

Contact Period Landscapes of the Lower Susquehanna River



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Acknowledgements

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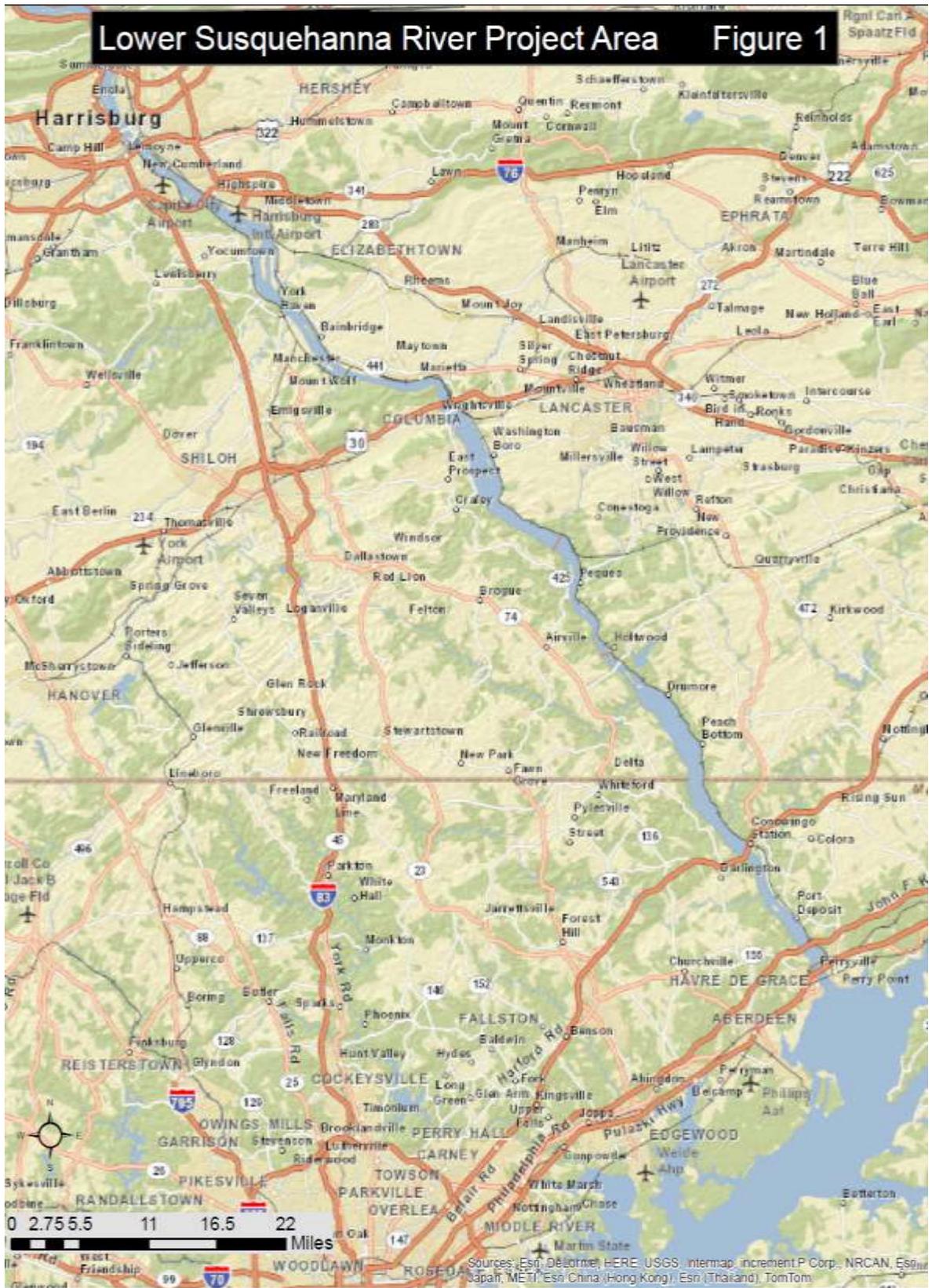
Introduction

This project was conceived to better understand and map the resources of the contact period landscapes of the Lower Susquehanna River in Pennsylvania and Maryland with two goals in mind: to assist the National Park Service (NPS) in its implementation of the segment plan for the Captain John Smith Chesapeake National Historic Trail (CAJO) and to test the application of the Indigenous Cultural Landscape (ICL) approach in the Lower Susquehanna. The Lower Susquehanna River corridor was defined as starting at about Harrisburg, Pennsylvania and traversing seventy-one miles to where the River flows into the Chesapeake Bay at Havre de Grace, Maryland (See Figure 1).

The Susquehanna River, from where it enters the Bay to about the Conowingo Dam in Maryland, was included in the Captain John Smith Chesapeake National Historic Trail when the CAJO was designated as part of the National Trails System. This stretch of the Susquehanna River is identified as a high potential route segment in the *CAJO Comprehensive Management Plan (CMP)*. Later the Secretary of the Interior designated the remainder of the Susquehanna River as a historic connecting component of CAJO.

The stated purposes of the *CAJO Comprehensive Management Plan* are to share knowledge of the American Indian societies and cultures of the seventeenth century, to interpret the natural history of the region and to improve recreational experiences (National Park Service). Included in the management plan was the innovative idea to consider the Chesapeake Bay region through the lens of the indigenous cultural landscape. The landscape as it was lived in by indigenous people at the time of early European contact (National Park Service Q-1).

Lower Susquehanna River Project Area Figure 1



One of the key reasons for this extension of the trail up the Susquehanna River was the contact between the American Indian tribes from the region with Captain John Smith. As this story would be an essential part of the work of NPS in developing a segment plan it was important to consider the Indigenous Cultural Landscape approach to the Lower Susquehanna. It was also an opportunity to strengthen the conservation values by adding a cultural dimension to lands already desirable for the richness of their ecological resources and for their capacity to protect water quality. By sharing and mapping information on the cultural resources, in particular those associated with native people of the region, it was hoped it could provide future protection of significant sites and the broader cultural landscape.

To accomplish the project an expert team of archaeologists both working for state government and in private practice, historians, and land conservation professionals met and reviewed the resources in the study area. Five meetings were held to identify the scope of the project, discuss criteria for application of the indigenous cultural landscape approach, develop maps, and identify potential interpretive ideas and locations. The project outcomes include mapping the contact period landscape correlating with soil fertility, topography, and stream location and with lesser confidence contact period trails. The study also has limitations. There was a lack of opportunity to consult with descendant communities and more research needs to take place in the Maryland portion of the Study Area.

Prior to and while meetings were taking place for the Pennsylvania portion of the project, two additional efforts were underway by NPS and its partners. The *Indigenous Cultural Landscapes Study for the Captain John Smith Chesapeake National Historic Trail* (University of Maryland, December, 2013) provides a methodology for the study of indigenous cultural landscapes. University of Maryland and NPS were also working on a study of the high probability ICL in the Nanticoke River Watershed to serve as a proto-type ICL study. (*Indigenous Cultural Landscape Study for the Captain John Smith Chesapeake National Historic Trail: Nanticoke River Watershed*, December 2013).

Project Background

The Captain John Smith Chesapeake National Historic Trail (CAJO) was established as part of the National Trails System following Congressional designation in 2006. Managed by the National Park Service (NPS) and partners, this 2000-mile water trail follows the routes of Captain John Smith's exploration of the Chesapeake in 1607-1609. In May 2012, Secretary Salazar used his authority under the National Trails System Act to designate the balance of the Susquehanna River from Maryland to Cooperstown, New York along with three other rivers as historic connecting components of the national trail. The Susquehanna River segment has the same goals as CAJO. The trail:

- Commemorates the voyages of John Smith on the Chesapeake Bay and tributaries.
- Shares knowledge about American Indian societies and cultures of the 17th century.
- Interprets the natural history of the Chesapeake Bay and tributaries.
- Provides recreational experiences on water and on land along the trail.

The CAJO Comprehensive Management Plan calls for the development of segment plans to effectively understand the local resources, opportunities, and partner capacities that are unique to each segment. Segment Plans tier off the CMP, address a two to five year timeframe, are developed collaboratively with trail partners, and approved by the National Park Service. A segment plan will be developed for the Lower Susquehanna River and address the cultural, recreational, and natural resources. This project will inform the segment planning process when it gets underway in 2014 by identifying interpretive themes and mapping of resources. An innovation in the *CAJO Comprehensive Management Plan* is the concept of identifying certain areas in the Chesapeake Bay watershed as indigenous cultural landscapes. This approach describes landscapes from the perspective of indigenous people who lived there at the time of Captain John Smith's explorations. For

generations, Indian people of the Chesapeake region hunted and fished, practiced agriculture and traveled throughout its lands and waterways. Their world was not just the dots on a map that denote known archaeological sites, but encompassed a whole lived-in landscape (National Park Service Q-1).

Brenda Barrett, retired from the Pennsylvania Department of Conservation and Natural Resources, and Jackie Kramer an outdoor recreational planner with the Chesapeake Bay Office of the National Park Service coordinated this project.

Project Goals and Outcomes for Pennsylvania

The primary goals were to better understand and map the resources of the contact period landscapes of the Lower Susquehanna River. The project was also seen as a way to test the application of the Indigenous Cultural Landscape (ICL) approach in the Lower Susquehanna. The Lower Susquehanna River Segment Plan will identify focus areas that contain resources and stories associated with trail routes (for example, Smith's explorations and historic American Indian cultures), trail- evocative landscapes, anchor sites, and a variety of existing immersion visitor experience opportunities. By gathering this information and mapping these resources, focus areas should emerge along the corridor thereby assisting the NPS in its development and implementation of the segment plan.

The outcomes of the project were stated as: identifying places with the potential to interpret the landscape and the story of the Captain John Smith Chesapeake National Historic Trail and opportunities to interpret the Lower Susquehanna as an Indigenous Cultural Landscape. Important to all participants was the possibility that by drawing attention to significant landscapes, these places could be protected in the future. As this was a new approach to gathering data and synthesizing information, the methodology was not fully developed and adaptations had to be made as the project progressed. The project work included the following steps.

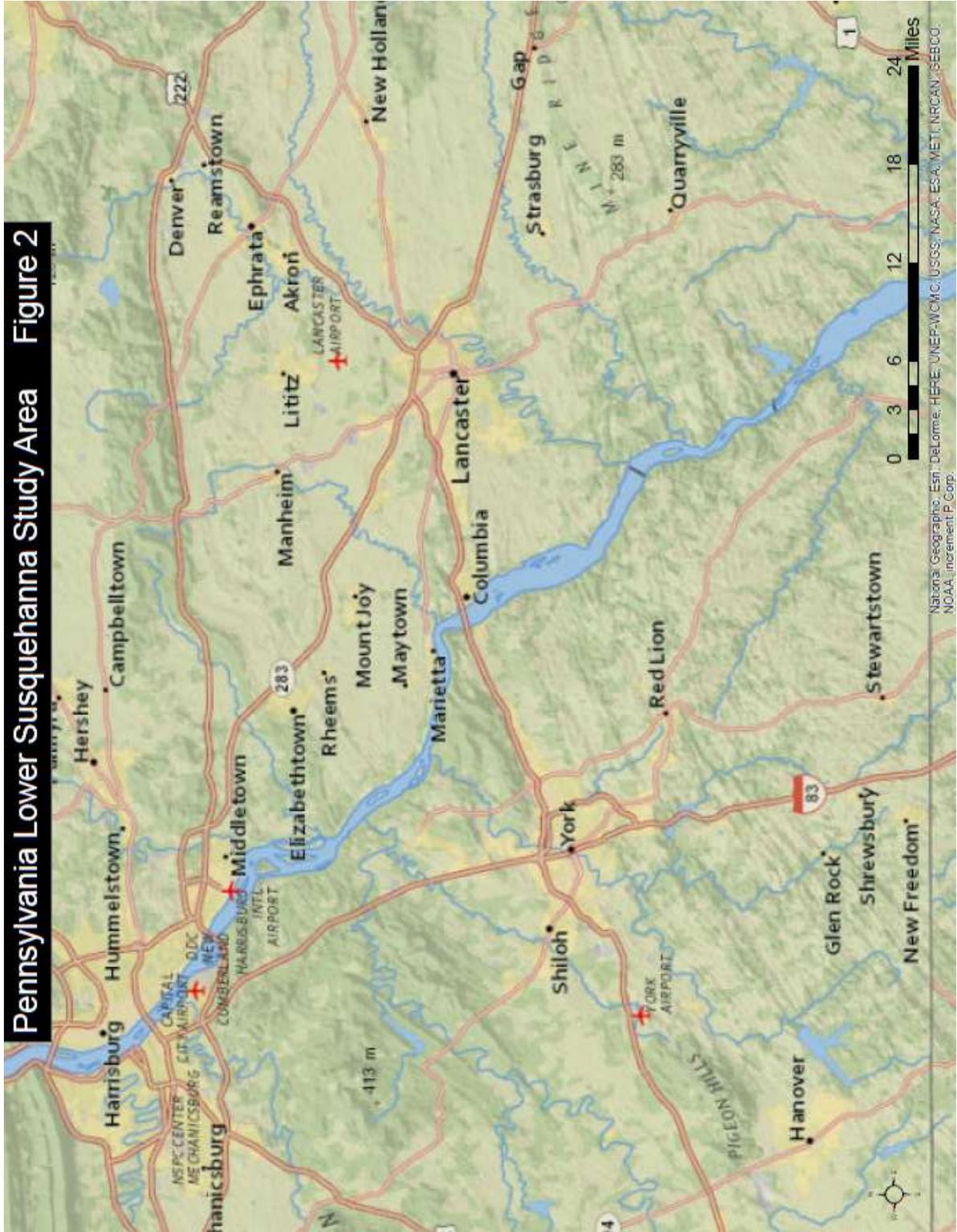
1) Identify the Study Area: Lower Susquehanna River in Pennsylvania

The Susquehanna River is the largest tributary to the Chesapeake Bay providing over 50% of the fresh water entering the bay. The Susquehanna River watershed encompasses over half of the state of Pennsylvania and reaches up into the state of New York. For this reason alone the region is a focal area for efforts to meet water quality improvement standards to protect the Bay's fragile ecosystem.

The Lower Susquehanna River valley in Pennsylvania was selected for study because of the intersection of nationally important American Indian resources, the interest of state level and local partners, and the potential for significant land conservation in the region. The Pennsylvania study area was defined as the Susquehanna River Valley in Lancaster and York County from the Maryland State line extending into a portion of Dauphin and Cumberland County north to the Susquehanna Water Gap. (See PA Study Area Fig. 2)

The Lower Susquehanna is also important in the Captain John Smith Story. The meeting of Captain John Smith with a Susquehannock delegation is symbolic of this larger story. According to Captain John Smith's writings, he met sixty men whom he called Susquehannock near the mouth of the Susquehanna River. The rocky fall line of the Susquehanna River ended Smith's journey up the River in present day Maryland. However, it is this meeting with the Susquehannock that was the basis for including the Susquehanna River beyond Smith's Falls (Maryland) in the Captain John Smith Trail (See *Feasibility Study on a Potential Susquehanna Connector Trail for the John Smith Historic Trail*). In addition to the drawing of the Susquehannock Indian on his map, Smith delineates five "kings houses" indicating where the

Figure 2
Pennsylvania Lower Susquehanna Study Area



Susquehannock lived. The site of the Sasquesahanough kings house on Smith's map is in present day Washington Boro, Lancaster County Pennsylvania. In his encounter, Smith described the Susquehannock men as *"Such great and well proportioned men are seldome seene, for they seemed like Giants to the English, yea and to the neighbors, yet seemed of an honest and simple disposition, with much a doe restrained from adoring us as Gods. Those are the strangest people of all those Countries, both in language & attire; for their language it may well beseeme their proportions, sounding from them, as a voice in a vault"* (National Park Service).

The Susquehannock were trading with Europeans prior to John Smith's arrival. As Barry Kent writes " Smith states that the Tockwhogh, a people living near the head of the bay on the east side, had many *hatchets, knives, and peeces of iron and brasse...which they reported to have from the Susquesahannockes*" (Kent p.26).

A significant factor in selecting the study area was that it provided an opportunity to consider the landscape of the American Indian people both before and at the time of their contact with John Smith. The Lower Susquehanna valley was once one of the most densely populated American Indian settlements on the eastern seaboard. Thousands of people are estimated to have lived in just one the region's large palisaded town known as the Washington Boro site, which is many times the population of the place today. The rich riverine environment supported intensive farming, hunting and fishing. The river was also provided a route for travel and trade over a wide area.

The region has important opportunities for land conservation. One of the reasons the land has remained so undeveloped is the over 13,000 acres of undeveloped utility land along its shores. With the changing economics of the energy business much of this open land are in a state of flux. Finally, there is active interest in community revitalization through recreation and tourism. There are also well-organized planning partners in Lancaster and York counties, a strong land trust presence, local and state parks, a state designated heritage area the Susquehanna

Gateway, and a developing land and water trail system. The Commonwealth of Pennsylvania has identified the Lower Susquehanna as one of its Conservation Landscapes and as a state heritage area.

2) Engage Regional Experts

The information for the study was collected through a series of meetings with regional experts primarily archaeologists and historians. Many of the archeologists had long experience working in the lower Susquehanna. They included Dr. Kurt Carr Senior Curator, State Museum of Pennsylvania, Dr. June Evans a retired professor from American University, Jim Herbstritt a Historic Preservation Specialist with the State Museum of Pennsylvania, Doug McLearn an Archaeologist with PHMC's Bureau of Historic Preservation, Steve Warfel former State Archeologist with PHMC, and Andrew Wyatt Senior Archaeologist, URS Corporation. Dr. Katherine Faull from Bucknell University, who was the primary author of the connector trail report for the Susquehanna River, participated in the meetings. Joanna Ogburn, Program Director, Chesapeake Conservancy and Kate Gonick from the Lancaster County Conservancy provided expertise in land conservation. Not all participants were able to attend every meeting, but minutes were shared with all attendees and reviewed at the beginning of every meeting to share the thinking of the group. The list of the members on the project team is included in Appendix A.

There was a lack of participation by descendant communities in this particular study. Pennsylvania has no state or federally recognized Indian Tribes. The closest recognized tribe with an affiliation to the Susquehannocks is Onondaga nation, a federally recognized tribe in the state of New York.

3) Consider the Indigenous Cultural Landscape Approach

The concept of the Indigenous Cultural Landscape is a more holistic approach to looking at the American Indian presence in a region. These landscapes go beyond specific "hunting grounds," "villages," and "sacred sites" to include holistic

homelands that are “units of land large and natural enough to accurately reflect the cultural life ways of the communities that lived within them” (Beacham 2011:41). One way to begin to identify the potential for these landscapes is document the natural resources still present on the land. Deanna Beacham, American Indian Program Manager of the National Park Service, has identified some of these resources as good agricultural soil, sources of fresh water, transportation routes, accessible landing places, and the resources still present in the marshes, brushy areas and primary or mixed deciduous forest and links it to indigenous communities that once lived on the land prior to European contact. For the purposes of this project the Lower Susquehanna Valley with its rich Native American heritage, high ecological values, and relatively undeveloped lands, had the potential to utilize this framework to identify potential areas that might be considered as indigenous cultural landscapes.

After much discussion, the expert group identified key criteria that could be utilized to identify potential indigenous cultural landscapes.

4) Criteria for the Contact Period/ Indigenous Cultural Landscapes

The study team spent most of its meetings developing criteria that could be used for identifying landscapes that were important in the Contact period and which might have potential for consideration as an Indigenous Cultural Landscape (ICL).

The work began by utilizing the baseline mapping of the region that included the topography and streams. (See PA Study Area Fig. 2) The first question was determining the time period to be mapped. It was agreed that the date of 1607 John Smith’s meeting with a delegation from the lower Susquehanna was too limiting. The early European contact period in the region would encompass two archeologically defined periods, Shenk’s Ferry (c. AD 1350-1600) and the Susquehannock (c. 1575-1763) that overlap with the time of first European contact. Based on a review of the archeological data from the Pennsylvania

Archeological Site Survey (PASS) and on the knowledge of the experienced archaeologists on the study team, there was an extensive discussion on how to identify the larger American Indian landscape. All agreed that the data points of the PASS files did not reflect the use of the land by the American Indian. The landscape of the region would have been used for agriculture, hunting, fishing, gathering of wood and plants as well as travel and trade.

The important question was what criteria could be used to identify this larger area. Archeological site reports document flora and fauna utilized at Shenk's Ferry and Susquehannock sites. However, except for certain trade goods and stone tools that can be sourced to specific locations, most of these remains are widely available within the region. In the end the group proposed to adopt a site catchments approach. This is generally defined as the area surrounding a settlement that is habitual used by the inhabitants as a source for food, tool making and other uses. The idea has been used both by archeologists and by ethnographers to discuss the use of the larger landscape by the people who live in a region. It was proposed that based on archeological and ethnographic sources a two miles radius would be drawn around the Susquehannock settlements identified in the PASS files. The resulting maps depict the landscape of the Shenk's Ferry and Susquehannocks. (See Contact Period Landscapes Fig. 3)

Another challenge was integrating the PAAS file data with mapping for the Susquehanna Connector Trail that was undertaken using historical sources (Friends of the Captain John Smith Chesapeake National Historic Trail). Historical data from the map created by John Smith and from other period accounts provides less precise geographic locations than archeological site data. However, since archaeological data is based on what has remained and has been reported, these records can be incomplete. A recent example was the discovery of a significant Susquehannock period site in Lemoyne Borough, Dauphin County. This site significantly expanded the range of sites from the contact period. However, the study team concluded that in the lower Susquehanna Valley, the information from the historical report by

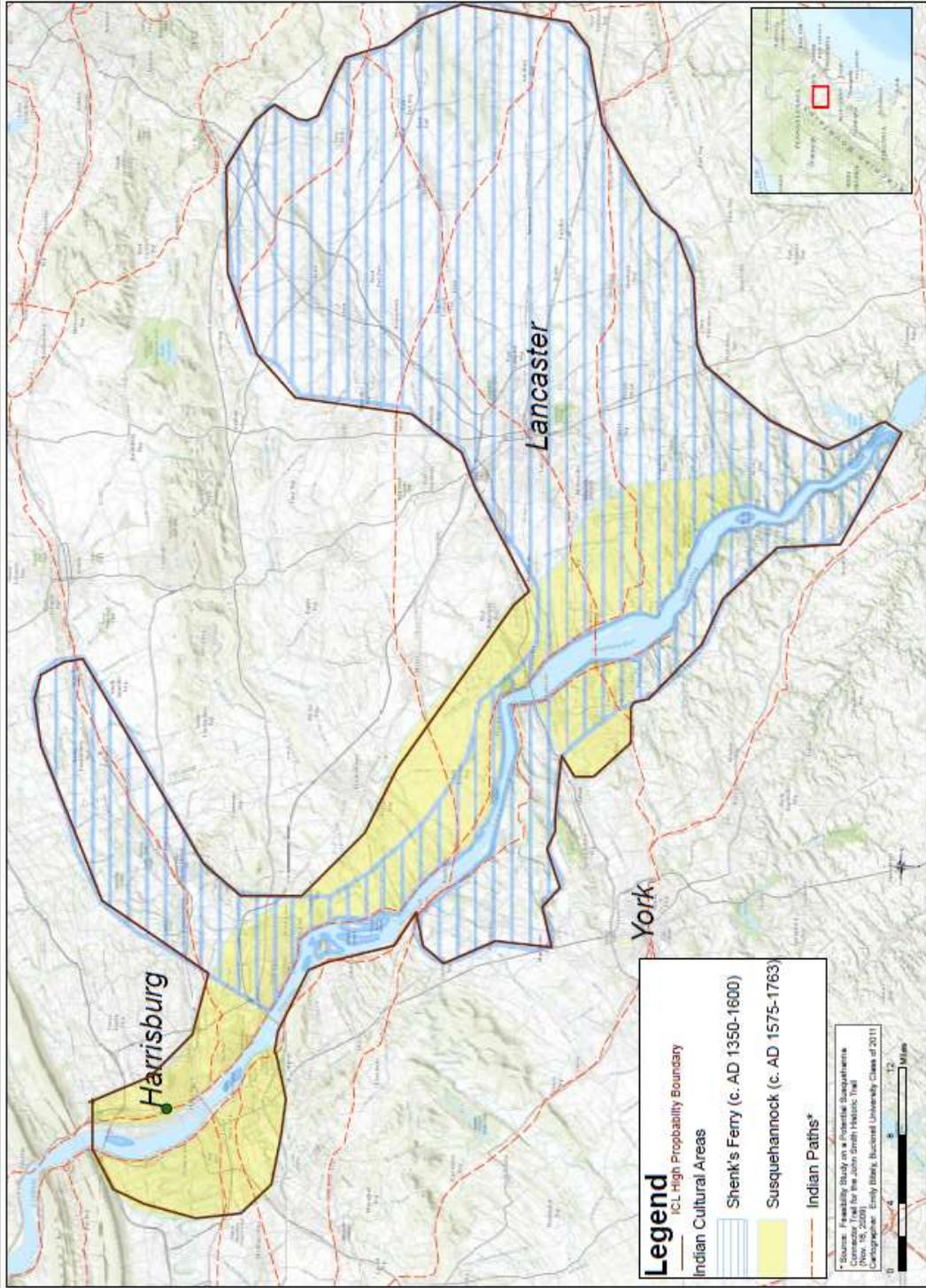
Bucknell University aligned with the contact period landscapes identified by using a more archeologically focused model.

The Susquehanna River and the many streams in the study area were identified in the base mapping (See PA Study Area Fig.2). It was noted that settlements in the region were all located in places that provided a steady source of water and riverine resources for the inhabitants. The study group also looked at soil fertility maps. These correlated well with the identified contact period landscapes. It was noted that the Lemoyne site, which is situated in an area that is now heavily developed, was located in an area of high fertility soils. Other observations included that the Shenk's Ferry cultural sites closely follow the regions high fertility soils in a broader more upland area on the eastern side of the river. The Susquehannock sites are all located in proximity to the Susquehanna River on both sides of the river and areas of high fertility soils. All Susquehannock sites are oriented toward the river on terraces overlooking the water. (See Soil Fertility Fig. 4)

Another source of information that was included in the Contact Period Landscapes was information on American Indian paths and trails. The primary source for this information was gathered originally by Paul A.W. Wallace from colonial records, travelers' accounts, Pennsylvania land records and other sources (Wallace). It was agreed that most of the trails identified in the Lower Susquehanna probably reflect paths of travel as they follow watercourses and seek the easiest terrain. However, they cannot be marked with any certainty. (See Contact Period Landscapes Fig. 3)

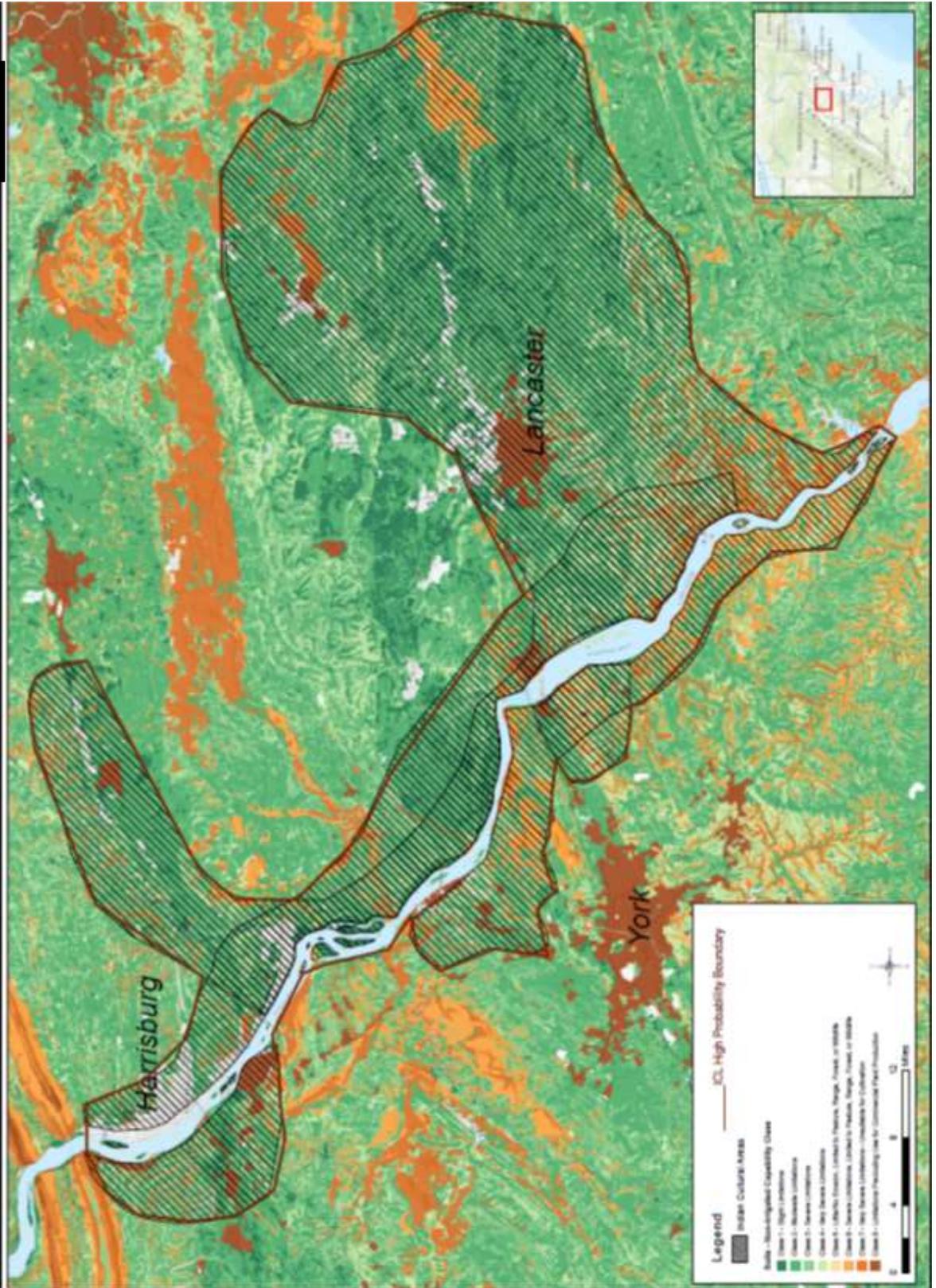
In conclusion the criteria selected to identify contact period landscapes were: archeological and historic site locations modified and expanded by considerations of resource utilization, a strong association with water courses and soil fertility, the importance of aspect in the Susquehannock period.

Lower Susquehanna River ICL - Contact Period Landscapes - Pennsylvania - Figure 3



Lower Susquehanna River Indigenous Cultural Landscape - Soils - Pennsylvania

Figure 4



5) Documentation of Existing Resources in the Study Area

The Lower Susquehanna Valley has been the focus of a number of initiatives by the state of Pennsylvania to survey and identify the regional assets on a landscape scale. The Susquehanna Gateway State Heritage Area was designated in 2001 based on extensive identification of resources and planning for regional management. The Lower Susquehanna Conservation Landscape Initiative was launched by the state Department of Conservation and Natural Resources in 2007. Regional resources such as public lands and parks, trails and proposed trails, historic communities and related resources have been well documented (Fermata, Lancaster York Heritage Region, Susquehanna Gateway Heritage Area).

Most of the members of members of the study team were familiar with the landscape of the Lower Susquehanna River Valley and many had lived and worked in the region for decades. All of the meetings were held in the study area in Dauphin, Lancaster or York counties. A list of the meeting dates and locations is attached. (Appendix B).

6) Conclusions Reached at Study Team Meetings and Creation of Project Maps

A landscape scale story can be told. American Indians in the Lower Susquehanna utilized resources beyond the individual archeological or historic sites and it is appropriate to consider a landscape scale approach. Theories on site catchment from both archaeological and ethnographic research might be an aid in setting boundaries for larger cultural landscapes. The project mapping addressed both the contact and immediate pre-contact period.

The river valley is an extraordinarily rich environment. Soil fertility data is an important predictor of site locations. Along the river valleys, particularly those underlain by limestone soils, conditions are right to create microclimates that

extend the growing season by up to two weeks. Recent archeological work at the Memorial Park site in Lemoyne confirms agriculture based on the “three sisters” of corn, beans, and squash. The Memorial Park site also yielded a range of other food resources such as nuts, large and small mammals, and fish. Important food sources that came from the Susquehanna River included shad, striped bass, eels and migrating waterfowl.

Every island in the Lower Susquehanna can be assumed to have prehistoric materials. These islands have some of the largest collection of petroglyphs on the east coast. While these carvings cannot be dated, it further corroborates the importance of the river to American Indian inhabitants over a long span of time.

Indian paths correlate with transportation routes today and with geographic settings such as watercourse and passes. It should be noted that some paths are known, while others are just assumed.

The Indigenous Cultural Landscape approach has potential as a framework to better understand the regions rich American Indian heritage in relationship to its high ecological values. Although power dams have interrupted the flow of the river and in the northern reaches of the valley development has impacted the contact period landscape, there are still places that illustrate the contact period landscape.

GIS mapping can inform interpretive themes as well as highlight the resources that were important to the American Indian story. The mapping for the project includes a base map of the region (Fig. 1), the Contact Period Landscapes (Fig. 2), Soil Fertility in relationship to the Contact Period Landscapes (Fig. 3), locations of potential interpretive sites (Fig. 4), and Protected lands in the region (Fig. 5).

The information held by the group and the extensive documentation by past planning studies allowed the team to move on to the next step of identifying interpretive themes and potential sites to interpret the themes.

7) Develop Themes and a List of Potential Interpretive Sites

The study team discussed and proposed interpretive themes that included, but were not limited to, public places that could tell the story of the contact period in the Lower Susquehanna. This information was deemed important to developing the segment plan and to placing the information on the contact period landscape and potential indigenous cultural landscapes in a regional context. Based on the discussions at the meeting, the following overarching themes were drafted:

Richness of the Ecosystem – The Susquehanna River is an important part of the story both as a source of food, shelter and access. The riverine environment moderates climate conditions and offers specialized habitat for wildlife and agriculture. The river is an important part of the North Atlantic flyway. Before the dams cut off fish passage, it was an important fishery for migrating Shad and eels. Shellfish and non-migratory fish were also abundant. The rich soils and moderated climate ensured productive agricultural fields. These resources supported a large American Indian population. Sources to tell this story can come from the floral and faunal analysis of the archeological record. New research at the Lemoyne Site documents the diversity of food sources. Traces in the river like eel weirs suggest a deep time depth of use of the river. Maps that show soil fertility seem to correlate with the archeological and historic records of the high population density at the time of contact could illustrate some of these ideas.

Convergence and Exchange / First Contact and Shifts in Power - The story of Captain John Smith's encounter with the Susquehannock is emblematic of the wave of change that was to come to American Indian people and the changing trade relationship with other tribes and the European power, French, Dutch and English. The Lower Susquehanna became the focus of competing interests and struggle for power. This can be documented through the evidence of trade goods in the

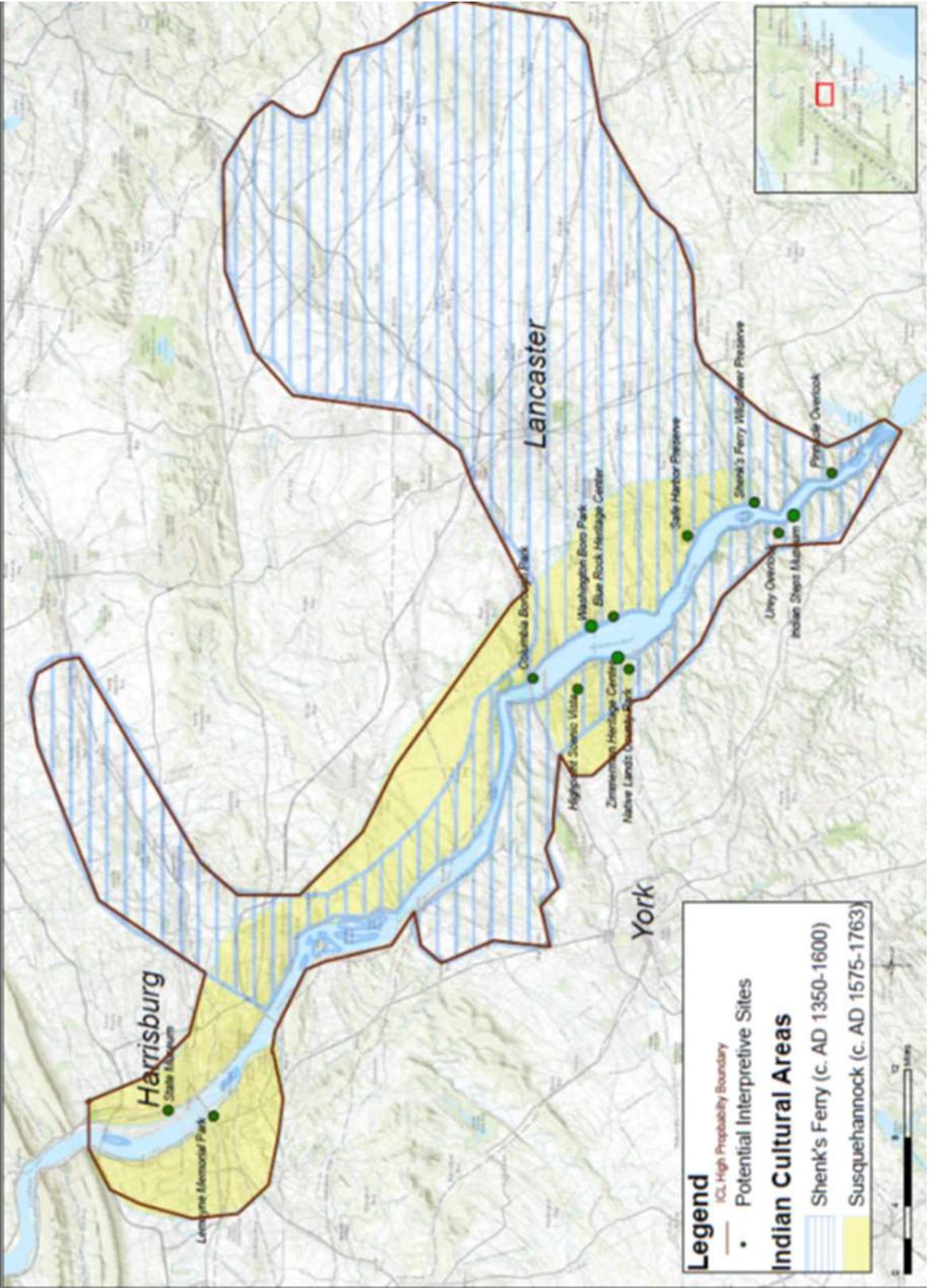
archeological record and by the location of Susquehannock towns with long views and defensive perimeters.

River Corridor as a Landscape of Change- It was proposed that if the John Smith voyages were the starting point the story in the Lower Susquehanna flows both backward and forward. The region shows a continuing narrative with a record of American Indian settlement going back over 10,000 years. However, the pace of change in the landscape speeded up after the period of European contact. Over time, farming, timbering and milling operations, urban and industrial development all changed the landscape. Transportation also played a key role in changing the landscape. This part of the state is at the crossroads of many early transportation routes including the Susquehannock Trail. The river crossings, often the site of later ferries followed by bridges, were important points of east-west travel. A canal system and later rail lines hugging the banks of the river moved products to developing markets outside the region. The changing river corridor had ecological impacts on the river. Within the region ecological impacts included the run-off from eroded soils and deposition from milling operations, intensive agricultural use, urban development and later the power dams. The river has also been polluted from upstream timbering, mining and gas drilling. Rail lines continue to create barriers to public access and fish passage is impacted by the power dams.

To provide opportunities to explore these themes, a list of potential interpretive sites was identified from personal knowledge of the team members. All the sites on the list are associated with one of the interpretive themes and are in public ownership or are publicly accessible. Team members felt it was important to utilize existing public sites due to the sensitive nature of archeological sites in the area. (See Appendix C) These sites were also located on a map. (See Potential Interpretive Sites Fig. 5) The approximate locations of a few trails are also noted on a map. (See Contact Period Landscape Fig. 3).

Lower Susquehanna River ICL - Potential Interpretive sites - Pennsylvania

Figure 5



In addition to these publicly accessible sites other potentially significant lands, primarily utility-owned lands, were identified. These included Peters Creek and Haines Creek with much of this land owned by Exelon in Fulton Township, Lancaster County. The Lancaster Solid Waste Authority owns land along the Susquehanna on the Lancaster County side of the river. The Authority also owns the Blue Rock Heritage Center site. Another possible site is Klines Run Park, another utility owned property, located in York County along the Susquehanna River.

Project Challenges

Taking an interdisciplinary approach is challenging. Integrating the broad historical information based primarily on early maps and traveler's accounts with the very specific points on a map, information from archeological surveys and excavations was not easy. The scale of the information sets was not the same. In this particular project the information from both the PASS and the Bucknell report were available in geographic information systems, but merging the data was problematic and time consuming.

Displaying information on archeological site location and environmental information as depicted on stream maps and soils maps was less problematic. However, more research is needed to better understand environmental conditions before and immediately after contact. Earlier archeological reports and collections in places like the State Museum may also contain additional information. However, this project had a limited scope and the experts had limited time as all were volunteers or participating in addition to other responsibilities. The recent excavations at the Memorial Park Site in Lemoyne have a great deal of information on agricultural crops, game species, and other floral and faunal remains. The findings raised questions about the accepted timeline of the various Susquehannock villages. The Memorial Park site also made it clear that there may be additional sites within the landscape of the Lower Susquehanna that have yet to be discovered.

As discussed in step 5) on documenting the Lower Susquehanna, the region is fortunate having many partnerships working to interpret and conserve its land and resources (See Fig. 6). Pennsylvania's Department of Conservation and Natural Resources (DCNR) has designated the river corridor in Lancaster and York Counties as a Conservation Landscape. The designation has resulted in a strategic plan and the identification of local lead partners to move the plan forward and significant DCNR resources to the area. The same geography is also designated as the Susquehanna Gateway State Heritage Area and the organization is also seeking congressional designation as a national heritage area.

Additionally, many local communities along the river have recognized the tourism potential of the Susquehanna River and its various cultural and natural resources. Although these communities are partners in the Susquehanna Riverlands Conservation Landscape, they often lack the local resources to match state funded grant programs. Several Master Plans for local parks are currently in the final stages. Early drafts provide information and recommendations on telling the Susquehannock story on these properties.

Participants at our meetings encouraged linking National Park Service efforts in the Lower Susquehanna with existing plans and partnerships.

Recommendations and Proposed Next Steps

The team made a number of recommendations for additional consultations and next steps.

Engage the American Indian community. The Commonwealth of Pennsylvania has no state or federally recognized tribes. The Onondaga Nation in New York State is a federally recognized tribe with affiliations to the Susquehannock.

Consult with archeologists and historians in the State of Maryland to reflect the full range of cultural resources of the Lower Susquehanna. Preliminary mapping has been provided by the Maryland Historical Trust and can be found in this report.

Coordinate this work with the other research in Maryland on the Indigenous Cultural Landscapes.

Engage partners like the Susquehanna Gateway Heritage Area, the Pennsylvania State Museum, Lancaster County Parks, York County Parks and local governments in interpreting the Captain John Smith Trail at appropriate public venues.

Complete the steps outlined in the *Indigenous Cultural Landscapes Study for the Captain John Smith Chesapeake National Historic Trail* Proto-type Methodology including refining the GIS mapping.

Review the various planning documents that already exist as part of the Lower Susquehanna Segment Planning process. Although most of these documents do not address the Susquehannock story in great detail, they do offer recommendations for improving cultural, historical, and recreational resources.

Facilitate an update of the book *Susquehanna's Indians* by Barry Kent. The last update was written prior to the discovery of the Lemoyne site.

Work with the Pennsylvania Land Trust Association to address cultural resources in their model conservation easement documents. The use of conservation easements, likely held by local land trusts, will be important to the protection of this landscape. Additional language should be added to the Pennsylvania Land Trust Association's (PALTA) Conservation Easement model document and/or the accompanying commentary that addresses landscapes with cultural resources. Appendix E provides some draft language that could be added to PALTA's Conservation Easement Model Document commentary.

Lower Susquehanna River Indigenous Cultural Landscape - Protected Lands - Pennsylvania

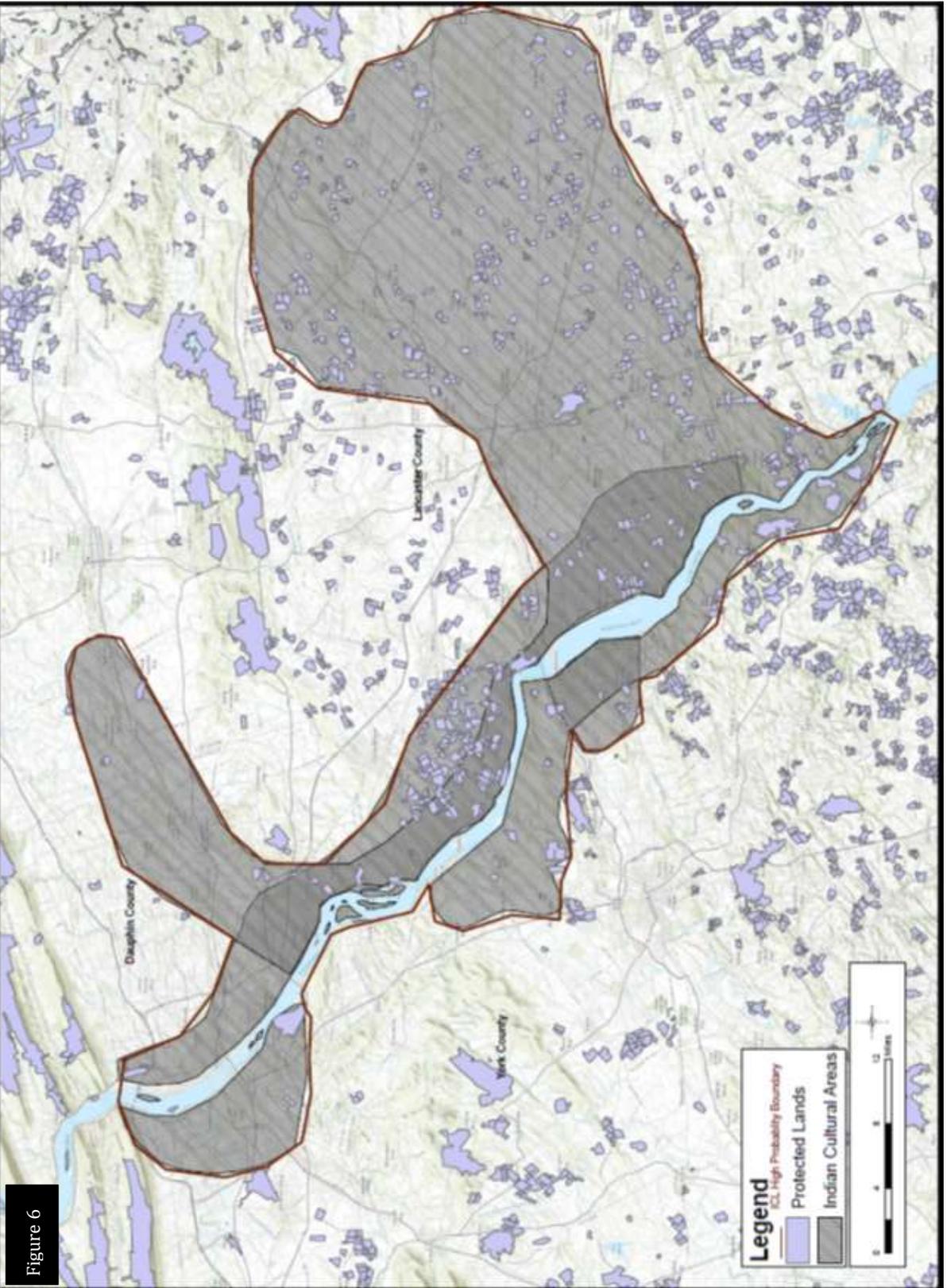


Figure 6

Project Goals and Outcomes for the Lower Susquehanna River in Maryland

1) Identify the Study Area: Lower Susquehanna River in Maryland

The study area for the Lower Susquehanna River in Maryland includes the Susquehanna River from the bay to the Mason Dixon Line. A base map (Fig. 7) illustrates the Study Area for the Lower Susquehanna River in Maryland.

Unlike the Pennsylvania portion of the Study Area, the Maryland portion of the Susquehanna River has a high potential route segment identified in the Captain John Smith Chesapeake National Historic Trail CMP. Captain Smith's documented voyage up the Susquehanna River, several voyage stops, as well as his meeting with the Susquehannock Indians are three of the justifications for this designation.

Landscapes evocative of the 17th century in and around Susquehanna State Park are also noted in the CMP and provide opportunities for interpretation. The segment runs from the bay upstream to about Smith's Falls. Within this stretch of the Susquehanna River are two significant voyage stops within a setting that is highly evocative of the 17th century, three other voyage stops, and one cross site. Cross sites are locations that are in close proximity to locations on Smith's maps that indicate he or his crew set a brass cross.

2) Engage Regional Experts

A meeting was held with members of the Maryland Historic Trust (MHT). MHT staff indicated Late Woodland sites in the Maryland portion of the Lower Susquehanna are nothing like the extensive villages found in the Lower Susquehanna River in Pennsylvania. Mr. Denny Curry, Chief of Archeology stated in a letter following the meeting that "this is most likely due to the narrow floodplains in Cecil County and the nearly non-existent floodplains in Harford County. In fact, the largest Late Woodland sites... are probably base camps at best." Mr. Curry provided a map that delineated areas of high probability for Late Woodland habitation and usage prior to Contact. In regards to the areas delineated on the map, he indicated the largest Late

Woodland sites “are probably base camps at best. The area demarcated north of the Conowingo Dam is now submerged, but a village site was reported in this vicinity in the early 1900s.” The following maps illustrate the area delineated by Mr. Curry at Maryland Historical Trust: Soils (Fig. 8) and Protected Lands (Fig. 9).

3) Review of the CAJO CMP for the Maryland Lower Susquehanna River

As noted in the Introduction and Background, the Susquehanna River, from where it enters the Bay to about the Conowingo Dam in Maryland was included in the Captain John Smith Chesapeake National Historic Trail when the Trail was designated as part of the National Trails System in 2006. This segment of the Susquehanna River is identified in the CMP as a high potential route segment. A high potential route segment is defined as “those segments of a trail would afford high quality recreation experience in a portion of the route having greater than average scenic values or affording an opportunity to vicariously share the experience of the original user of a historic route.” (CMP page 2-28) High potential route segments must meet all of the following criteria: 1) Trail Related Resources – must have greater than average aggregation of trail-related resources within the trail corridor (examples: High Potential Historic Sites, Visible shoreline evocative of the 17th century, and voyage stops); 2) Public access sites to the water; 3) Capacity to support a high quality recreation experience; 4) Presence of protected lands; and 5) Proximity to a Chesapeake Bay Gateways and Watertrails Network (CBGN) partner. The CMP also identifies two voyage stops within this segment that are highly evocative of the 17th Century as well as three other voyage stops. According to John Smith’s journal a cross site location is also in this vicinity. Finally, the CMP maps numerous public access sites as well as evocative landscapes in this segment.

4) Documentation of Existing Resources in the Study Area

The existence of the Lower Susquehanna Heritage Greenway (LSHG), a state designated Heritage Area, has brought attention to this section of the Lower Susquehanna River. The Lower Susquehanna Heritage Greenway has a five year Management Plan. The Heritage Greenway is also a designated Scenic Byway. LSHG

has served as a reviewer of numerous planning documents for Harford and Cecil counties. In addition, Maryland Historical Trust maintains records on archeological sites and historical structures in the state.

5) Themes and Potential Interpretive Sites

Although further research is needed on the Maryland portion of the Lower Susquehanna River, the themes identified by the Pennsylvania Study Group clearly have some relevancy to this portion of the River. A brief overview of those themes as they relate to the Maryland portion appears below.

Richness of the Ecosystem

Like the Pennsylvania portion of the Lower Susquehanna, the river supports a myriad of wildlife resources. Migratory birds make the Eastern shore and the Bay their home during the winter months. Migratory fish such as shad were a mainstay food source all along the Susquehanna River. The Chesapeake Bay is world renowned for its shellfish. With these resources, the area would be a source for food for American Indian populations living in the area as well as those using the River as a trading transportation corridor.

Convergence and Exchange / First Contact and Shifts in Power

As indicated earlier, Captain John Smith's journey included sailing up the Susquehanna River to a location now known as Smith's Falls. The falls precluded Smith and his companions from traveling further up the river. Smith's journals reflect on his meeting not only with the Susquehannock but his encounter with the Tockwhogh who lived at the head of bay on the east side in the vicinity of the Sassafra river. The Tochwhogh told Smith about the Susquehannock and Smith persuaded them to travel up the Susquehanna and invite the Susquehannock to visit. Ultimately many Maryland tribes experienced a similar fate as the Pennsylvania tribes once the Europeans began arriving in significant numbers.

Additional research is needed to explore the impact of this contact and the shifts in power that occurred in Maryland.

River Corridor as a Landscape of Change

Petroglyphs were found on rocks and islands in the Susquehanna River in Maryland, indicating this area has supported native peoples for at least a thousand years. The largest collection of petroglyphs was found on Bald Friar Island, also known as Big Indian Island.

However, this landscape has also changed as small towns grew along the river's edge. Canals, railroads, and a hydro-power dam were built in the 19th and 20th centuries. These changes have impacted wildlife resources as well as restrict public access to the Susquehanna River.

Potential interpretative sites have also been identified for this section of the river. All the sites are in public ownership and represent at least one of the CAJO themes (see Appendix D.)

RECOMMENDATIONS

Consult with archeologists and historians in the State of Maryland to reflect the full range of cultural resources of the Lower Susquehanna.

Coordinate this work with the other research in Maryland on the Indigenous Cultural Landscapes.

Engage the American Indian community. Reach out to the Maryland Commission on Indian Affairs.

Engage partners like the Lower Susquehanna Heritage Greenway, local non-profit historic organizations and local governments in interpreting the Captain John Smith Trail at appropriate public venues.

Conclusion

With the designation of the entire Susquehanna River as part of the CAJO trail, there are opportunities to adopt a more holistic approach to resource conservation, one that interprets the landscape from an American Indian perspective, offers recreational access, and provides for some permanent protection of its cultural and natural values and iconic scenery. These ideas align with the emerging large landscape movement and opportunities to scale up conservation by expanding partnerships to protect land and associated resources.

The Lower Susquehanna valley is particularly significant as the homeland of the American Indian people, the Susquehannock, who established major settlements in the region. The Susquehannock meeting with John Smith opened a window into the interior of the Chesapeake Bay watershed and the people who once lived there. The mapping of the contact period cultural landscape and of sites that might portray the Indigenous Cultural Landscape is an opportunity to both tell and honor that story.

Lower Susquehanna River ICL Base Map Study Area - Maryland

Figure 7

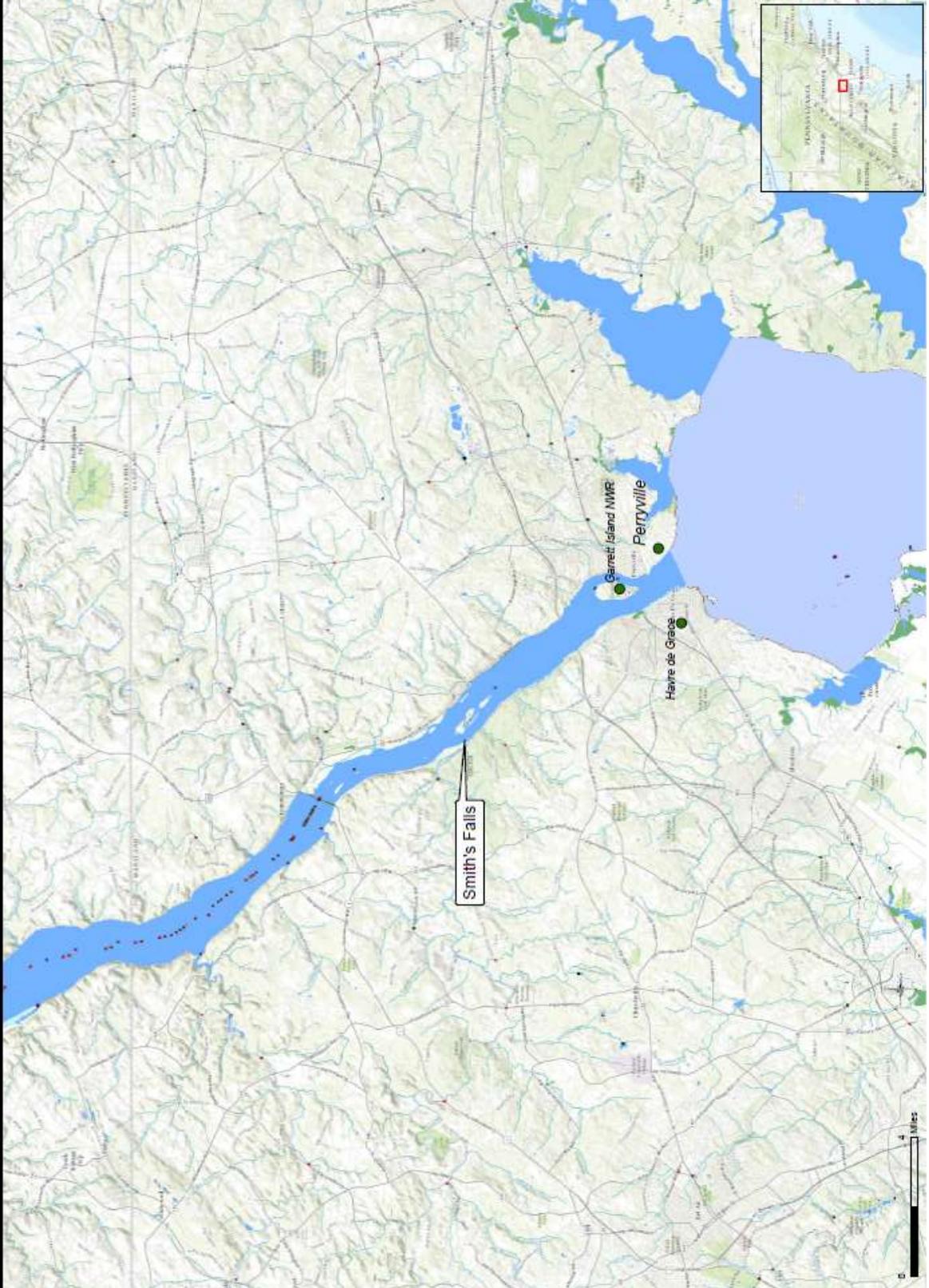


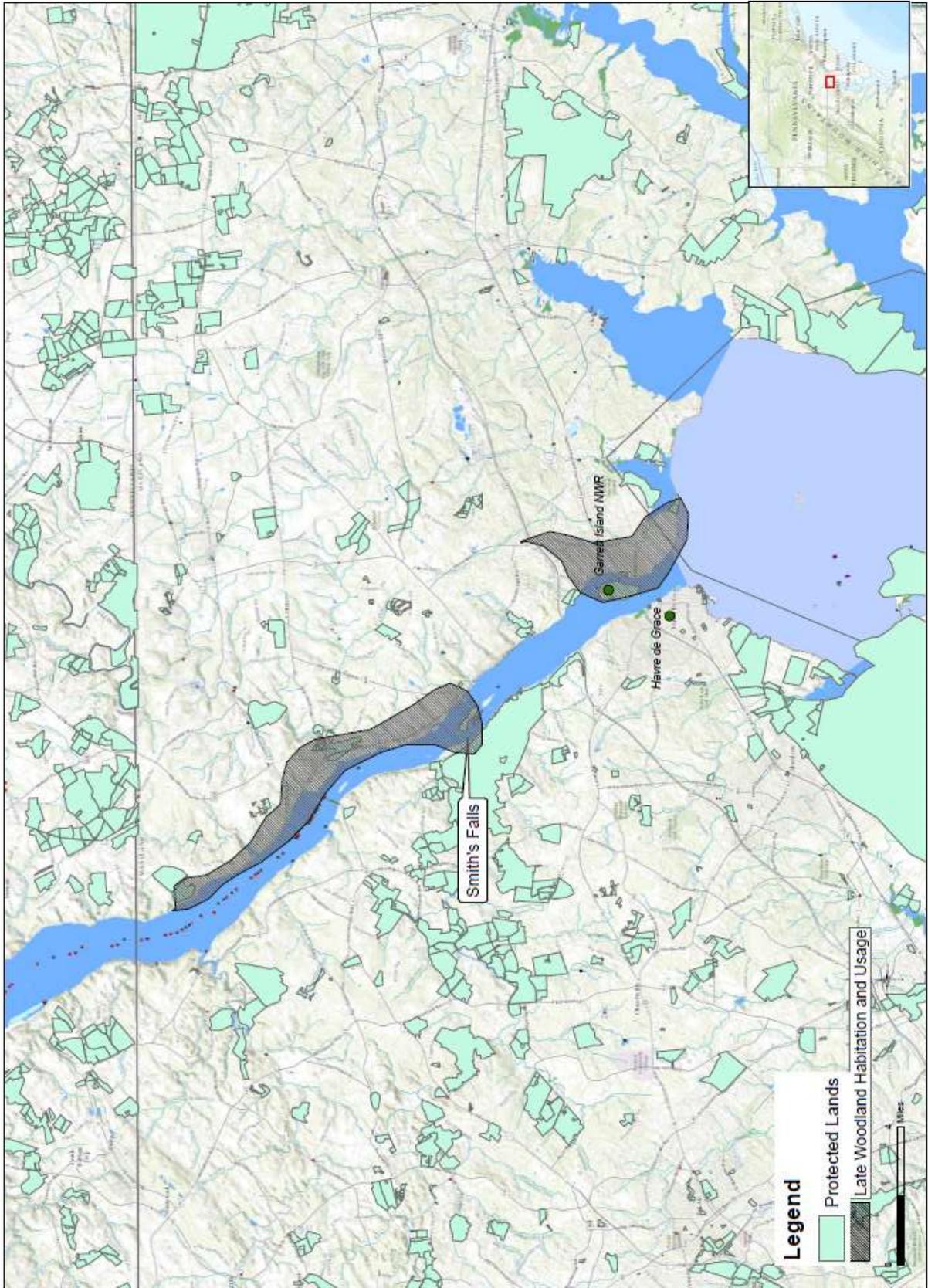
Figure 8

Lower Susquehanna River High Probability ICL - Soils - Maryland



Lower Susquehanna River High Probability ICL - Protected Lands - Maryland

Figure 9



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Appendix B: Project Meetings

February 21, 2013
Zimmerman Center
Lower Susquehanna Gateway Heritage Area
Wrightsville PA

April 24, 2013
State Museum of Pennsylvania
Harrisburg PA

August 1, 2013
Lancaster County Conservancy
Lancaster PA

November 18, 2013
State Museum of Pennsylvania
Harrisburg PA 17104

May 6, 2014
Maryland Historical Trust
Crownsville MD

Appendix C: List of Potential Interpretive Sites for Pennsylvania

(See Figure 4)

Blue Rock Heritage Center

Lancaster County

Provides a riverside location to tell the story of the nearby Susquehannock and Shenks Ferry village and towns. Also provides access to the river and specifically the Conejohela Flats an important bird habitat. Tells the story of the areas rich agricultural heritage through the 1832 Witmer Grist Mill.

Columbia Borough Park (Boat Launch)

Lancaster County

Offers excellent river access, long up and down river views and opportunities for interpretive signage. This was a key site for investment by the Conservation Landscape Initiative, including PA DCNR, PA Fish & Boat Commission, federal sources and Columbia Borough.

Enola Low Grade Trail

Lancaster County

Provides views of the Susquehanna Gorge, a good interpretive perspective, and a recreational asset.

Highpoint Scenic Vista and Recreation Area

York County

A York County Park with a 360 degree views, parking and trail access. The views include the Susquehanna River, Native Lands County Park, and the river towns.

Memorial Park

Lemoyne Borough, Cumberland County

A borough park that contains a recently excavated Susquehannock site and overlooks the river.

Native Lands Heritage Park

York County

This York County park property preserves a National Register listed Susquehannock site (Byrd Leibhart Site) and surrounding landscape. Property can be entered using the trail located at the Susquehanna Gateway Heritage Area's Zimmerman Center or from nearby Klines Run Park.

Northwest River Trail

Lancaster County

This trail is located on the northern portion of Lancaster County side of the river providing river access and river views. The Susquehanna Riverlands Conservation Landscape improving the infrastructure of the trail for more public access.

Pinnacle Overlook**Lancaster County, owned by LCC**

Offers views of the river, the forested river hills, Lake Aldred and Duncan Island. The Overlook is part of the Kelly's Run Preserve.

State Museum of Pennsylvania**Harrisburg, Dauphin County**

The Pennsylvania Archaeology galleries have extensive exhibits on Susquehannock material culture.

Safe Harbor Preserve**Lancaster County Conservancy, Lancaster County**

Located in Manor Township, this preserve supports a hardwood forest. The harbor is actually an inlet at the confluence of the Conestoga and Susquehanna Rivers.

Urey Overlook**York County**

Located in Lower Chanceford Township, York County, the Overlook offers views of Lake Aldred on the Susquehanna River

Shenks Ferry Wildflower Preserve**Lancaster County**

This 50-acre glen is located along the Susquehanna River and is part of the Holtwood Environmental Preserve. It supports over 70 species of spring woodland flowers.

Washington Boro Park**Washington Boro, Lancaster County**

This small community park has a Pennsylvania Historical and Museum Commission marker noting the significance of the archeological sites in the region.

Zimmerman Center,**Canoe and Kayak Launch, York County**

Opening in June 2014 this project was funded in part by a Chesapeake Bay Gateway grant and will provide river access and a connection to the Zimmerman Center and the Native Lands Park.

Indian Steps Museum**York County**

A National Register listed site with an extensive American Indian artifact collection. Property also provides informal river access.

Appendix D – Potential Interpretative Sites in Maryland

Susquehanna State Park Harford County, Maryland

The Park provides boating and fishing opportunities and has an extensive trail network providing views of the river. The Park is also the site of an over 200 year old Grist Mill. The park includes an evocative landscape and is the location of a possible Captain John Smith voyage stop.

Susquehanna Museum at the Lock House Havre de Grace, Maryland

Located at North Park, the Museum tells the history of the Susquehanna and Tidewater Canal.

Garrett Island Cecil County, Maryland

Part of the Blackwater Wildlife Refuge, the island is 198 acre and is undeveloped. It has no visitor facilities or interpretative media on the island; however, there is a beach area designated for public use. It has evocative landscapes and is the possible location of the meeting between Captain John Smith and the Susquehannock Indians.

Fisherman's Park Harford County, Maryland

Owned by Exelon as part of the Conowingo Dam project, the Park features a boat launching, fishing areas, picnic tables and hiking trails. The Park is open year-round to the general public.

Appendix E – Draft language for PALTA Model Conservation Easement Commentary

Recommendation for providing for the preservation of archaeological resources in the PALTA Conservation Model Document Commentary.

1. Add to section 1.03 Conservation Objective (a) Resource Protection Objectives:
viii. Cultural and Archaeological resources

Elaborate: Add a brief description of the cultural and archaeological resources found on the property and more fully described in the Baseline Document.

For example: The property is a historically important land area as it meets the criteria for listing on the State (or) National Register of Historic Places. **OR** The property contains cultural and archaeological resources and is listed on the State (or) National Register of Historic Places.

2. Add to section 1.03 (b) Goals:

A goal that relates to these types of resources

(i) Highest Protection Area. To protect cultural and/or archaeological resources within the Highest Protection area so as to keep them in an undisturbed state.

(ii) Standard Protection Area. Do we want to recommend archaeological resources be in a Standard Protection Area?

3. Add to section on Additional Improvements 3.03

It is recommended that the easement restrict construction of improvements within the viewshed of the property from a public road to maintain the scenic values of the property.

If archaeological resources are located within a Standard Protection Area then add to the paragraph on Additional Improvements 3.03 (b) if additional structures are permitted.

Language such as: To protect the scenic values of the Property, no buildings or structures shall be constructed within ___ feet of a Public/State Road as measured from the center line of the road.

4. Add to section on Disturbance of Resources 4.03

It is recommended that the easement include language specific to archaeological resources.

Language such as: Grantor shall not grade, excavate, or plow over 12 inches in depth without the prior written consent of the Grantee. Grantee may require a survey of the area to be graded, excavated or plowed prior to granting consent. Grantee may require the Grantor to conduct data recovery, excavation, curation,

documentation and reporting of the affected resources in a form provided by the Grantee.

5. Other guidance:

- a. Land Trusts should establish criteria to evaluate whether or not accept an easement on a property with cultural and/or archaeological resources. The following are suggested criteria:
 - i. Property is listed on the State or National Register of Historic Places.
 - ii. Property meets the criteria for listing on the State or National Register but is not listed.
 - iii. Property is identified by the County or local municipality in the comprehensive plan as having local historic significance.

- b. Guidelines should be established to address conducting archaeological investigations on the property that involve invasive field work such as collecting, testing or excavations.
 - i. Land Trust should be notified in writing at least 30 days in advance of the investigation.
 - ii. Notification should include: a map of the location to be investigated, the proposed field procedures, and techniques for acquiring and analyzing data.
 - iii. All excavations should be required to be backfilled.
 - iv. Landowner should submit a copy of the final report by the investigator that will be included in the Baseline document. It is recommended that the Land Trust require the principal investigator have a graduate degree in anthropology/archaeology.