter the initials of the surveyor and the date that the lot was surveyed.

**MATERIALS PRESENT**

The **Materials Present** section is simply an inventory. Place a check next to all of the materials that appear in a given lot. Check **Mixed** if all artifact types (with the exception of floatation and soil samples) are found within the lot.

## CONSERVATION FORM

The **Conservation Form** is the primary form to describe the condition of artifacts and the priority level they warrant as conservation is conducted in the future. **This form is only filled out for artifacts that are a priority for conservation.** The following artifacts are not considered for conservation unless there are special circumstances:

nails
bolts
charcoal and other by-products
brick
mortar

20th century ammunition items
synthetic items
soil samples
oyster shell
lithics
faunal remains

The **Conservation Form** has five parts. First, the **material** says what is to be conserved. Second, the **condition** of the material is described. Next, **recommended treatments** are described. Fourth, a **priority** level is assigned to each material. Finally a **comments** field allows for the addition of crucial information that could not be included elsewhere.

For each material type or object needing treatment, there will be a **New Entry**. Sometimes an entry in the **Conservation Form** will describe and recommend treatment for a group of objects such as a bag of glass fragments. At other times, one particular object will need its own condition description and priority, and it will warrant its own form. **New Entries** can be added as often as needed to describe a lot. However, for the sake of brevity, objects should be grouped as much as possible.

**MATERIAL**

Several different materials appear in most lots. The options for material type are listed below.

**Metals:**
- Iron
- Copper Alloy
- Lead Alloy
- White Metal Alloy
- Other

**Organic:**
- Leather
- Wood
- Textiles
- Bone
- Other

**Inorganic:**
- Olive Glass
- Other Glass
- Tin Glazed Ceramics
- Other Ceramics
- Other

**Composite:** (Write in)
**Other:** (Write in)

**CONDITION**

There are five options for condition: **stable**, **fair**, **poor**, **unstable/deteriorated**, and **deteriorated beyond treatment**. Each material has different definitions for these five levels of stability, and they are outlined in Appendix A.

More than one condition can be chosen on the conservation forms as long as the objects listed are of the same material, and they receive the same priority rating for conservation.

For each condition present, there is a field to enter a note or description of the objects in question. For example, the alphabetical designations (alphas) of the pertinent objects may be entered. Alphas are assigned to artifacts in the cataloguing process as described in the "Historic St. Mary's City Archaeology Laboratory Manual" (Appendix B). The inclusion of specific alphas in the conservation form calls attention to individual artifacts. If a large group of objects shares a condition, and the inclusion of all alphas is burdensome, then other descriptions may be used. For example, a bag of glass fragments may be described as "3 x 5 bag." Thus this field exists to allow the surveyor to give descriptions that will help staff and conservators find the artifacts needing treatment.

**RECOMMENDED TREATMENTS**

Each material type has unique conservation needs depending upon the condition of the object. Listed below are descriptions to help determine when particular treatments should be recommended.

**Treatment Descriptions**

**Staff-** The recommended treatment may be completed by staff in the HSMC lab and does not need the attention of a professional conservator. Only staff trained in proper conservation techniques shall perform any of the recommended treatments.

**Conservator**- The recommended treatment needs to be undertaken by a professional conservator.

**Remove Tape-** Some artifacts have been joined or otherwise supported by the application of tape. Tape can be detrimental to artifacts and must be removed. If tape is found on bone or glass, it needs the attention of the conservator. Tape found on stable ceramics may be removed by trained staff, but the condition and subsequent tape removal must be documented.

**Cleaning Only-** There are generally three instances where cleaning may be necessary. First, choose **cleaning only** if an object is still dirty after removal from the ground, and this dirt may be harming the object. Second, choose **cleaning only** if salts need to removed from the surfaces of objects. Finally, **cleaning only** may be recommended when corrosion crusts need to be removed from metal.

**Stabilize Only-** An object is clean but needs stabilization. An example of an object needing **stabilization only** might be a piece of glass that is deteriorating and flaking apart.

**Clean and Stabilize-** Examples of objects that need both cleaning and stabilization are pieces of glass and corroded metals (especially iron). Generally, glass can be treated by staff, while metals require the attention of a professional conservator.

**Repackage-** Objects need extra support that may be provided by Ethafoam®, acid-free tissue, or individual acid-free boxes to prevent physical damage from packing with other objects in boxes or drawers. Do not recommend repackaging for items that are not yet packed in archivally stable materials. This type of packaging problem should be noted in the survey notebook.

**Re-Treatment-** Items have been conserved or mended in the past but continue to deteriorate. Often conservation treatments used in the past have proven to do more harm than good, and artifacts that have been treated using outdated methods probably need special attention.

**X-Ray-** Radiography is recommended for metal objects that are very corroded and unrecognizable, but which appear to have a coherent shape that may be obscured by the corrosion products. Ferrous objects should be tested with a magnet before x-ray is recommended to ensure that a solid metal core is present and not just corrosion products.

**Analysis-** Analysis refers to objects that may need further chemical study by specialists. For example, a metallurgical study of a white metal alloy may reveal its relative proportions of lead, tin, etc.

**Other-** This category is a catch-all for treatment needs that may arise that have yet to be considered.

**No Treatment Needed-** Generally, if no treatment is needed for an object, no conservation form is filled out at all. However, some special objects (i.e. Façion de Venice glass, conserved metal objects, etc.) may be stable, but worthy of extra documentation. For these, choose **no treatment needed**. **No treatment needed** should also be chosen for items that are **deteriorated beyond treatment.** Additionally, if an object needs no treatment because it is **deteriorated beyond treatment**, it is included in the conservation forms to acknowledge that it was examined in the course of the survey.

## PRIORITY

The priority levels range from 1-5, with "1" being the highest priority and "5" being the lowest. The priority level is determined by considering the condition and importance of the object. For example, a tiny, non-diagnostic fragment of glass in unstable condition may be a lower priority than a more diagnostic glass fragment in poor condition, even though it has a greater risk of deteriorating beyond treatment.

Priorities can be assigned to groups of objects or to individual objects depending upon the discretion of the conservation assistant and the specific circumstances of objects in a lot. Each different priority level assigned within a given material should constitute its own **New Entry** in the **Conservation Form**. If there is a question as to the priority level of a certain object, the lab director and/or conservator should be consulted.

As priority levels are assigned, archivally stable, acid-free priority tags will be enclosed with the objects to be treated to aid HSMC staff and conservators in finding the artifacts later.

## COMMENTS

Comments may be used to give crucial information that cannot be included in any other areas of the database. When using comments, follow the rules listed below.

### RULES GOVERNING ALL COMMENTS, NOTES, AND "OTHER" FIELDS IN THE DATABASE

1. **Do not use unless absolutely necessary**.
2. Be as brief as possible.

3. Be consistent. Keep track of all comments in Section 5 of the Survey Notebook so that if the condition is found again, the comment can be typed in exactly the same in all cases (See below). This consistency is needed to facilitate database queries.
4. Use Caps Lock to put everything in uppercase.

## SURVEY NOTEBOOK

The **Survey Notebook** is a venue for the conservation assistant to address any issues that do not get entered into the database, as well as to keep track of questions for the lab director and/or conservator. Each week, the conservator and lab director will meet with the conservation assistant to discuss the problems and questions outlined in the notebook. This notebook has five sections.

**Section 1: General Questions**

The first section of the notebook is for the inclusion of any general questions that arise as the survey progresses. A time will be set aside each week for the lab-director, conservator, and conservation assistant to meet and discuss these questions.

**Section 2: Pulled Artifact Log**

As the survey progresses, questions will arise about the conditions of artifacts, whether something has been treated or not, and what priority should be assigned to certain objects. These objects should be pulled for inspection by the conservator and/or lab director. In the notebook, a record will be kept of artifacts pulled in the course of the survey, where they came from, and what question needs to be addressed (See **Pulled Artifact Log** in Appendix D).

Two acid-free pull slips will be filled out for each pulled object as defined by the "Historic St. Mary's City Archaeology Laboratory Manual" (Appendix B); one will stay with the artifact while another is kept in the bag where the artifact was found. As the conservation assistant or interns return these items to their original locations, a note should be made on the **Pulled Artifact Log** that the items have been returned.

**Section 3: Silica Gel Documentation**

Where metals are separated and desiccated with indicating silica gel, it is necessary to maintain a log of the state of the silica gel. Desiccation of metals in the HSMC collections began in 2002 with a project funded by an IMLS general operations grant to re-package collections excavated prior to 1988 in archivally stable housing. As of October 2002, no data has been collected to help curation staff form policies and schedules for the replacement of silica gel.

The **Silica Gel Documentation Log** (See sample forms in Appendix D) will help staff decide how often the silica gel will need to be replaced in order to keep the relative humidity within bags of metal below 50% (as recommended by Lisa Young's 1997 "Historic St. Mary's City Conservation Survey"). The log will also enable an analysis of how bag thickness and size affects the rate at which the desiccant needs replacement.

**Section 4: Packaging Needs**

**General Collections:** All packaging surveyed should be up to the standards defined by the 2002 Repackaging Project guidelines (Appendix C). Packaging should meet the following requirements:

1. Boxes are acid-free Hollinger record boxes for non-metals and Coroplast record boxes for metals.
2. Each box is lined with Ethafoam®, and has an Ethafoam® support separating bags in the bottom of the box from bags in the top of the box.
3. All artifacts are kept in polyethylene zip-lock bags that are vented to prevent trapped moisture.
4. All artifacts are sorted by material type (i.e. there are separate bags for bone, stone, brick, etc.).
5. Heavy objects are either at the bottom of the boxes or removed to prevent crushing of other items.
6. All bags with artifacts enclose acid-free paper labels with provenience information written on them.
7. Especially fragile objects have Ethafoam® support or small acid-free boxes to protect them within the polyethylene bags and Hollinger box.
8. Metals are kept in separate Coroplast boxes, not mixed in with other materials.
9. Metals are contained in vented polyethylene zip-lock bags within larger **un-vented** polyethylene zip-lock bags. A vented bag of silica is enclosed within the un-vented bag along with the bags of metals. **No silica gel is in direct contact with metals.**
10. Bags of silica have a date written on them, and they meet the following standardized size requirements:

| Outer Bag Size | Silica Bag Size |
|---|---|
| 13" x 18" | Full 6" x 6" |
| 12" x 12" | 2/3 Full 6" x 6" |
| 8" x 10" | Full 3" x 5" |
| 6" x 6" | Half 3" x 5" |

If packaging does not meet the requirements outlined above and described in more detail in Appendix C, then this shall be noted so that the packaging can be changed as needed.

**Study Collections:** Items in the study collections (cabinets) should all be in polyethylene zip-lock bags with acid-free tags enclosed. These bags should be in acid free boxes. See more detailed requirements in Appendix C.

**Section 5: Comments Log**

The **Comments Log** is a running list of all descriptions written in the character fields of the conservation form in the database.

The comments to be included in this log include all **Comments** fields, the **composite** write-in field, and the o**ther** write-in field. Notes written on the **Conservation Form** after condition descriptions are there to describe the items to be conserved so that these items will be easily located. Because queries will not be run on these descriptions, no records need be kept of these particular notes.

**Procedural Manual Appendix XV-A**

Because each type of material deteriorates in different ways, and has different needs, some general rules for the condition descriptions and recommended treatments of artifacts are listed in Appendix A. Each material is listed in the order that it appears in the database. Assistance with definitions for the condition of artifacts may also be found in J. M Cronyn's *The Elements of Archaeological Conservation.*

## METALS

### IRON

#### Condition

**Stable-** The object has been treated and does not require re-treatment, the object was burned prior to deposition and is therefore preserved, or the items simply remains stable after removal from the ground.

**Fair-** The object is corroded and may be blistering, but little or no yellow or red coloring appears, the item is not actively spalling, and it can be handled without causing damage.

**Poor-** The object is corroded and blistering and has some yellow to red coloring, but it is not actively cracking and breaking apart.

**Unstable/Deteriorating-** The object is cracking, has bright orange to red corrosion activity, and parts of the object are being lost into the bag. Morphology is disappearing and pieces fall off when the object is handled.

**Deteriorated Beyond Treatment-** Only corrosion products are left and these do not retain any trace of the original shape of the object.

#### Treatment

By the time the survey is conducted, all metals should be desiccated, and there will be little that staff can to do for iron that continues to deteriorate. Therefore, iron treatment will always be by "**conservator."** For almost all iron, the recommended treatment will be **"clean and stabilize." "X-Ray"** should be recommended for corroded iron objects that look like they may have some kind of coherent shape, decorative elements, holes, finished edges, or evidence of another alloy such as tinning or silver that may be identified in an X-Ray. **"Re-treatment"** should be recommended for iron objects that have been conserved, but continue to be in poor or unstable condition.

#### Priority

Because iron tends to be very unstable and deteriorate rapidly, most iron objects will warrant a priority level of "1" or "2."

### COPPER ALLOY

Copper alloys may generally be recognized by the presence of greenish corrosion products. Because the proportions of metals used to comprise most of these objects is unknown, artifacts that are made of brass, bronze, etc. are all included in the copper alloy category.

**Condition**

**Stable-** The object is still shiny on its surface or it has a pinkish-brown protective patina such as seen on an old penny.

**Fair-** The object has a layer of greenish or bluish corrosion on its surface, but there are no corrosion blooms and original surfaces are intact. Details are still visible in the surfaces.

**Poor-** A few blooms of corrosion products can be seen on the object, its original surface is damaged, and details are obscured by corrosion products, but the general shape of the object is still intact.

**Unstable/Deteriorating-** Much of the object is threatened by blooms of corrosion products or it is entirely encrusted. The shape of the object is being lost.

**Deteriorated Beyond Treatment-** Only crumbles or corrosion products remain. The shape of the object is entirely lost and no metal core remains intact.

**Treatment**

Treatment is generally **clean and stabilize** by a **conservator**.

**Priority**

Most diagnostic coppers (i.e. buttons, rings, hardware, etc.) will warrant a priority of "2" while particularly damaged artifacts or objects that appear in large quantities (i.e. straight pins, furniture tacks, etc.) will get a priority rating of "3."

**LEAD ALLOY**

Lead can usually be identified by it grayish or whitish color from corrosion products. It is also very heavy. If a metal cannot be definitively determined to be lead, it is probably a white metal alloy. This category includes pewter.

**Condition**

**Stable-** The lead has a dull or shiny brown appearance indicating a protective corrosion layer. The original surface is intact.

**Fair-** The lead has a thin white or discolored layer of corrosion keeping it relatively protected from contaminants. The original surface is slightly eroded, but still discernable, and the object can still be handled.

**Poor-** Lead has white blooms of corrosion products, possibly with some discoloration. The surface is rough, but the original shape of the object is intact.

**Unstable/Deteriorating-** Lead has a white, fissured crust of corrosion products and it is actively cracking apart. Handling causes cracking or crumbling and subsequent loss of morphology. Treated lead objects have red spots on the surfaces, indicating lead-acetate from harmful coatings applied to lead in the past.

**Deteriorated Beyond Treatment-** Only brittle, crumbled pieces of metal and corrosion products are left and these do not retain any trace of the original shape of the object.

**Treatment**

Lead treatment will be by a **conservator** and will generally be **clean and stabilize.** A large number of lead items were conserved in the 1980's and these need particular examination. If there is evidence of red spotting, then the object has received an outdated treatment, it is unstable, and **re-treatment** by a **conservator** is recommended.

**Priority**

Closed window leads may open upon conservation to reveal dating information. These will receive a priority of "1." Other small lead items will generally get a priority "3." Diagnostic lead items may receive anywhere from a "1" to "3" depending upon their relative condition and exhibit/analysis potential.

**WHITE METAL ALLOYS**

White metal alloys are generally comprised of some combination of tin and lead, but antimony, copper and zinc may also be present. Generally, analysis is needed to determine the proportion of metals. The metals contained will affect the condition of the objects.

**Condition**

**Stable-** Metal is still shiny or has a thin dull patina. The original surface is intact and any decoration or detail still visible.

**Fair-** Some spotty corrosion products are visible, but the shape of the object is intact.

**Poor-** The surface of the object has some crusty corrosion products, possibly some cracks, and the original surface is no longer visible, but the shape of the object remains.

**Unstable/Deteriorating-** Blooms of corrosion products or a thick crust of corrosion have obscured the surface and the shape of the object. Cracking is evident and morphology is threatened. Handling causes the object to fall apart.

**Deteriorated Beyond Treatment-** The item has completely cracked apart and only crumbles or corrosion products remain.

**Treatment**

White metal alloy treatment is generally **clean and stabilize** by **conservator**.

**Priority**

White metal alloy items will be prioritized based upon the relative significance of the artifacts (i.e. diagnostic objects). Like copper alloys and lead alloys, these items will generally get a priority rating of "2" or "3" unless they are **stable** or **deteriorated beyond treatment** in which case they would be a "5."

## OTHER METALS

Other Metals include silver, gold, though these will appear rarely in the collection. Gold by itself is a noble metal and will not likely be deteriorated. However, gold is often used to decorate other metals in the form of plating or gilt, and these gilt layers can be very deteriorated by the corrosion of the base metal. In such instances, the base metal should be listed for treatment, and a note should be made of the gold inclusions in **Comments**.

### Silver

#### Condition

**Stable-** Consider silver **stable** if it appears shiny and silver or gray in color with little to no corrosion.

**Fair-** The surface of the metal has formed a protective pink, dark gray, black, or brown patina but surface detail is still apparent.

**Poor**- Dull black or powdery corrosion products have formed. Surface details may be obscured by swollen crusts of corrosion products.

**Unstable/Deterioriating-** Details on surfaces are obscured by corrosion and the item is brittle and may be losing morphology.

**Deteriorated Beyond Treatment-** No silver metal core remains. Only corrosion products are left. This instance will rarely happen with silver.

#### Treatment

Silver treatment is generally **clean and stabilize** by **conservator**.

#### Priority

Generally silver does not need a very high priority because it is relatively stable. Because silver items are rare, however, they may have great exhibit potential. Therefore, non- diagnostic silver will generally get a rating of "3" or even "4" while very diagnostic items with exhibit potential may get a rating of "2" or "1."

## ORGANIC OBJECTS

When organic objects such as leather, wood, and textiles are found, the conservator should always be consulted to discuss condition and treatment. Bone, however, is more common and some general definitions and rules can be outlined.

### BONE

#### Condition

**Stable-** Bone is intact and strong. No cracks, new breaks, or surface flaking is evident.

**Fair-** Bone is slightly brittle and may have some cracking or surface flaking but deterioration is not threatening and very little debris is seen in the bag.

**Poor-** Bone is brittle, and may be cracking or show evidence of new breaks. Surfaces are flaking or appear soft and abraded and a lot of powdery debris is evident in the bag.

**Unstable/Deteriorating-** Bone is very brittle and cracking apart, or looks abraded, with original surfaces lost and powder from that loss in the bag. Morphology is threatened, and bone cannot be handled without causing harm.

**Deteriorated Beyond Treatment-** Completely crumbled pieces of bone that have no recognizable morphology.

**Treatment**

Generally, only bone objects (i.e. carved bone, bone handles, game pieces, buttons, etc.), **not** faunal materials, will be considered for treatment. In exceptional cases, however, faunal remains may be worthy of exhibit and may warrant treatment. The decision to treat faunal remains will be made with the input of the lab director. Treatment of bone will generally require the attention of the **"conservator."** If the bone surfaces appear unwashed or stained (iron or copper salts), then the object may need to be **cleaned and stabilized**. Most bone objects will just need to be **stabilized**, and a few (such as fan blades, handles, etc) may need to be **adhered**.

**Priority**

Diagnostic items generally warrant a priority of about a "3"or "2," depending on what it is and its condition. Items in **fair** condition may rate as low as "4."

## INORGANIC OBJECTS

### OLIVE AND OTHER GLASS

**Condition**

**Stable-** Glass is translucent and shows little to no signs of patina or layering near the surface or the fragments have been treated in the past and remain stable after treatment.

**Fair-** Glass has a rough translucent appearance or is iridescent to opaque, but there is not a lot of flaking or active deterioration.

**Poor-** Glass has a rough, translucent appearance or is iridescent to opaque. The glass is crumbling or laminating and flakes can be seen in the bag.

**Unstable/Deteriorating-** Glass is discolored or opaque. It is cracking or laminating heavily and a lot of flakes or chunks of glass can bee seen in the bag. The glass cannot be handled without causing further deterioration.

**Deteriorated Beyond Treatment-** Thin remnants of patina that have peeled off of a glass fragment or tiny pieces of brittle, cracked glass are all that remain of the original piece.

**Treatment**

In general, recommended treatment for glass will be **stabilize only** by **staff**. However, for special diagnostic glass, such as bottle seals and elaborate table glass, recommend treatment by **conservator**. Glass that has been mended or conserved using outdated materials and shows signs of continual deterioration needs **re-treatment**. If tape is found on glass, it will need to be removed by a **conservator**.

**Priority**

In general, glass treatment will be a priority "3" if **unstable** or a priority "4" if it is **fair** or **poor**. Important diagnostic glass fragments will have a higher priority, however. Because olive glass frequently needs treatment, it should be noted even if it is stable. When stable, olive glass will get **no treatment needed** and a priority if 5.

**TIN GLAZED AND OTHER CERAMICS**

**Condition**

**Stable-** Both the paste of the ceramic and any glaze that might be present are intact, showing no new breaks, no flaking of glaze, and no loss of decoration. No salts can be seen efflorescing on the surfaces of the ceramic.

**Fair-** Ceramic paste and glaze are stable, but overglaze decorations show some deterioration. Little evidence of salt efflorescence is seen.

**Poor-** Ceramic paste is soft and may be damaged by washing in water and some glaze is separating from the paste or spalling. Salts may be leaching and forming white powder, crystals or encrustations on the surface, but this is limited.

**Unstable/Deteriorating-** Ceramic paste is soft and visibly wears with handling. Glaze is actively spalling and chipping away from the paste, and decoration is urgently threatened. Leaching of salts may be heavy, forming crystals and crusts on the surfaces of the fragments.

**Deteriorated Beyond Treatment-** Only small glaze chips remain or paste fragments are tiny and worn to the point of losing all if its original shape.

**Treatment**

**Poor** and **unstable** ceramics should be treated by a **conservator.** Spalling of glazes on items slated for exhibit warrant consolidation and mending (choose **other** under treatment recommendations), though mending is not recommended for items that are not slated for exhibit. Leaching salts require **cleaning and stabilization.** Items that have been mended with unstable or improper materials and the joins are threatened or the ceramic appears to be continuing to deteriorate require **re-treatment**.

**Priority**

Generally, ceramics are more stable than most materials and will therefore be a priority "4" or "5." An exception to this is tin-glazed earthenwares that are in poor or unstable condition, and the loss of glaze is threatened by not doing a treatment. Unstable tin-glazed ceramics may warrant a rating of "2" or "3" depending upon how diagnostic they are. Items slated for exhibit may also rank very high. **Re-treatment** of mended ceramics is a priority "5" task unless the vessel is being harmed by the failing joints, adhesive residue, etc.

## COMPOSITE OBJECTS

Composite items present a special challenge for conservation because materials are often incompatible for long-term preservation. Composite items will therefore often get very high priority ratings. For example, bone-handled utensils may have corroding iron breaking the bone handles. Treatment of composite objects varies. Composite objects will be described in the write-in field for **composite** in the database. Objects will generally require consultation with the lab-director or conservator to determine treatment and priority designations.

## OTHER OBJECTS

**Other** objects may include early synthetic materials such as hard rubber buttons and semi-organic plastics such as celluloid (cellulose nitrate). Early plastics are often very unstable and require treatment by conservator. At HSMC, however, most synthetic items will not be conserved because they are not part of the colonial time period emphasized at the Museum. Exceptions will arise in site ST1-14, however, a slave quarter and later tenant dwelling site that may yield important information about African-American life on the site into the 20th Century.

**Other** objects will vary and will generally require consultation with the lab director and conservator to determine treatment and priority.