

Rainwater, River, Ria, & Rail

LOWER SUSQUEHANNA CONSERVATION
LANDSCAPE INITIATIVE (CLI)

AUGUST 2010

Prepared for the Pennsylvania DCNR
by Fermata, Inc. of Austin, Texas

Rainwater, River, Ria, & Rail

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LANDSCAPE INITIATIVE (CLI) - AUGUST 2010



Lower Susquehanna/Ted Eubanks, Fermata, Inc.

*All water has a perfect memory and is forever trying
to get back to where it was. --Toni Morrison*

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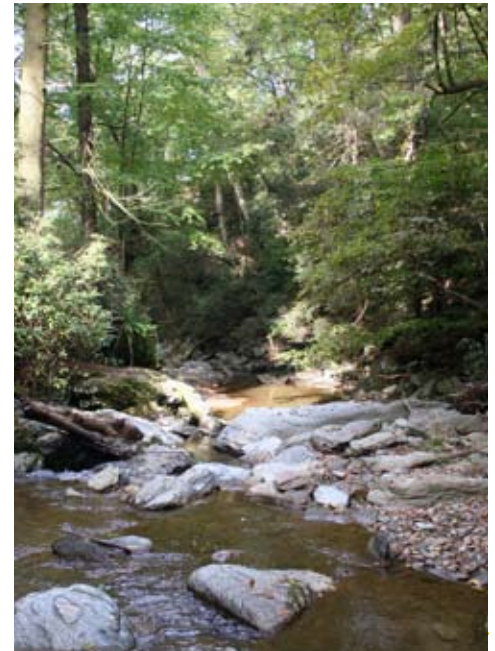
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Conestoga Trail at Tucquan Glen Nature Preserve/Brenda Adams-Weyant, Fermata, Inc.

Introduction

The Pennsylvania Department of Conservation and Natural Resources (DCNR) has focused over the past several years on the development of an innovative integrated, place-based approach to coordinate strategic investment and actions in large landscapes, focusing on the values of sustainability, conservation, community revitalization, and outdoor recreation. DCNR's Conservation Landscape Initiatives (CLI) began in north-central Pennsylvania in the PA Wilds, and now has expanded to include a diversity of landscapes around the Commonwealth. Fermata Inc. has been involved in developing strategic plans for five of the CLIs - PA Wilds, Laurel Highlands, Poconos, South Mountain, and now the Lower Susquehanna.

Since the inception of this program in the PA Wilds, a relatively consistent model of planning and implementation has been developed (see below). Although the model is easily adaptable to the specific conditions and opportunities within a region, there are similarities and consistencies that allow CLIs to be compared and contrasted. While each CLI has an identifiable theme, the steps taken in planning and the measures of success should be replicated.



Figure 1: CLI Model

The initial focal area of the Lower Susquehanna CLI (LSCLI) covers portions of two Pennsylvania counties - York and Lancaster. The Lower Susquehanna forms the boundary between these two counties, with the river itself being part of Lancaster County. DCNR and many partners, including Lancaster and York County Planning Commissions, the Lancaster County Conservancy, The Conservation Fund, and the Susquehanna Gateway Heritage Area (SGHA) have been working for years with the utility companies that have land holdings along the Susquehanna to conserve lands. In recent years, DCNR has explored the possibility of acquiring some of these lands to create a state park. Therefore the agency is being presented the opportunity to reconnect the CLI and the Commonwealth to one of Pennsylvania's iconic landscapes, the Susquehanna River, and connect it to the people and communities who live, work and play in this region.

A Ria is a drowned river valley or estuary.

The Susquehanna River drains 27,500 square miles (71,225 km²), covering nearly half of the land area of Pennsylvania. The river empties into the northern end of the Chesapeake Bay, the ria (drowned river valley or estuary) of the Susquehanna, providing half of the freshwater inflow for the entire Chesapeake Bay. More than 31,000 miles of streams with 31,193 names—thousands of rivulets and hundreds of significant rivers and creeks—feed the Susquehanna. Unlike most big rivers, the Susquehanna has several tributaries that are nearly as substantial as the main stream where they enter it. These include the 86-mile-long Juniata, the 70-mile Chemung and the 40-mile Lackawanna. Therefore the Susquehanna River, Pennsylvania, and its communities are inextricably linked to the Chesapeake. Rather than the river being an extension of the bay, for Pennsylvania the bay exists because of the river.

Susquehanna Drainage

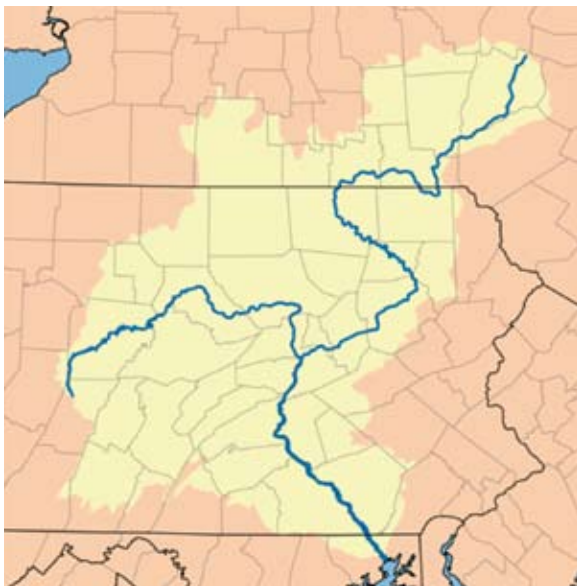


Figure 2 Susquehanna Drainage

The CLIs are a vivid example of place-based planning, conservation, and development. Rather than modify the landscape to fit a preconceived notion of community (with the obligatory Walmarts and McDonalds), the CLI emphasizes the uniqueness of a specific region and allows those particular attributes to define a path toward the future. The singular importance of the river in this CLI became obvious in Fermata's earliest work in the region.

While both counties have significant development away from the river (primarily the cities of York and Lancaster), the river communities along the Susquehanna (such as Columbia, Mariette and Wrightsville) have declined in their shadow in recent years. For many residents and travelers, the Susquehanna is little more than a bridge to be crossed coming to and from other parts of the counties. Both counties have expressed a keen interest in working with the CLI to develop additional recreational and heritage-based tourism, as well as educational opportunities, along the river.

From a broader perspective there is ample evidence that the citizens of the Commonwealth

are ecologically, historically, and socially detached from the river. Both Philadelphia and Pittsburgh lie outside of the Susquehanna drainage, with Harrisburg the largest city along the lower reaches. In Fermata's opinion, this detachment undermines efforts to expand support for river improvements, as well as the eventual Chesapeake Bay restoration.

Fermata's CLI recommendations (combined with our previous recommendations for CLIs such as the Poconos and the PA Wilds) are focused on how DCNR and its partners can best take advantage of the in situ Susquehanna experience to lift the profile of the river. After all, while the river flows only a short distance through Maryland, the two major branches of the Susquehanna bisect the entire state of Pennsylvania. Therefore the key to deepening support for the restoration of the Chesapeake Bay among citizens of the Commonwealth is through the Susquehanna.

Despite water quality improvements over the last thirty years, Pennsylvania still has much to do to reclaim the Susquehanna. Impacts continue including acid mine drainage on the West Branch, overloaded point source discharges, and agricultural runoff throughout the watershed. Restoration of the river and its tributaries is a vital importance to Pennsylvania communities; furthermore, the restoration of the river contributes to the restoration of the bay, and without strong citizen support, the investments necessary for such restoration will be difficult, if not impossible, to garner. For Pennsylvania, with over half the state (26,000 square miles) in the Chesapeake Bay watershed, the bay begins and ends with the Susquehanna River.

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Veterans Memorial (Columbia Bridge) from Columbia/Ted Eubanks, Fermata, Inc.

Jack Brubaker, in [*Down the Susquehanna to the Chesapeake*](#), makes the following observation: “Today the Susquehanna is the bay’s only indispensable tributary, contributing an extraordinary 19 million gallons of water a minute—90 percent of the upper bay’s fresh water and 50 percent overall. Without that steady influx to hold back the briny Atlantic, the Chesapeake could not support its rich mix of estuarine life. Given the river’s pervasive influence, “Susquehanna Bay” would be the Chesapeake’s more accurate designation.”

In issuing his Executive Order on the Chesapeake Bay in 2009, President Obama recognized that the Bay watershed is one of our nation’s greatest treasures and must be protected and restored. The Executive order requires the development of a federal strategy “to protect and restore the health, heritage, natural resources, and social and economic value of the Nation’s largest estuarine ecosystem and the natural sustainability of its watershed.” Pennsylvania’s role in this initiative is in restoring and protecting the watershed. The success of the Chesapeake Treasured Landscape Initiative will depend on an unprecedented level of engagement and collaboration among all levels of government,

the private sector, nonprofit organizations, and the 17 million residents of the watershed. With more voices now calling for the restoration of the watershed, and a shared goal to conserve land and increase public access, there has never been a better time to further the objectives of the Lower Susquehanna CLI.

To be a citizen of the Commonwealth is to also be a citizen of the Susquehanna. No one in Colorado would question being part of the “Rocky Mountain” state, but how many would view the Susquehanna with the same reverence or respect? Yes, Pennsylvania is the state of forests and mountains. But, of equal importance, Pennsylvania is a [*river state*](#). The Delaware, Schuylkill, Clarion, Lehigh, Allegheny, Brandywine, Monongahela, Youghiogheny, and Ohio are examples of rivers that have helped define not just the state but the nation as well. The greatest of these is the Susquehanna, and it is precisely for this reason that DCNR must redouble its efforts to connect its constituents to this vital aspect of Pennsylvania heritage.

- **The Susquehanna is the longest river on the American east coast (444 miles long).**
- **The river is the longest in the U.S. without commercial boat traffic.**
- **Chesapeake Bay is the ria (drowned river) of the Susquehanna, and the river provides 90% of the upper bay’s fresh water.**

The Current Situation

Fermata staff has visited the Lower Susquehanna CLI on numerous occasions over the past 18 months. Our personnel have met with local stakeholders, not-for-profits, business leaders, agencies, elected officials, DCNR staff, and interested citizens in analyzing the current situation and opportunities this presents the agency. Brenda Adams-Weyant, Fermata's senior recreation planner, met with DCNR parks staff and visited current and potential park lands (See Appendix B for her analysis). Over the course of our work, we have come to the following conclusions:

1. Unlike preceding CLIs where we were faced with a diversity of opportunities and resources, this CLI is all about the river. The river is an all-encompassing theme, one that should be mined to its depths. The Lancaster Amish heritage is well presented, and any additional effort on the part of the CLI to incorporate that story is simply redundant. The industrial heritage of York County (Harley-Davidson, York Barbell, food manufacturing, and its agriculture) is being addressed as well. What is missing is that remarkable space in between the two - the Susquehanna River. The river has many forms - historic transportation artery, Civil War barrier, major fishery, power generator, recreational destination, and watershed for the Chesapeake Bay. These strands should now be woven into whole cloth, a garment that is recognized and valued by the public. As the Pennsylvania-born writer Edward Abbey said, *"that which today calls itself science gives us more and more information, an indigestible glut of information, and less and less understanding."* The Susquehanna needs not only facts but a narrative as well.

2. Lancaster and York counties view the river as their backyard, rather than their front door. The development of a robust recreational and tourism industry along the river will help shift

the orientation of the counties toward the river. The extensive power generation facilities that harness the river have no doubt contributed to the view that the river is industrialized and therefore of little appeal to recreationists. Yet these facilities are bordered by extensive land holdings and stretches of undeveloped shoreline. Expanded recreational opportunities are possible, particularly if DCNR is able to develop new riverfront parks in the region.

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Susquehanna River/Ted Eubanks, Fermata, Inc.

3. DCNR has little identifiable presence on the river. Building that presence will require recreational lands. DCNR state parks are the primary recreational lands in the state, yet currently DCNR has not one state park that fronts the Lower Susquehanna. However, Samuel Lewis State Park and Susquehannock State Park do provide breathtaking river valley views.

4. Local conservation and heritage organizations lack the resources to fill the gap left by DCNR's absence. The SGHA currently meets its funding needs through partnerships with the Counties of York and Lancaster, and the Lancaster Solid



Pinnacle Overlook/Brenda Adams-Weyant, Fermata, Inc.

Waste Authority. They have realigned their mission to “enhance the region’s quality of life and economic vitality by promoting the preservation, conservation, and interpretation of the Susquehanna River’s cultural and natural heritage.” The Lancaster County Conservancy is an effective preservation organization that needs to build on its engagement and advocacy experience. Their main priority in the next couple of years is finding the capacity to manage land once the PPL land acquisition project is settled. Local tourism boards and CVBs for the most part have been focusing on the traditional opportunities of “Pennsylvania Dutch County.” York County CVB is starting to promote more nature and recreation-based tourism events and

Lancaster CVB for the first time listed the Lower Susquehanna National Recreation Water Trail in its 2010 publication. Therefore, in our opinion, there is an opportunity to pull these various efforts together.

5. Both counties have progressive land conservation and planning (green space) programs. In addition, both counties are eager to diversify their economies, and for both, the river is an untapped resource. Therefore both counties are eager and willing partners in the DCNR CLI effort.

6. The interest of the utility companies in divesting themselves of their excess lands is an opportunity for DCNR and its partners to develop a presence on the river. In our opinion, this is a once in a generation opportunity for DCNR to perfect its role as the agency responsible for the natural resources of the state.

7. Rivertowns: According to the 2005 DCNR funded River Towns Heritage Development Strategy conducted in partnership with Rivertownes USA and the Susquehanna Gateway Heritage Region---there are immense opportunities for sustainable economic revitalizations in the established communities located adjacent to the Susquehanna River. The rich historic communities of Columbia, Marietta and Washington Borough in Lancaster County, and Wrightsville, Accomac, and Long Level in York County are poised to be gateway communities for this treasured landscape. This study states “From colonial times and ferry crossings, through the canal era and the age of coal, iron, and timber into the era of railroads and now automobiles, the fortunes of these communities have always been linked to the river. ...The role of the Susquehanna is changing quickly. Today, the river’s improving health, growing importance as a recreational resource, and status as one of the region’s key assets are increasingly being recognized. With its waters fast becoming cleaner, the river is emerging as a major recreational attraction;

initiatives like water trails, greenways, and bike trails are underway.” DCNR and its CLI partners are working on a myriad of community enhancement projects ranging from riverfront park development, trails, and river access to community infrastructure improvements to green economic development.

8. Culture/Native Americans: From the earliest Native Peoples, to the American Revolution, to the Civil War, days of big timber and the Industrial Age, our heritage is undeniably linked to the grand Susquehanna River. The history of Native American river towns is more subtle but perhaps even more impressive. Native Americans have occupied the lower Susquehanna for over 12,000 years; stockade settlements are first noted around 1550 AD well before John Smith’s epic journey up the river from the Chesapeake Bay in Maryland. It was the very abundance of this nutrient rich sustainable resource of plentiful and diverse wildlife that Native Americans thrived for so many years. More than 50,000 Native Americans had lived their lives here before the first Europeans ever arrived. Native people still live here today, as seen by the many local powwows and festivals held each year.

The historic sites of the last two Susquehannock Indian settlements are now preserved in various public parks in the region. The Upper Leibhart Archaeological Preserve, located in York County’s Native Lands Park, dates to 1665. It is so significant that the National Park Service has recognized it as deserving of National Historic Landmark status. In 2003, Preservation Pennsylvania listed this site as one of the “Most Endangered Historic Places” and is managed by the Archaeological Conservancy. The last Susquehannock village site, to the south, dates to 1676 and is also part of Native Lands County Park. Although most of this Native American history is invisible to us, the images they carved on river rocks to the south at Conejohela Flats are the only place on the Susquehanna where extensive rock art sites have been found.

The Susquehannocks settled in the area about 1575, building the first of several successive stockade villages on the Lancaster County side of the river. The three largest were near present day Washington Borough in Lancaster County. In 1608, when John Smith first encountered the Susquehannocks farther to the south, near the river’s mouth in Maryland, nearly 2,000 people were living in their Washington Borough community. Perhaps due to pressure from other Native groups or encroachment from traders and settlers, the Susquehannocks moved to this side of the river about 1665, establishing their first village just north of Klimes Run Park which is currently owned by Safe Harbor Utility Company.

Opportunities to interpret Native American culture along the river are abundant. Local CVBs are in a good position to promote this unique story to potential visitors.

9. The Lower Susquehanna is blessed with a diverse system of trails. This diversity can be enhanced by interconnecting trails such as the Northwest Rail Trail, Manor Township Rail-Trail,



Indian Steps Museum/Ted Eubanks, Fermata, Inc.



Rocky Islands downstream of Holtwood Dam/Brenda Adams-Weyant, Fermata, Inc.

*Saving the water and the soil must
start where the first raindrop falls.
--Lyndon Baines Johnson 1947*

and the Mason-Dixon hiking trail. The Mason Dixon Trail already links with the Conestoga Trail, which connects to the Horseshoe Trail. The Mason Dixon Trail also spans the distance between the Appalachian Trail and the Brandywine Trail. The interconnected network of trails has the potential to become a national attraction, just as the Great Allegheny Passage and C & O Canal Trail have done.

10. The first edition of the Lower Susquehanna Water Trail Guide was printed in 2002. Interest in the Lower Susquehanna for paddling has increased since the publication, which has brought to light additional needs for access points and campsites. It is important to ensure that new access points and camping areas are developed to meet user's needs while providing a sustainably developed facility. A Pennsylvania Fish and Boat Commission Fishing and Boating Access Strategy completed in 2010 identified the Lower Susquehanna as one of the top ten rivers in Pennsylvania for fish and boat access improvements.

Precisely what should be the interest of DCNR in this region of the state? Other state agencies have legislated responsibilities that involve the river as well. The Pennsylvania Fish and Boat

Commission, for example, regulates recreational activities such as fishing and boating on the river. The Pennsylvania Game Commission manages game lands that border the river as well, primarily for hunting. The Pennsylvania Department of Environmental Protection regulates environmental impacts from pollutants affecting the river, and the Pennsylvania Department of Agriculture is concerned with agricultural runoff. There are a number of nonprofit organizations that offer limited environmental education and advocacy. River Keepers, the Chesapeake Bay Alliance, and SHGA are excellent examples of groups at work in the region to connect the public to the resource. Although the PPL Holtwood Environmental Center is only open by appointment, they do offer a wide array of environmental programming. In the private sector, Shank's Mare Outfitters in Long Level, and Chiques Rock Outfitters in Columbia provide canoe and kayak rentals, and guide outings on the river.

Yet DCNR, through its parks and its community revitalization efforts in partnership with local and county municipal officials and community leaders, is the primary interface between the citizens of the Commonwealth and their environmental heritage. Parks are where people play, where people relax, and where people learn. For example, much of the Susquehanna water that courses through this region originates as rainwater falling on DCNR public lands, particularly state forests. DCNR is critical to the river and the river is critical to Chesapeake Bay. Yet the DCNR public land system, at present, does not include river front where this critically important story can be told.

President Obama's recent [Executive Order](#) has elevated the importance of the Chesapeake Bay restoration. Pennsylvania has significant responsibilities for the river's (and ria's) cleanup. Yet why would citizens of the Commonwealth be willing to foot the bill for Pennsylvania's part of the cleanup if they see no connection between the state and the bay? That connection, of course, is the Susquehanna.



Rocky bluffs along Conestoga Trail near Pinnacle Overlook/Brenda Adams-Weyant, Fermata, Inc.

Ultimately, the fate of biodiversity and intact ecosystems may depend less on rates of habitat loss or invasive species, than on public perception of whether conservation should be supported at all.
--Zaradic, Pergam, and Kareiva 2009

Recommendations



Chickies Rock County Park/Brenda Adams-Weyant, Fermata, Inc.

Public sentiment is everything. With public sentiment, nothing can fail. Without it, nothing can succeed.
-- Abraham Lincoln

Fermata has written extensively about the need of DCNR and its partners to develop a progressive engagement strategy. Nowhere is this more important than in this CLI, given the critical need to connect people to the river. Therefore we once again urge the development of an engagement plan (communications and interpretation) to enlist the interest and support of the public in conserving the river, the ria, and the raindrops (the watershed).

We believe that DCNR must expand its reliance on partners outside of the agency for much of this engagement effort. The Susquehanna Gateway Heritage Area and Lancaster County Conservancy have emerged as external project leads in the Lower Susquehanna Initiative.

Engagement

The basic premises behind this strategy were first presented in Fermata's plan for the Poconos Forests and Waters CLI. We have significantly expanded that initial work for South Mountain and DCNR. In truth, engagement is a task for all CLIs, and in this section is the next iteration of an attempt to design an engagement strategy for the agency.

Perhaps the most oft-cited phrase in all interpretation literature is a sentence written by an anonymous U.S. National Park Service ranger in an obscure administrative manual a half century ago: "Through interpretation, understanding; through understanding, appreciation; through appreciation, protection." Freeman Tilden quoted the manual in *Interpreting Our Heritage*, and since that publication interpreters have flitted around the phrase like moths around a candle.

Tilden published this seminal work in 1957. It is still the backbone of interpretation, and his six principles remain relevant. They include the following:

1. Any interpretation that does not somehow relate what is being displayed or described to something within the personality or experience of the visitor will be sterile.
2. Information, as such, is not Interpretation. Interpretation is revelation based on information. But they are entirely different things. However, all interpretation includes information.
3. Interpretation is an art, which combines many arts, whether the materials presented are scientific, historical, or architectural. Any art is to some degree teachable.

4. The chief aim of Interpretation is not instruction, but provocation.
5. Interpretation should aim to present a whole rather than a part, and must address itself to the whole person rather than any phase.
6. Interpretation addressed to children (say, up to the age of twelve) should not be a dilution of the presentation to adults, but should follow a fundamentally different approach. To be at its best it will require a separate program.

As Tillman wrote, "the chief aim of interpretation is...provocation." Yet he died (1980) before the 21st Century technological revolution that is still underway. As Marshall McLuhan said: "Anyone who tries to make a distinction between education and entertainment doesn't know the first thing about either." The delineation between the two has become increasingly blurred in the internet age. When does news stop being education and start being entertainment? Is reality television real? What is being learned by the 10 million people who are subscribed to the tweets (from the micro-blog Twitter) of a dead man (Michael Jackson)? Is the purpose of news to educate or to provoke? Does it matter if the public sees little distinction between traditional journalism and talk radio?

Explore. Discover. Adventure. Revelation.

These are the buzz words of experiential tourism and recreation, the search for transformative experiences that cannot be had elsewhere. Experiential tourists and recreationists collect experiences the way that cruise ship passengers collect countries (or calories). For the Lower Susquehanna, there is much to gain in connecting recreationists and travelers with the distinctive, authentic experiences derived from the nature, culture, and history of the region. In truth, these are more than travelers. They are explorers, adventurers. This segment

of the population is repulsed by the fabricated, fictitious world that is much of modern travel (and modern media). These travelers and recreationists are offended by the idea that the Eiffel Tower or the pyramids of Egypt can be experienced in Las Vegas, and that paint ball is an outdoor recreation.

Yes, part of the connecting process is marketing and communications. Yet engagement extends well beyond marketing, and includes education and interpretation, recreational programming, and conservation enlightenment. Engagement insures that visitors are immersed in an authentic experience, and that they leave the region with a greater understanding of its singularity. Finally, engagement provides the depth of information and meaning that defines a context for the marketing slogans and campaigns.

Fortunately, the rapid development and adoption of new communication technologies allows us to engage the public in ways never before possible. According to Pew Internet, "More than half of Americans - 56% - have accessed the internet wirelessly on some device, such as a laptop, cell phone, MP3 player, or game console." Use of the internet on mobile devices has grown sharply from the end of 2007 to the beginning of 2009. Experts predict this trend will continue in coming years.

- In December 2007, 24% of Americans said they had at some point used the internet on their mobile device.
- By April 2009, 32% of Americans said they had at some point used the internet on their mobile device.
- 53% of those between the ages of 18 and 29 have used the internet on a handheld device.
- 48% of African-Americans have used the internet on a handheld device.

Wireless Users (1)

| | Wireless Users | Non-wireless internet users | Non internet users |
|-----------------------------|----------------|-----------------------------|--------------------|
| Gender | | | |
| Male | 51% | 47% | 45% |
| Female | 49 | 53 | 55 |
| Parental status | | | |
| Parent of child under 18 | 40 | 32 | 14 |
| Age | | | |
| 18-29 | 30 | 15 | 7 |
| 30-49 | 42 | 36 | 22 |
| 50-64 | 22 | 33 | 25 |
| 65+ | 6 | 16 | 47 |
| Median age | 39 | 49 | 62 |
| Race | | | |
| White (not Hispanic) | 67 | 80 | 70 |
| Black (not Hispanic) | 12 | 5 | 16 |
| Hispanic (English speaking) | 14 | 9 | 8 |
| Other | 6 | 6 | 6 |
| Region | | | |
| Non-rural | 88 | 79 | 74 |
| Rural | 11 | 21 | 26 |
| Number of cases | 1,131 | 575 | 547 |

Source: Pew Internet & American Life April survey conducted from March 26-April 19, 2009. N=2,253. Margin of error is +/- 2. Survey conducted in English.



Traditional internet access

% as share of all adults

| | White | Black | Hispanic |
|------------------------------|-------|-------|----------|
| Have desktop computer | 66% | 51% | 64% |
| Have laptop computer | 47 | 34 | 56 |
| Online yesterday | 59 | 45 | 60 |
| Online several times at home | 30 | 21 | 32 |
| Online several times at work | 28 | 18 | 36 |
| Internet user | 79% | 67% | 84% |
| Broadband user | 65 | 46 | 68 |

Source: Pew Internet & American Life April survey conducted from March 26-April 19, 2009. N=2,253. Margin of error is +/- 2. Survey conducted in English.



- 47% of English-speaking Hispanics have gone online using a handheld device.

Trend data from the Pew report indicate:

- An increase from 58% in 2007 to 69% in 2009 in the share of all Americans who have used their handheld device for a non-voice data application. This is a growth of 16%.
- An increase from 32% in 2007 to 44% in 2009 in the share of all Americans who, on an average day, use a non-voice application on their handheld. This is a growth of 36% over the sixteen month interval.

These new technologies and communication platforms offer an unprecedented opportunity to connect with a broad spectrum of populations, many traditionally underrepresented in conservation and outdoor recreation. For example, although Pennsylvania has the second-highest number of in-state hunters in the nation (about 9% of the total population), the percentage of African-Americans that participate in hunting in the state is too small to measure.

Yet with these new communication tools there is an opportunity to engage minorities in the outdoors. The public lands in and around the Lower Susquehanna provide a broad diversity of recreational opportunities, not just the heritage activities such as hiking, hunting, and fishing.

Consider the following. According to a recent article in USA Today,

Facebook

- *More than 10,000 websites use Facebook Connect, a service that lets Facebook users log in to affiliated sites using their Facebook account and share information from those sites with their Facebook friends.*

- *About 30 million Facebook members access it through mobile devices.*

Twitter

- Twitter users spend 66% more dollars on the Internet than non-Twitter users, says market researcher ComScore.

LinkedIn

- LinkedIn has more than 365,000 company profiles. More than 12 million small-business professionals are members of LinkedIn.

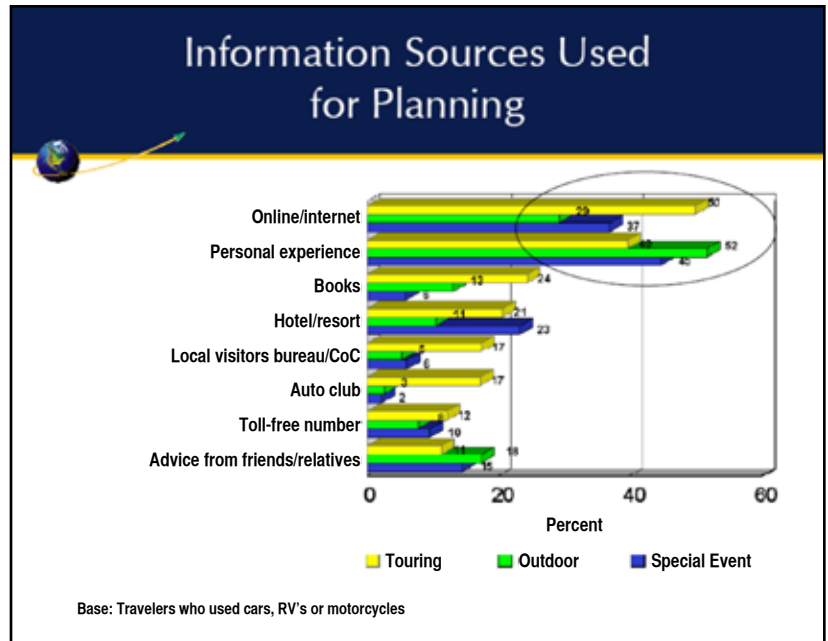
MySpace

- More than 1 million small businesses and individuals promote their goods and services on MySpace.

Smartphones power the trend

As smartphones such as iPhone and BlackBerry take off, more people are updating their Facebook and Twitter profiles while on the move. Smartphone shipments are expected to surge to 164 million this year, up 13% from 2008, says market researcher Forward Concepts. The mobile social-networking industry is expected to become a \$3.3 billion market worldwide by 2013, ABI Research predicts.

Finally, the following chart is from a report prepared by Longwoods International for America's Byways. The green bar represents travelers who are seeking outdoor recreational opportunities. As shown in this report, outdoor recreationists depend on "personal experience" and "online-internet" as their primary information sources. Of course, "personal experience" is now most commonly communicated through internet social networks such as Twitter and the blogosphere. Interestingly, "local visitor's bureau/CoC" (Chamber of Commerce) is among the least used sources of information for these types of travelers.



Chris Anderson, in "The Long Tail" describes the emerging internet market as expressing two demands:

- Give me everything
- Help me find it

According to Anderson, the strength of a company such as Amazon is their expansive inventory (far beyond any physical book store), and the search technology that helps buyers find specifically what they are looking for. The same can be applied to recreational tourism, in our opinion. The key is to develop an extensive database of recreational information and opportunities in and around the Lower Susquehanna, and then to develop the digital media necessary to help potential travelers and recreationists find what they are searching for.

Engagement Strategy

A recent [study](#) for the U.S. Department of Education found that online educational programs tend to perform better than traditional face-to-face instruction.



Lower Susquehanna/Ted Eubanks, Fermata, Inc.

In addition, social media have now become commonplace in American life. According to a recent report from Universal McCann, "[Media in Mind](#)," half of U.S. adults use social media. In the 18-34 year-old demographic, the numbers of social media users are even higher: 85% rely on one of the three platforms (blog, text messaging, and social networking) to stay in touch with others. Those adults who say that they've never sent a text message fell to 41% from 49% last year. In addition,

- 10% of U.S. adults now publish blogs (up from 5% last year)
- 20% of 18-34-year olds publish blogs (up from 10% last year)
- 22% of U.S. adults use Instant Messaging (up from 9% last year)
- 21% of 18-34-year olds use Instant Messaging (up from 14% last year)
- 75% of men ages 18 to 34 say they spend most of their time in front of a computer screen versus 18% in front of a TV screen, according to a survey of 50,000 by AskMen.com, a lifestyle website. Those who don't have a social-media plan, don't at their own risk, say marketing experts.

The maturation of social media has reached a point where researchers are beginning to [mine](#) the immense corpus of information to ascertain sentiments, emotions, and opinions of various populations. Every expectation is that the prevalence of social media will only continue to [grow](#).

Therefore an obvious question is, to what degree have conservation organizations and agencies adopted these approaches in reaching out to the general population? This begs the question, since it assumes that these organizations and agencies wish to reach out. But of the subset that do, our general experience has been that most are woefully behind in the adoption of these approaches, even more so with the agencies charged with protecting these resources.

All of these tools, these media, are easily acquired. But what does Lower Susquehanna want to say? We recommend that an important initial step in Lower Susquehanna's engagement strategy will be the development of an interpretive plan that is fashioned for delivery through the various internet technologies that are currently available. Education, interpretation, and outreach are content driven, and if the content being offered is poor, the medium being used for its delivery is irrelevant. Bad and impoverished content, regardless of location, is still off-putting.

Therefore there are two components in our recommended strategy. First, develop an interpretive strategy for the nature resources of the region. Second, tailor the interpretive strategy for delivery primarily through the web. This does not preclude the need for interpretive signage, guides, maps and the like at the specific parks, forests, and facilities. The goal is to make all of these materials available on the web as well.

Even more importantly, develop site-specific blogs where real-time information about recreational opportunities can be instantly communicated. We suggest reviewing the following examples: www.fermatainc.com, www.birdspert.org, and www.indianabeyondthebeach.com.

In order to manage this effort, we recommend that the internet initiative be organized and maintained through the CLI. Although this effort will be closely aligned with DCNR, limitations imposed by the state preclude such an effort within the agency. The SGHA, as one of the primary project partners, is positioned well to take the lead on the social media and internet initiative.

The conservation message should be threaded through all that is presented to the public. One of the expressed goals of the CLIs is to develop a constituency for conservation in the Commonwealth, one that clearly understands the role that the public must play in the restoration and conservation of the state's natural resources. A very similar conservation message is an integral part of the Chesapeake Treasured Landscape Initiative, which also seeks to connect Pennsylvanians to the health of the Susquehanna River (and the Chesapeake Bay). Both initiatives have much in common and there is a great deal to be gained from a close partnership.

Finally, it will be critical to develop new types of interpretive tools and recreational programming to expand the opportunities for connecting with the general population. Examples include:

- SmartTrails
- Audio/Video Guides
- Electronic Passport Program
- "Build Your Own Trail" online program
- RSS feeds of current recreational conditions (water levels, snow levels, and eBird), educational content, weather conditions, etc.
- Introductory online videos to specific parks, forests, and activities

Some of the above examples could be integrated into the ExplorePATrails.com website as downloadable files associated with specific trails. Trail users will appreciate the availability of more detailed information.

In addition to the programming listed above, the web and blogs should have a bulletin board where recreationists can post their experiences, recommendations, photos, etc. Remember how important "personal experience" is in how outdoor recreationists choose destinations. One way to accomplish this goal is to organize specific recreational interests (trails associations, canoe and kayak clubs, equestrian organizations, birding clubs, etc) that will shoulder the responsibility for posting current recreational conditions related to their respective interests.

The next step in this strategy should be to identify the various media to be used in communicating these messages in the region, to specify the various audiences and develop specific strategies to reach each (such as county commissioners or traditional media outlets), and to develop a focused and consistent effort



Susquehanna River from Susquehannock State Park/Brenda Adams-Weyant, Fermata, Inc.

In order to manage this effort, we recommend that the internet initiative be organized and maintained through the CLI.



Tidewater Canal/Ted Eubanks, Fermata, Inc.

in “getting the message out.” The following is a template for such an effort:

- Develop a Lower Susquehanna blog and website for engaging the public.
- Write two articles/press releases per month about Lower Susquehanna with search engine keywords and hyperlinks that can be distributed to online article banks and online press release channels. Disseminate these articles to traditional press and media when relevant.
- Create new Wikipedia entries for up to 20 Lower Susquehanna destinations, and edit current ones, to include adventure and ecotourism destinations and information.
- Monitor and respond to online travel and recreation forum questions with answers related to adventure travel and outdoor recreation opportunities in Lower Susquehanna (ex. Yahoo answers, Wiki answers).

- Promote Lower Susquehanna YouTube videos with adventure tourism, ecotourism, and quality of life content (including conservation) to appropriate websites.
- Create a bookmarking campaign (deli.cio.us, for example) to drive people interested in the region to appropriate websites.
- Identify top travel and recreation bloggers, actively comment on their blogs, and submit relevant adventure and ecotourism articles for their review. Link adventure and ecotourism comments to current news and events.
- Blog about regional adventure and ecotourism in online travel communities.
- Create content (tweets) to the Lower Susquehanna Twitter account to increase reach directly to experiential travelers, outdoor recreationists, and residents.
- Create four podcasts on Lower Susquehanna, and interview key recreationists (opinion leaders) who can recommend it.
- Re-label Lower Susquehanna to rank on Google Images better, positioning eco and adventure destinations higher. This is particularly important considering how Lower Susquehanna gets lost among so many others.
- Load YouTube videos to other digital media sites such as TubeMogul.com, clipmoon.com.

The development of these communication platforms and strategies are necessary first steps before offering significant content to the public. Our experience and strong belief is that poor content remains poor no matter the communication platform.

Let’s return to a point made earlier in this report; the fact that these new technologies are becoming the primary tools for communicating

with the general public. An obvious benefit is the ability to reach large numbers of people for marginal cost. However, there is also a risk that these technologies present. By adopting new digital technologies, do we run the risk of transforming the outdoors into a virtual experience?

The answer is yes, and this is an outcome or overextension that must be guarded against. McLuhan, late in his career, identified four laws to these developments or endeavors which he termed the tetrad. Framed as questions, the tetrad is intended to give us a new tool for looking at our culture. The questions that comprise the tetrad are as follows:

1. What does it (the medium or technology) extend?

In the case of Lower Susquehanna, we are interested in extending regional conservation efforts, in enhancing an appreciation for the natural resources in the region, and in promoting a more sustainable lifestyle for both residents and visitors.

2. What does it make obsolete?

We would argue that the traditional approaches of the past regarding conservation education, outreach, and recreation are already obsolete. What has served us well in the past is a liability in the future. The intent of the Lower Susquehanna is to work with regional initiatives to insure that they too do not become obsolete.

3. What is retrieved?

“Retrieved” is a rather arcane term. Restated, is asking about the *collateral benefits of the new technology*. Arguments have been made that the spread of telephone service returned a sense of community. The new technologies described above are developing communities as well, although many are held together not by geography but by interest. A specific goal of the

Lower Susquehanna CLI should be to create that sense of a sustainable community and region through the use of these technologies.

4. What does the technology reverse into if it is over-extended?

As noted earlier, there is the risk that the over-extension of these technologies may reduce an authentic experience to one that is virtual. But it is too late to reverse the trend. This change is inevitable. The most obvious way to confront this change is to adopt these new technologies for a different end.

Here is an example. According to a recent report from the Outdoor Foundation:

- From 2006 to 2007, there was an 11.6% drop in participation in outdoor activities among American children ages 6 to 17.
- Among boys ages 6 to 12, participation in outdoor recreation dropped from 79% to 72% in 2007.
- Among girls of the same age, participation dropped from 77% to 61%.



Susquehanna River/Ted Eubanks, Fermata, Inc.

The Pew report quoted earlier shows a disproportionately higher use of wireless and internet services among young people, contrasted with those of retirement age. In other words, there is an opportunity to engage young people through the technologies of their time (interestingly, the Outdoor Foundation, in partnership with Backpacker Magazine, has published a [list](#) of the best cities in American in which to raise an outdoors kid. No community in Pennsylvania is mentioned).

The goal of “high tech” engagement is not replacing the authentic outdoor experience with a virtual one. The intent is to reach the broad

population of potential visitors with the messages that will inspire them to get outdoors. As Aldo Leopold said, “recreational development is a job not of building roads into the lovely country, but of building receptivity into the still unlovely human mind.”

Success at seducing people into the outdoors, however, does not insure that they enjoy a positive experience. Resource agencies have often view outdoor recreation as a set of self-serve activities. With increasing numbers of citizens who have not

been previously exposed to the outdoors, such a hands-off approach will have limited success in getting the uninitiated outside.

Expanding recreation within public lands is difficult in the face of shrinking budgets. Reduced staff levels preclude heavy staff involvement. However, the technologies described above can deliver recreational programming without staff. More importantly, the immediacy of these new technologies is rewriting what is possible in recreational programming.

The recreational information provided by the DCNR website, in our opinion, remains in lockstep

with a shopworn model. Recent website updates are a move in the right direction, but still falls short of the breadth and depth of information that users expect. We are in no position to recommend a complete revision of the DCNR website (although we would, if asked), but for the purposes of this CLI that “revision” can be accomplished outside of DCNR constraints.

Therefore we recommend that, as part of the CLI engagement strategy, recreational programming be developed within the context of the new digital media. The following are examples of components of such a strategy:

- Audio/Video guides available as downloads or as DVDs made available at regional parks and visitor centers.
- GPS-enabled pod trails and iPod apps to connect travelers with the resources of the region, including the Lower Susquehanna water trail.
- A web-based travelers passport with online authentication (in old jargon, stamped) at each location.
- Public Service Announcements for distribution to regional (in this case, the market region) radio, as well as available for download.
- A digital “discovery” trail, called a SmartTrail, that can be modified based on the recreational opportunities of the moment. In other words, much like the stairs in Harry Potter’s Hogwarts, the path of the trail will shift with opportunity.
- Digital programming that can be focused on specific recreations, such as for hikers, bikers, and birders.

Components of this strategy should be implemented through partnership with the counties, their tourism representatives, SGHA, and Lancaster County Conservancy. In fact, the

The goal of “high tech” engagement is not replacing the authentic outdoor experience with a virtual one. The intent is to reach the broad population of potential visitors with the messages that will inspire them to get outdoors.

2010 mission of the SGHA is to “enhance the region’s quality of life and economic vitality by promoting the preservation, conservation and interpretation of the Susquehanna River’s cultural and natural heritage.” Their board consists of influential leaders representing tourism, civic, and river based industry organizations. With input from key board members, local CVB’s, DCNR’s Communication and Outreach staff, and County planning staff-- SGHA existing website could be a used as spring board for developing this engagement strategy.

However, we also recommend the development of partnerships with the Pennsylvania Environmental Council, the Pennsylvania Parks and Forests Foundation, and others in expanding efforts to educate the public and their leaders as to the complexities of the issues the agency and the CLI face.

At times engagement may be virtual, but often the agency’s most opportune moments are *in situ*. The absence of state parks along the Susquehanna severely limits *in situ* engagement efforts. The prospect of lands being made available for state park development as part of hydroelectric relicensing could not happen at a more opportune time. We will address this issue later in this report.

However, there are additional in situ engagement opportunities that should be explored in tandem with the continuing negotiations with the respective utility companies. According to the [National Scenic Byway Program](#), “the National Scenic Byways Program is part of the U.S. Department of Transportation, Federal Highway Administration. The program is a grass-roots collaborative effort established to help recognize, preserve and enhance selected roads throughout the United States. Since 1992, the National Scenic Byways Program has funded 2,832 projects for state and nationally designated byway routes in 50 states, Puerto Rico and the District of Columbia. The U.S. Secretary of Transportation recognizes certain roads as All-American Roads or National Scenic



Marietta, PA/Brenda Adams-Weyant, Fermata, Inc.

Byways based on one or more archeological, cultural, historic, natural, recreational and scenic qualities.” Fermata recommends the establishment of a state scenic byway along the river as an education and outreach platform that can precede the more laborious state park establishments.

We recommend that the scenic byway designation begin with the creation of a Corridor Management Plan (CMP). The route would be established as some combination of PA Route 425 along the western shore, and River Road along the east as far south as Susquehannock State Park. The route should extend on the eastern shore as far north as Riverfront Park in Columbia and Marietta.

Fermata recommends using the scenic byway and the CMP as a way of connecting county open lands, county parks, conservancy lands (those open to the public), industry lands (those open to the public), game lands (where appropriate), and DCNR lands in a cohesive interlocking recreation region . Interestingly, Maryland has already developed the Lower Susquehanna Scenic Byway, extending along the short 33 miles of river in that state. The vast majority of the Susquehanna watershed (considering all of the branches) is in Pennsylvania. In fact, the Susquehanna is a Pennsylvania river, yet the only state to have officially recognized its value through a scenic byway is Maryland.



Veterans Memorial (Columbia Bridge) over the Susquehanna from Wrightsville/Ted Eubanks, Fermata, Inc.

We recommend that this effort along the river in York and Lancaster counties be ultimately extended to include the river system as a whole in Pennsylvania. We suggest that the Susquehanna River Scenic Byway system be incorporated into Pennsylvania's Chesapeake Bay initiative, offering the Commonwealth an opportunity to educate its citizens (and the world for that matter) as to the value of this river and its origins.

Given budgetary constraints, we believe it critical for DCNR and its CLI partners to use current technology to provide recreational and education programming that cannot wait for physical structures to be constructed or for additional public lands to be acquired. Much of the interpretation and programming that will ultimately be offered at state parks and interpretive centers can be initially developed and perfected in the virtual world. For example, Fermata has recently acquired an iPhone application (SmartTrails) that allows for interpretation in real-time, which can be offered to the world through Apple's iTunes and iPhone.

As part of this engagement strategy, therefore, we recommend that DCNR and the CLI work with York County CVB, PA Dutch Country CVB, SGHA, the Susquehanna Valley Visitors Center, and others to develop a clear identity for the river and its adjacent communities, and to offer

recreational and educational programming through a CLI portal. This recreational programming should be offered in conjunction with the websites already in existence, such as the SGHA and the tourism promotion agencies and organizations.

DCNR has funded numerous improvements to public lands and amenities in the region. We recommend that DCNR, within its limited means, continue working in partnership with county and local governments, utility companies, SGHA, Lancaster County Conservancy, Rivertownes USA, and local private outfitters such as Shanks's Mare and Chiques Rock Outfitters. River resource based agencies such as the Lancaster Solid Waste Authority have provided technical assistance, in-kind and monetary resources to enhance recreation and cultural resources along the river corridor. Examples of these projects include the rehabilitation of the riverfront parks of Columbia, Wrightsville, Marietta, East Donegal, and Conoy Townships. These parks serve as trailheads to Northwest River Trail and provide direct connection to the downtown business and residential centers of the region.

The county planning agencies are interested in continuing their efforts to develop a river corridor management plan. They want to develop a set of sustainable guidelines for private and public land owners to manage their

properties. Their staff also plans to engage the local government officials to provide technical assistance and monetary resources to improve their livability and economic vitality. These recommendations should be incorporated into the recommendations and public engagement strategy of the PA Fish and Boat Commission's recently developed River Access Study. This study identified the Lower Susquehanna River as a high priority region in need of additional fishing and boating access.

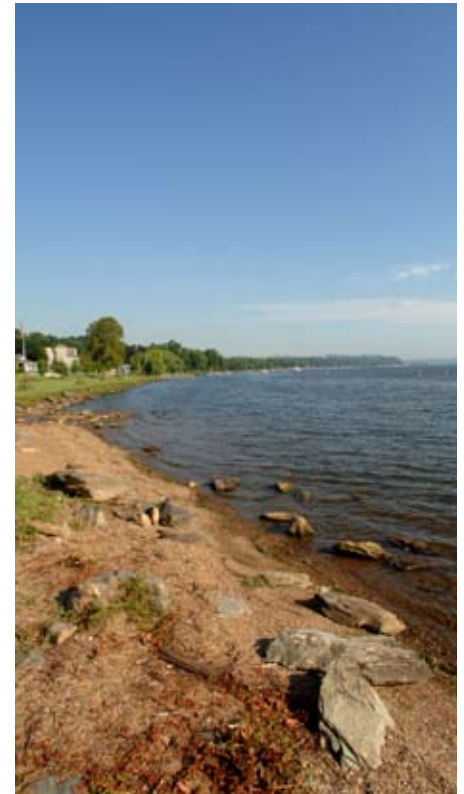
In early 2010, DCNR hosted a Rivertown meeting in partnership with SGHA and the Lancaster Chamber of Commerce. Trail Towns Coordinator Cathy S. McCollom presented the Trail Town program to civic, business, and municipal leaders of these communities. The Trail Town program is easily adapted to fit with the current rivertowns of Marietta, Columbia, and Wrightsville. Lancaster county planning is willing to work with these communities to conduct a trail town assessment and develop a river development strategy plan.

County planners and county economic development staff as part of this effort should expand appropriate riverfront development (outfitters, small-scale retail, and boutique hotels) in the region. Currently the types of riverfront development that would be expected along such as scenic landscape are virtually absent. We understand the barrier that the railroad presents along the eastern shore, but along the western shore, such as in Wrightsville, the lack of retail development is inexplicable. An appropriate riverfront development strategy that would protect the scenic and ecological values of the river itself, would offer local business and entrepreneurs the opportunity to benefit. SGHA could incorporate this strategy as part of their engagement strategy and host it on their website. There was positive feedback from meetings held with the County Visitors Bureaus and Chambers of Commerce who indicated their willingness to engage with initiatives such as this. Board members of the SGHA are

very interested in developing a "mentoring program" to assist local governments and their Chambers of Commerce with improving their economic vitality via enhancing their cultural, recreation and natural resource amenities. It is also imperative that the Rivertown communities and their cultural, historical and recreation amenities be marketed together. The non-profit organization, Rivertownes USA, currently works with the Rivertowns of Wrightsville, Columbia, and Marietta to coordinate public events that celebrate the cultural and recreation aspects of these communities. They are another untapped resource which should be involved in the engagement plan.

Suggestions for Capital Improvement Projects which connect and interpret the river to the public:

1. As part of the engagement plan, the county, municipal and SGHA have identified the need for a comprehensive signage plan for the entire Susquehanna Gateway Heritage Area. This would include gateway signage into the corridor, directional signage for roads, arrival signage for attractions, park signage, boat access signage, trail signage, interpretive signage, and pedestrian wayfinding signage. This type of approach would involve a partnership approach between York and Lancaster counties as well as the SGHA. This has the benefit of creating a comprehensive system and ensuring that all the components of a signage system work together to create a look and feel for the river corridor. This plan would incorporate the existing signage planning work that was recently completed by the Susquehanna Greenway Partnership. Funding for this project should



Lower Susquehanna/Ted Eubanks, Fermata, Inc.

be explored through the Chesapeake Gateway Grant program and incorporate work that was already done for the Susquehanna Greenway Partnership.

2. Develop a master site development plan for the Susquehanna Heritage Park in Hellam and Lower Windsor Townships in York County. In 2008, the Farm Land Trust of York County used the \$1.4 million donated value of the John and Kathryn Zimmerman Center for

Heritage at Historic Pleasant Garden (Susquehanna Gateway Heritage Area Offices) as the local match for a DCNR grant to the Farm & Natural Lands Trust of York County for acquisition of Oscar Leibhart Native American Historic Site and Wilton Meadows/County Line Quarry Scenic Site. These properties totaled approximately 59 acres and are located off Long Level Road in Hellam and Lower Windsor Townships. These properties are located near other properties that DCNR provided grant funding to York County to acquire for High Point and Byrd Leibhart Native

Peoples Historic site. Susquehanna Gateway Heritage Area (SGHA) envisions creating a Susquehanna Heritage Park that showcases the above mentioned properties that are clustered near the Susquehanna River in York County.

3. Lancaster county parks should rehabilitate its Chickies Rock County Park which is located just outside of Columbia Borough. This park is a gateway to the Columbia Borough and receives over 200,000 visitors annually. It offers spectacular views and access to the Susquehanna River and is a trailhead for the Northwest River Trail. Lancaster County Parks system is challenged financially and therefore creative private/non-profit/government funding partnerships will be needed to accomplish this task. Recommend the County to pursue federal and state funding.

4. Advance municipal riverfront park improvements to East Donegal and Conoy Townships whose parks serve as trailheads to the Northwest River Trail.

Pennsylvania recently completed its 2009-2013 Statewide Comprehensive Outdoor Recreation Plan (SCORP). Few states have as extensive a system of hiking, water, biking, rail, and scenic trails as the Commonwealth (over 4000 miles of hiking trails, over 1300 miles of rail-trails, 2800 miles of biking trails, and 1900 miles of water trails). However, most trails in the state were developed independently, and therefore a significant weakness of the state's trail system is a lack of connectivity.

We therefore recommend that DCNR in partnership with SGHA, PFBC, and the county planning offices develop a trail master plan for connecting, completing, and enhancing existing land and water-based trails. This plan should consider the placement of wayfinding and interpretive signage, how to take advantage of social media engagement opportunities, how to connect with the new Captain John Smith National Historic Water Trail, and how to take advantage of Chesapeake Treasured Landscape Initiative. Examples of regional trails that should be incorporated include:

- Mason-Dixon Trail (Designated National Recreational Trail on June 5, 2010)
- Conestoga Trail
- Low Grade Rail Trail and Safe Harbor Bridge
- Northwest River Trail
- Lower Susquehanna National Water Trail
- Captain John Smith National Historic Water Trail extension

We want to emphasize, though, that this recommendation is not to develop new trails, but to enhance and improve the trail system as it exists. There is a need for a variety of trails, from short distance, highly interpreted walks for the entire family, to long-distance trails that will

Few states have as extensive a system of hiking, water, biking, rail, and scenic trails as the Commonwealth (over 4000 miles of hiking trails, over 1300 miles of rail-trails, 2800 miles of biking trails, and 1900 miles of water trails).

attract intrepid hikers. Biking trails (mountain, road, and single-track), birding trails (such as to the Conejohela Flats), water trails, equestrian trails, even snowmobile trails should be interconnected in a seamless recreational system.

Additionally, the engagement strategy should be delivered across the entire trail system. No trail user should leave without being engaged by the CLI as well as by DCNR. And, these trails and their interpretation should be initially organized and delivered to the public through new technologies such as the SmartTrails App. These technologies enable interpreters to more effectively interpret the natural, cultural, and historical resources of a region without the need to clutter the landscape with a forest of interpretive signs and printed guides.

DCNR should also work with the private outfitters of Shank's Mare in York County, and Chiques Rock Outfitters in Lancaster County, to engage them with the technologies mentioned above to interpret the natural and cultural resources of the river.

Specific (and immediate) trail improvements include the following:

- Need canoe campsites at regular intervals downstream of Harrisburg.
- Develop the Low Grade rail-trail and connect to Northwest River Trail.
- Evaluate trails and identify easy loop opportunities for general audiences. Develop a trail map of the area that shows all trail opportunities including information on allowable trail uses and difficulty levels.
- Institute a DCNR river patrol to increase visibility on the river. Consider sending a uniformed DCNR employee along with the PFBC patrols.



Hiking along the Tidewater Canal/Ted Eubanks, Fermata, Inc.

- Develop paddling day trips that include strong thematic focus on **birding, geology, and petroglyphs** (see below). Through-paddling is uncommon and difficult now because of the lack of camping opportunities and the need to portage around dams. Most of the water is flat water, which makes it easier to develop mini water trails. There are many interesting shallows to explore along the river that could be developed as interpretive tours.

Birding

Below the Safe Harbor Dam there are mudflats and rocky islands known as the Conejohela Flats. Over 250 species of birds have been observed resting, nesting, and feeding on the mud flats and brushy islands created by the Safe Harbor Dam. Over 30 different species of shorebirds are seen here annually, in large numbers (thousands throughout a season). The [Susquehanna River Birding and Wildlife Trail](#) has identified a number of such sites along this stretch of the river, including the Pinnacle Overlook. Bald Eagles are increasingly common along this stretch of the river, and a broad diversity of woodland birds nest in the forests that border the Susquehanna. Many of these birding opportunities are accessible by boat.

Petroglyphs

The Lower Susquehanna watershed has the highest concentration of petroglyphs in the northeastern U.S. To date over 1000 carved designs have been found at ten distinct sites. The development of hydroelectric dams on the river submerged many of these petroglyphs, although some were removed and conserved by archeologists in advance of the flooding. The Lower Susquehanna petroglyphs fall into three main groups: the Bald Friar group, the Walnut Island petroglyph, and the Safe Harbor group. The State Museum in Harrisburg displays actual petroglyphs from Walnut Island. One group of petroglyphs remains along the river. In the area just below Safe Harbor Dam, among the many exposed rocks more than 300 carvings can still be seen. Carved designs from a time long ago cover the surface of seven large rocks which put together would make an area about one quarter of an acre in size. These petroglyphs are most easily seen by boat.



Native Americans have occupied the lower Susquehanna for over 12,000 years./Cody Goddard

Geology

Unlike the broad expanse at its mouth, the Susquehanna is squeezed through a series of gorges as it slides south of Columbia. The largest of these gorges, the Holtwood, is over 3 miles long. South of the dam are a series of river potholes, some of the most significant in the eastern U.S. Recent research has shown that these gorges were carved in a brief period of time, most likely due to large-scale flooding during a period of warming. What remains is a spectacularly dramatic landscape, such as seen [Susquehannock State Park](#). Hawk Point, the park's main overlook, provides a spectacular view of the upper reaches of the Conowingo Reservoir. Many islands are in view from Hawk Point including Mt. Johnson Island, the world's first bald eagle sanctuary. Just to the right and down the hill from Hawk Point Overlook is Wissler's Run Overlook. This overlook gives an excellent view of the original rocky nature of the Susquehanna River. The 380-foot high cliffs that overlook the river make these views possible (even more impressive when seen from a boat).

As we have said repeatedly, DCNR is faced with a daunting challenge in connecting constituents to the Susquehanna without having direct access to the resource itself. Therefore Fermata recommends that the agency aggressively pursue riverfront acquisitions, especially those that may be made available through negotiations with the utility companies. In particular, we recommend the following land acquisitions:

- Acquire Lock 12 Historical Area. Interpret the historical ruins. Add a hand-carry canoe launch. Promote nature exploration via kayak or foot in the shallows below the dam.
- Acquire Otter Creek PPL lands between the road and the river to provide DCNR canoe launch and riverside campsites for paddlers, through-hikers, and bicycle tours.



Conestoga Trail near Pinnacle Overlook/Brenda Adams-Weyant, Fermata, Inc.

- Continue negotiations with utility companies (Safe Harbor, PPL, and Exelon) to acquire, lease, and/or manage recreational and conservation lands bordering the river.
- Develop a Susquehanna River interpretive center within a new state or national park developed from these acquired lands.
- Diversify current recreational offerings in partnership with private outfitters through these new parks such as:
 - Birding (Conejohela Flats)
 - Photography
 - Non-motorized boating
 - Scenic touring (biking, hiking, canoeing, kayaking)

Fermata also recommends that the CLI and DCNR investigate the possibility of partnering with the power companies, SGHA, and others in interpreting hydropower on the Susquehanna (renewable energy). Consider micro and mini hydro for new state parks, and interpret these facilities as well. There are few topics more

current (or contentious) in Pennsylvania than energy. The state has placed a high priority on the development of non-renewable Marcellus Shale natural gas, as well as renewable sources such as wind. Yet little effort has been made to develop micro and mini hydroelectric sources in the state, even though the water resources of the Commonwealth would appear to offer impressive opportunities. Therefore we recommend that DCNR work with the existing hydroelectric producers on the river to interpret and demonstrate the potential for sustainable energy development through small-scale hydro power production.

Everybody experiences far more than he understands. Yet it is experience, rather than understanding, that influences behavior. --Marshall McLuhan

Sustainable Development

In 2008 Fermata's Ted Eubanks and Dr. Mark Hughes wrote a lengthy report for then Secretary Michael DiBerardinis concerning the prospects for sustainable development in the Laurel Highlands and the responsibilities and opportunities for DCNR in this regard. We believe that the recommendations and observations in that report are as valid today as then, and therefore we quote the following section directly from that report.

Sustainability, as applied to development, communities, tourism, or recreation, remains a poorly defined, amorphous notion. As an adjective "sustainable" has been applied to

an impressive (at times oxymoronic) set of terms, and therefore what sustainability precisely means remains in limbo. As noted by Cates, et.al, "This malleability allows programs of environment or development; places from local to global; and institutions of government,

civil society, business, and industry to each project their interests, hopes, and aspirations onto the banner of sustainable development." Crantz notes that "we might benefit by resisting the urge to find one "true or incontestable, consensual definition . . . [in order to remain] sensitive to the range of . . . innovations which may surface." The challenge for DCNR is to adopt this nebulous concept of sustainability and mold its basic tenets to fit the lands and activities that fall within its domain, and then to allow the agency's own actions to inspire those of other agencies, communities, and interests in the Commonwealth.

DCNR, however, does not have equal jurisdiction within these three broad components of

sustainability. Certainly DCNR has a direct and unambiguous responsibility regarding the environment, although it shares that charge with other agencies such as the PA Game Commission, the PA Fish and Boat Commission, the PA Department of Environmental Protection, and federal agencies such as the US Fish and Wildlife Service, the USDA Forest Service, and the US EPA (not to mention a bevy of not-for-profits such as the Nature Conservancy, the Western Pennsylvania Conservancy, the Natural Lands Trust, and the Pennsylvania Environmental Council). DCNR's social (community) sustainability interest is often subordinated to that of the local communities or townships themselves (particularly regarding land planning), and the role of the PA Department of Economic Development (DCED) in advising communities about land planning.

However, we note that DCNR is the only resource agency in the Commonwealth that manages both lands and substantial facilities and infrastructure (ignoring, for the moment, PennDOT and its highway right-of-ways). DCNR builds and maintains roads (primarily in state forests), buildings, sewage treatment facilities, and the like. Parks and forests are, in a sense, micro-communities themselves, suffering from many of the ailments that afflict those traditional communities around them. Contemporary threats to sustainability in the Commonwealth (urban sprawl, global warming, carbon emissions, demographic shifts, energy constraints) are felt with the parks and forests as well.

This agency occupies a unique position in that steps taken to enhance sustainability and revitalization within its own boundaries are broadly transferable to the communities and citizens of the state. Potentially undermining this transfer is the multiplicity of local government units (over 2500 in Pennsylvania)

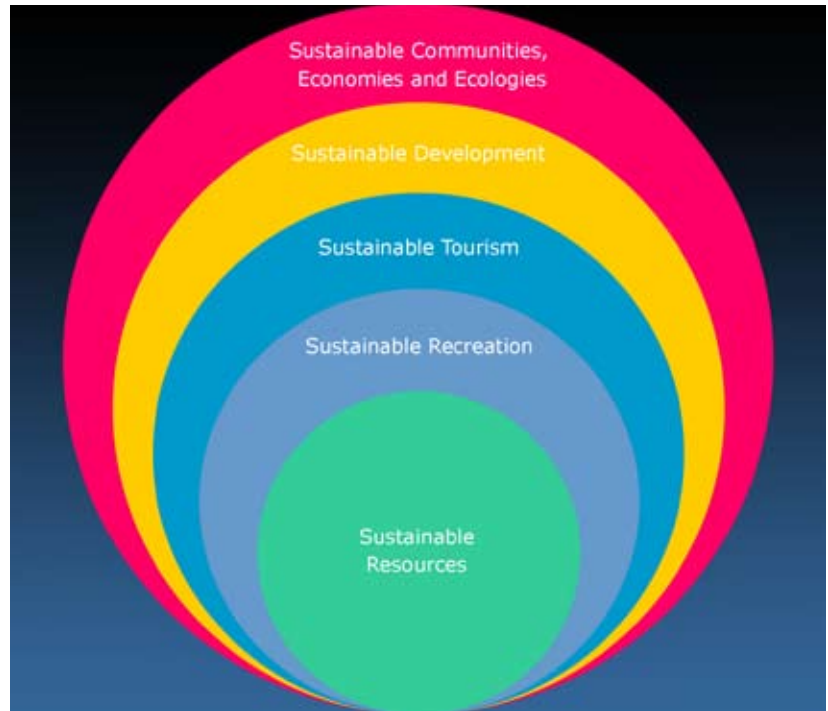


that through sheer volume and disparate capacities and responsibilities challenge high quality local planning. For example, municipal governments have land use authority. Counties have responsibilities over subdivisions, water planning, recreational planning, solid waste, and bonding power. School districts have taxing power and wield influence over the path of community development. Many rural communities lack the basic skills and capacity to attempt even the most rudimentary planning. Yet most of DCNR lands are in rural regions of the state, and are therefore impacted by this lack of local planning. In other words, as a primary steward of Pennsylvania public lands DCNR has a vested interest in high quality planning in the Commonwealth.

Although DCNR's influence may be limited to the realms of sustainable resource management, recreation, and grant programs, its potential influence expands as it reaches out to the larger sustainability concerns of development, communities, and economies. DCNR's grant programs are impressively diverse and certainly extend well beyond recreation. For example, DCNR provides counties, municipalities, not-for-profits, and regional coalitions with funding and technical assistance to do open space, greenways and trails, river conservation, parks and recreation, and natural heritage protection planning.

The critical concerns for the agency are two-fold. First, the agency must maximize sustainability within its primary or core programs and practices. Second, there must be effective mechanisms (such as its outreach, education, marketing, and communications) that will allow the agency to leverage its efforts within its own lands and programs to influence the world that surrounds it.

How do these concepts apply to the LSCLI? Among the contemporary sustainability concerns (energy, wildlife habitat, land use, pollution, climate change, and adequate food supplies,



for example) is water. Pennsylvania is among the states blessed with abundant water sources and supplies, yet it faces significant threats to these supplies from industrial pollution, acid mine drainage, agricultural runoff, urban non-point pollution, and structures restricting the free movement of aquatic species such as the American shad (just to name a few). Due to the extent of the Susquehanna watershed in Pennsylvania, the river serves as an effective metaphor for all of these threats. The sustainability of the Susquehanna will depend on the Commonwealth's willingness to address these threats. By extension, the sustainability of the Chesapeake Bay will depend on the Susquehanna.

Yet how does the Commonwealth engage in such an effort? How does the Commonwealth justify the investments that such a cleanup will require when all of the benefits are seen to accrue to those down river in the Chesapeake Bay states? How do DCNR and its CLI partners effectively secure the support of the citizenry in this regard when the river is seen as a background, if seen at all?

We suspect that most of the water that passes through the Lower Susquehanna on its way to Chesapeake Bay first fell as raindrops on DCNR forest lands (and other public lands such as PA Gamelands). Most of the state forests were first acquired in the early 20th Century to restore and protect the state's watersheds, and DCNR forests border the Susquehanna along all of its branches. Therefore we believe that DCNR has a primary role in educating the public as to the importance of these public lands which protect the state's watersheds, and the responsibility of DCNR to insure that these watersheds remain

intact and viable. Simply put, the Bureau of Forestry provides the state with trees *and* water.

For local communities, even those away from the river such as Lancaster and York, the river also provides an important quality of life amenity that to date has been either ignored or unrecognized.

For local communities, even those away from the river such as Lancaster and York, the river also provides an important quality of life amenity that to date has been either ignored or unrecognized. The most obvious opportunity for both to diversify their economies and to

enhance their attractiveness to new businesses and residents is to incorporate the river into their economic development strategies. Our meetings with the economic development interests in the region, particularly those in Lancaster County, have revealed a strong interest in such diversification.

To avoid becoming marginalized, the conservation movement will need to diversify its outreach strategy, engaging novel and diverse constituencies.

--Zaradic, Pergam, and Kareiva 2009

Let us offer a comparison that is not as far-fetched as it may seem at first blush. In the late 1950s and early 1960s the San Antonio (Texas) River could only be described as a crime-ridden cesspool. Although the city had dreamed since the 1920s of developing the river as an amenity, no administrations were willing to step forward and take the political risk inherent in such a public works project. However, efforts finally materialized in the 1960s, and today the San Antonio Riverwalk is one of the country's most recognized tourist destinations and the city continues to expand its efforts to enhance the river away from the downtown tourist district. What began as an eyesore is now a quality of life asset for the city.

Therefore we recommend that DCNR and the CLI work with Lancaster and York Chambers of Commerce to promote the river as an important quality of life asset for the region. As DCNR and the CLI expand public recreation opportunities along the river, it will be critical for the public to be made aware of these enhancements. We also believe that there are opportunities for DCNR and the CLI to partner with Pennsylvania Department of Agriculture, Lancaster Farmland Trust, and local businesses in expanding local farming and markets for local produce. The slow food movement, for example, is among those quality of life attributes valued by new residents and businesses.

One of the challenges faced by the CLI is identity. Lower Susquehanna has already been adopted by Maryland for its byway. Pennsylvania Dutch certainly applies to some of the region (particularly Lancaster County), but poorly defines the river. The Susquehanna Gateway is an option, but we are unsure as to the potency of this brand in the market. We recommend, therefore, that the DCNR and CLI partners immediately explore the development of an identity that clearly links it to the river, but distinguishes it from other Susquehanna related tourism and development efforts.

Appendix A: Summary of Recommendations.....

1. Develop an engagement plan (communications and interpretation) to enlist the interest and support of the public in conserving the river, the ria, and the watershed.

- a. DCNR must expand its reliance on partners outside of the agency for much of this engagement effort. The Susquehanna Gateway Heritage Area and Lancaster County Conservancy have emerged as external project leads in this Initiative.
- b. An important initial step in Lower Susquehanna's engagement strategy will be the development of an interpretive plan that is fashioned for delivery through the various internet technologies that are currently available. This does not preclude the need for interpretive signage, guides, maps and the like at the specific parks, forests, and facilities. The goal is to make all of these materials available on the web as well.
- c. Develop site-specific blogs where real-time information about recreational opportunities can be instantly communicated.
- d. The internet initiative be organized and maintained through the CLI. Although this effort will be closely aligned with DCNR, limitations imposed by the state preclude such an effort within the agency. The SGHA, as one of the primary project partners, is positioned well to take the lead on the social media and internet initiative.
- e. The conservation message should be threaded through all that is presented to the public.
- f. Develop new types of interpretive tools and recreational programming to expand the opportunities for connecting with the general population. Examples include: Pod Trails, Audio/

Video Guides, Electronic Passport Program, "Build Your Own Trail" on-line program, RSS feeds of current recreational conditions (water levels, snow levels, and eBird), educational content, weather conditions, etc., Introductory on-line videos to specific parks, forests, and activities.

g. The web and blogs should have a bulletin board where recreationists can post their experiences, recommendations, photos, etc. Organize specific recreational interests that will shoulder the responsibility for posting current recreational conditions related to their respective interests.

h. Identify the various media to be used in communicating these messages in the region, to specify the various audiences and develop specific strategies to reach each, and to develop a focused and consistent effort in "getting the message out."

i. Recreational programming should be developed within the context of the new digital media.

j. Components of this strategy should be implemented through partnership with the counties, their tourism representatives, SGHA, and Lancaster Conservancy.

k. Develop partnerships with the Pennsylvania Environmental Council, the Pennsylvania Parks and Forests Foundation, and others in expanding efforts to educate the public and their leaders as to the complexities of the issues the agency and the CLI face.

2. Establish a state scenic byway along the river as an education and outreach platform that can precede the more laborious state park establishments. Begin the designation process with the development of a Corridor Management Plan.

a. The byway effort along the river in York and Lancaster counties should be extended to include the river system as a whole in Pennsylvania. The Susquehanna River Scenic Byway system should be incorporated into Pennsylvania's Chesapeake Bay initiative, offering the Commonwealth an opportunity to educate its citizens and the world as to the value of this river and its origins.

3. DCNR and the CLI should work with York County CVB, PA Dutch Country CVB, SGHA, the Susquehanna Valley Visitors Center, and others to develop a clear identity for the river and its adjacent communities, and to offer recreational and educational programming through a CLI portal. This recreational programming should be offered in conjunction with the websites already in existence.

4. DCNR should continue working in partnership with county and local governments; utility companies, SGHA, Lancaster County Conservancy, Rivertownes USA, and local private outfitters such as Shanks's Mare and Chiques Rock Outfitters.

5. Investigate the development of a River Town or Trail Town initiative in the region.

6. Develop appropriate riverfront development strategy that, while protecting the scenic and ecological values of the river itself, would offer local business and entrepreneurs the opportunity to benefit. Further, the CLI should work with county planners and county economic development staff to expand appropriate river front development in the region.

7. Capital Improvements Projects

a. Support the development of a comprehensive signage plan within the Susquehanna Gateway Heritage Area.

b. Develop a master site development plan for the Susquehanna Heritage Park in Hellam and Lower Windsor Townships.

c. Support the rehabilitation of Chickies Rock County Park, and important gateway to the region.

d. Support municipal riverfront park improvements to East Donegal and Conoy Townships whose parks serve as trailheads to the Northwest River Trail.

8. DCNR in partnership with SGHA, PFBC, and the county planning offices should develop a trail master plan for connecting, completing, and enhancing existing land and water-based trails. This plan should consider the placement of wayfinding and interpretive signage, how to take advantage of social media engagement opportunities, how to connect with the new Captain John Smith National Historic Water Trail, and how to take advantage of Chesapeake Treasured Landscape Initiative.

a. This recommendation is not to develop new trails, but to enhance and improve the trail system as it exists.

b. The engagement strategy should be delivered across the entire trail system.

c. Utilize technology to deliver interpretation to trail users.

d. DCNR should work with the private outfitters of Shank's Mare and Chiques Rock to engage them with the technologies mentioned above to interpret the natural and cultural resources of the river.

9. Recreation recommendations

a. Need canoe campsites at regular intervals downstream of Harrisburg.

b. Develop the Low Grade rail-trail and connect to Northwest River Trail.

c. Evaluate trails and identify easy loop opportunities for general audiences. Develop

a trail map of the area that shows all trail opportunities including information on allowable trail uses and difficulty levels.

d. Institute a DCNR river patrol to increase visibility on the river. Consider sending a uniformed DCNR employee along with the PFBC patrols. Acquire river islands to protect the ecosystem and provide campsites.

e. Develop paddling day trips that include strong thematic focus on birding, geology, and petroglyphs. Through-paddling is uncommon and difficult now because of the lack of camping opportunities and the need to portage around dams. Most of the water is flat water, which makes it easier to develop mini water trails. There are many interesting shallows to explore along the river that could be developed as interpretive tours.

10. DCNR should aggressively pursue riverfront acquisitions, especially those that may be made available through negotiations with the power companies.

a. Acquire Lock 12 Historical Area. Interpret the historical ruins. Add a hand-carry canoe launch. Promote nature exploration via kayak or foot in the shallows below the dam.

b. Acquire Otter Creek PPL lands between the road and the river to provide DCNR canoe launch and riverside campsites for paddlers, through-hikers, and bicycle tours.

c. Continue negotiations with power companies (Safe Harbor, PPL, and Exelon) to acquire, lease, and/or manage recreational and conservation lands bordering the river.

d. Develop a Susquehanna River interpretive center within a new state park developed from these new lands.

e. Diversify current recreational offerings through these new parks such as: birding, photography, non-motorized boating, and scenic touring.

11. Investigate the possibility of partnering with the power companies, SGHA, and others in interpreting hydropower on the Susquehanna (renewable energy).

a. DCNR should work with the existing hydroelectric producers on the river to interpret and demonstrate the potential for sustainable energy development through small-scale hydro power production.

12. If DCNR is to be successful in getting Pennsylvanian's to care about the health of the Chesapeake Bay, DCNR must educate the public as to the importance of the public lands and forests which protect the state's watersheds, and the responsibility of DCNR to insure that these watersheds remain intact and viable.

13. DCNR and the CLI should work with Lancaster and York Chambers of Commerce to promote the river as an important quality of asset for the region.

a. Partner with Pennsylvania Department of Agriculture, Lancaster Farmland Trust, and local businesses in expanding local farming and markets for local produce.

14. Develop an identity that clearly links the region to the river, but distinguishes it from other Susquehanna related tourism and development efforts.

Appendix B: DCNR Interview and Assessment Notes

Samuel Lewis State Park

September 24, 2008

Bill Rosevear

1. Tell me about your recreational use.

- 120,000 visitors annually
- vista viewing
- dog walking
- picnicking
- jogging
- kite flying

2. Do you have any trails or recreation facilities that cross your boundary into other public lands?

No

3. How does recreational use vary across the year?

Surprisingly Sam Lewis gets lots of usage, even when the larger park (Gifford Pinchot) has lower attendance. I attribute it to the larger population from nearby communities and housing developments. Attendance is highest during the summer months and on weekends.

4. What activity is most popular?

Walking and vista viewing

5. What has unrealized potential?

Within the vision and mission of DCNR the recreational potential of the park is fully realized. Environmental Education and Interpretive Programs and Displays are not fully developed.

6. What activities are declining?

Picnicking is declining.

7. What are visitors asking for that you do not have? Is it an appropriate use?

Camping is sometimes expected at both parks. It is not in the park management plans.

8. Where do your visitors come from? What percentage is local (within 50 miles)?

Visitors are about 85 percent local. With no water based recreation or overnight camping they do not attract people willing to travel for more than 30-50 minutes.

9. How long is the typical visitor visiting your unit? Day use or overnight?

I don't know how long. I would guess about 1 hour.

10. How long is the typical trip away from home for visitors to this area?

It depends on the type of user. Day-use visitors would be about 2-3 hours from their home to the park and then back home. Overnight users drive longer distances with an average being 1.5 to 2 hours one way with stays that last for 2 days or more.

11. Do you get any international visitors? Specify.

We have a lot of recent immigrants (Russian, Korean, Vietnamese, and Hispanic) that use the 3 parks (mainly Pinchot) in the complex. We are not a known destination for foreign visitors.

12. What are your recent or planned capital projects?

Sam Lewis is waiting for Flush Toilets.

13. What special events occur on the unit?

Sam Lewis has had Indian Powwows, but they outgrew the area.

Star Gazing programs have been popular.

14. Identify the outfitter/guide services that operate on the unit. Are they under permit? What is needed?

None, need a larger customer base.

15. Do you offer any equipment rentals?

Metered viewing scopes

16. What kinds of recreational and interpretive programs are you offering to the public? How well are they attended?

At the two satellite parks we do not have a schedule of recreational or EE&I programs. Occasionally we will do a star gazing program or work with a school group.

17. Do you have any interpretive signs, trails or exhibits?

Photo metal wayside interprets the viewscape.

Would like to see more waysides.

18. What are your unique natural, historical and cultural features?

Vistas

19. Do you have any recreational use that negatively impacts natural resources?

None

20. What complicates your delivery of recreation services to visitors?

Hiring, Budget cycle, Vandalism, hours of operation are all factors that affect our delivery of services.

Assessment:

The park primarily serves as a neighborhood park. It does have a nice view of the river and surrounding countryside. I don't see this park being a big attraction to tourists or outdoor recreationists.

Susquehannock State Park

September 24, 2008

Bill Rosevear

1. Tell me about your recreational use.

- 80,000 visitors annually
- group camping
- 2 major vistas
- Picnicking
- hiking
- horseback riding
- ball fields
- Amish users



Landis House, Susquehannock State Park/Ted Eubanks, Fermata, Inc.

- Bald Eagles and Vultures are seen every day as they fly past.
- It is more remote to population bases.

2. Do you have any trails or recreation facilities that cross your boundary into other public lands?

No

3. How does recreational use vary across the year?

Attendance is highest during the summer months and on weekends.

4. What activity is most popular?

Vista viewing and picnicking

5. What has unrealized potential?

Within the vision and mission of DCNR the recreational potential of the park is fully realized. Environmental Education and Interpretive Programs and Displays are not fully developed.

6. What activities are declining?

Picnicking

7. What are visitors asking for that you do not have? Is it an appropriate use?

Camping is sometimes expected at both parks. It is not in the park management plans.

8. Where do your visitors come from? What percentage is local (within 50 miles)?

Visitors are about 85 percent local. With no water based recreation or overnight camping they do not attract people willing to travel for more than 30-50 minutes.

9. How long is the typical visitor visiting your unit? Day use or overnight?

I don't know how long. I would guess about 1 hour.

10. How long is the typical trip away from home for visitors to this area?

It depends on the type of user. Day-use visitors would be about 2-3 hours from their home to the park and then back home. Over night users drive longer distances with an average being 1.5 to 2 hours one way with stays that last for 2 days or more. Susquehannock does not attract many campers to the group site. Scouts groups from the surrounding counties are the main users.

11. Do you get any international visitors? Specify.

We have a lot of recent immigrants (Russian, Korean, Vietnamese, and Hispanic) that use the 3 parks (mainly Pinchot) in the complex. We are not a known destination for foreign visitors.

12. What are your recent or planned capital projects?

Susquehannock has had flush toilets installed. The entrance road needs repaved.

13. What special events occur on the unit?

Susquehannock has a Fiddler's Convention (300 people).

14. Identify the outfitter/guide services that operate on the unit.

None, need a larger customer base.

15. Do you offer any equipment rentals?

Metered viewing scopes

16. What kinds of recreational and interpretive programs are you offering to the public? How well are they attended?

At the two satellite parks we do not have a schedule of recreational or EE&I programs. Occasionally we will do a star gazing program or work with a school group.

17. Do you have any interpretive signs, trails or exhibits?

A cast aluminum, 3 dimensional, display was stolen. A display about raptors is still there. Would like to see more waysides.

18. What are your unique natural, historical and cultural features?

Vistas

The Landis House (1850 farm house), not open to the public - hazardous floors

19. Do you have any recreational use that negatively impacts natural resources?

Horseback riding, on trails not designated for horseback riding does occasionally impact negatively on the environment.

20. What complicates your delivery of recreation services to visitors?

Hiring, Budget cycle, Vandalism, hours of operation are all factors that affect our delivery of services.

Assessment:

The park offers two nice river vistas on bluffs overlooking the river. This vantage point provides good opportunities to view soaring raptors. Interesting rocky islands in the river are reminiscent of the Maine Coast. Power generation facilities are visible from both vistas and do not distract too much from the natural beauty of the river valley. The entrance road is in poor condition. Recommend new pavement or a grading and chip seal to repair the only obvious detractor at this well kept park.

Hiked the Overlook Trail from Hawk Point to Wisslers Run. The trail was in good condition and was marked well. I also hiked the Nature Trail which had a minor amount of erosion which could easily be fixed with some grade dips.

The park is scenic with a nice mix of open space, park-like stands of trees and natural woodlands. Facilities are clean and well designed.

Utility Company Lands

Conejohela Flats

This site gets high acclaim for its shorebird and waterfowl viewing opportunities. Some sources indicate this is a PGC waterfowl propagation area, but I could find no information regarding this on the PGC or PA-Audubon website. The site is designated an Audubon Important Bird Area and numerous websites provide information on birds sighted. The best viewing opportunities are via kayak. There is limited land access to view the flats because of an active railroad grade. No signs identify this area as the Conejohela Flats and I venture this resource is largely unknown outside of birding circles. In its present state, promotion to increase visitation is not recommended due to the limited access and opportunities for trespass, but if a better landside viewing area was acquired, this could become a more attractive birding resource for birders at all levels.

Conestoga River Park (Safe Harbor)

Conestoga River Park is located just upstream of Safe Harbor Park. The park provides picnic pavilions, ball fields, and an arboretum. Lock 6 of the Conestoga Navigation Canal and the Safe Harbor Village walking tour are interesting historic resources within the park.

Conestoga Trail

Hiked from Pinnacle Overlook at Tucquan Creek. The trail is steep (in excess of 20%) and moderately eroded from Pinnacle to the railroad grade. Trail is rocky so footing is poor but conversely this keeps the trail from eroding severely. The trail passes many interesting rock outcrops and views of the river valley. From the railroad grade to the next ridge top, the side-hill trail has good grades. From the ridge top to Tucquan Creek, the trail follows down the spine of the ridge to the railroad grade and creek crossing. Grades are steep but not as severe or long as the descent from Pinnacle. Tucquan Creek is rocky, narrow, scenic and interesting. The trail was marked adequately. There were several unmarked trail intersections.

Holtwood Recreation Area (PPL)

This area feels like a state park. It has the typical park amenities - picnic pavilions, ball fields, trails, EE center, and tree identification arboretum. The site is well designed and maintained and has a feeling of age and character.

The Face Rock Overlook is located in this area. The site is entirely dominated with transmission towers and an electric substation. The hum of electricity and the numerous transmission lines crisscrossing the view seriously detracts from the natural environment.

Indian Steps Museum

The Holtwood Environmental Preserve map indicates this site is located on PPL lands and is operated by the Conservation Society of York County. The Indian Steps Museum pamphlet indicates the estate was "...presented to the Conservation Society for the sum of \$1." Gary Smith expressed some interest in obtaining this land for DCNR to use as an EE or administrative center. After touring the museum, I think it is best to maintain this as a museum for Native American interpretation operated by a local entity. The inscription above the main entry states, "I entreat all those who pass this way to safely guard and preserve these former possessions of and monuments to an ancient Indian people. John Edward Vandersloot, Owner and Builder, Indian Steps Cabin-1912".

The museum displays have minimal interpretation, but what does exist is brief and easy to understand. It is said this is one of the best exhibits on Susquehannock Indians in Pennsylvania. The building is interesting and obviously built as a shrine to Native Americans. The grounds are beautiful and provide river access.

Kline's Run Park (Safe Harbor)

This park includes riverfront access and a pleasant view from the river bluff. The park offers a picnic pavilion, playground and canoe access. The Lancaster York Heritage Area proposes building a River Heritage Center on the bluff overlooking the river. The center would include interpretive exhibits on Native Americans, including a replica of the petroglyph rock below Safe Harbor Dam, and exhibits about the recreation and historical resources in the area. This is an ideal location for an educational center because of its riverfront

location and easy access from the rivertowns. No center of this kind exists in the area and this would be an important resource to connect visitors with the great natural and historic resources in the river corridor.

Lock 2 Boat Access Area (Safe Harbor)

This area is also known as the Long Level. This stretch of road closely parallels the Susquehanna River and provides unobstructed views of the river. There are two boat launches in this stretch and several marinas. This area provides more access to the riverfront than any other area in Lancaster and York Counties. Much of this land is owned by Safe Harbor and leased to private homes and marinas. DCNR may want to consider acquiring lands in this area to secure more public access to the river in this stretch. A bicycle path from Wrightsville to Lock 2 would provide a safe alternative for transportation and recreation.

Lock 12 Historic Area (PPL)

The intact ruins of the canal lock, limestone kiln and sawmill are presently interpreted but could use updating. This area is adjacent to the shallows below the Holtwood Dam. This is an interesting place to observe nature and geology via kayak. There is a Bald Eagle nest on a transmission tower right along the road. I like this site for DCNR acquisition because of the historic sites and wildlife observation opportunities. There is no boat launch at this site, but a hand-carry canoe/kayak launch could easily be added to provide access to the shallows.



Lock 12 Historic Area/Brenda Adams-Weyant, Fermata, Inc.

Otter Creek Campground (PPL)

This is a full service campground with tent and trailer sites, hookups, showers, dump station and camp store. A natural area, hiking trails and Urey Overlook are all within

walking distance. This riverside property includes a hand-carry canoe/kayak launch. The launch was closed during our visit with no explanation posted. The campground is located on both sides of the road. The riverside portion used to be part of the day use area. Many of the campsites are occupied all season by RV campers who have modified their campsites with gardens, decks and other semi-permanent improvements. The campground is in fair condition.

Gary Smith has indicated an interest in acquiring the campground and day use areas. I support acquiring the lands between the road and the river. A hand-carry launch would help increase DCNR's presence on the river. Paddle-in campsites could also be designated in this area to provide much needed campsites for river paddlers. I am neutral on the need to acquire the campground. DCNR does not allow seasonal campsite occupancy and discontinuing this program could be controversial. Additional staff would be needed and this seems like a long shot in today's economy.

Pequea Creek Campground (PPL)

This is a full service campground with tent and trailer sites, hookups, showers, dump station and camp store. A group site for organized youth or outdoor organizations is available by reservation. The site offers picnicking, play areas, nature trails and fishing on the creek. A boat ramp is within one mile of the campground. Many of the campsites are occupied all season by RV campers who have modified their campsites with gardens, decks and other semi-permanent improvements. The campground is in fair condition. This recreation area is located along the scenic Pequea Creek.

I am neutral on the need to acquire the campground. DCNR does not allow seasonal campsite occupancy and discontinuing this program could be controversial. Additional staff would be needed and this seems like a long shot in today's economy.

Pinnacle Overlook (PPL)

This overlook and picnic area provides a picturesque vista of Lake Aldred and several islands. The view is of a largely natural landscape of forested river bluffs. The site is well maintained. A sign in the parking area warns visitors not to leave valuables in their car because of recent thefts. The Kelly's Run-Pinnacle Trail System is a

National Recreation Trail that offers seven miles of hiking trails between Pinnacle and Holtwood Recreation Area. The Conestoga Trail (maintained by the Lancaster Hiking Club) also traverses this area.

I am neutral about the need for DCNR to acquire this site. Will PPL sell these unwanted blocks to the highest bidder, or will they continue to be “public lands” managed by PPL or another local entity? None of these recreation sites should be sold to a developer. They need to stay as public recreation sites.

Safe Harbor Park (Safe Harbor)

This day-use park features ball fields and courts, playgrounds, fishing, picnic pavilions and canoe access to Conestoga River. The Conestoga River is rich in historical resources and is a popular canoe and kayak stream. The River Road follows the Conestoga which provides easy access for fishing, kayaking and nature study.

Shenk’s Ferry Wildflower Preserve (PPL)

Gary Smith does not have any interest in acquiring the undeveloped power company lands along the Susquehanna. The local conservancies and park districts are likely to pick these up. DCNR’s primary interest is gaining visibility on the river, so sites like boat launches and riverside properties make most sense. Their interest does follow the same predictable trend towards developed recreation sites.

I did not walk the trails at the Wildflower Preserve, but I do find it intriguing that PPL owns this land and that it has been recognized for its herbaceous diversity. This would be an important site to acquire if no one else was interested.

Wrightsville Boat Access Area

This community park offers a boat launch and picnic area. The public land along the riverfront is managed by several entities, making consistent management and service difficult.

Summary of Recommendations

1. Need canoe campsites at regular intervals downstream of Harrisburg.

2. Support development of the River Heritage Center at Kline’s Run Park.

3. Develop the Low-grade rail trail and connect to North West River Trail.

4. Evaluate trails and identify easy loop opportunities for general audiences. Develop a trail map of the area that shows all trail opportunities including information on allowable trail uses and difficulty levels.

5. Acquire river islands to protect the ecosystem and provide campsites.

6. Branding is needed for the river corridor. The existing identities of Lancaster and York Counties to not encompass or describe the experience along the river.

- a. Brenda’s suggestion: Susquehanna River Bluffs
- b. Lancaster-York Heritage Area: Susquehanna Gorges
- c. Locally known as: Susquehanna River Hills

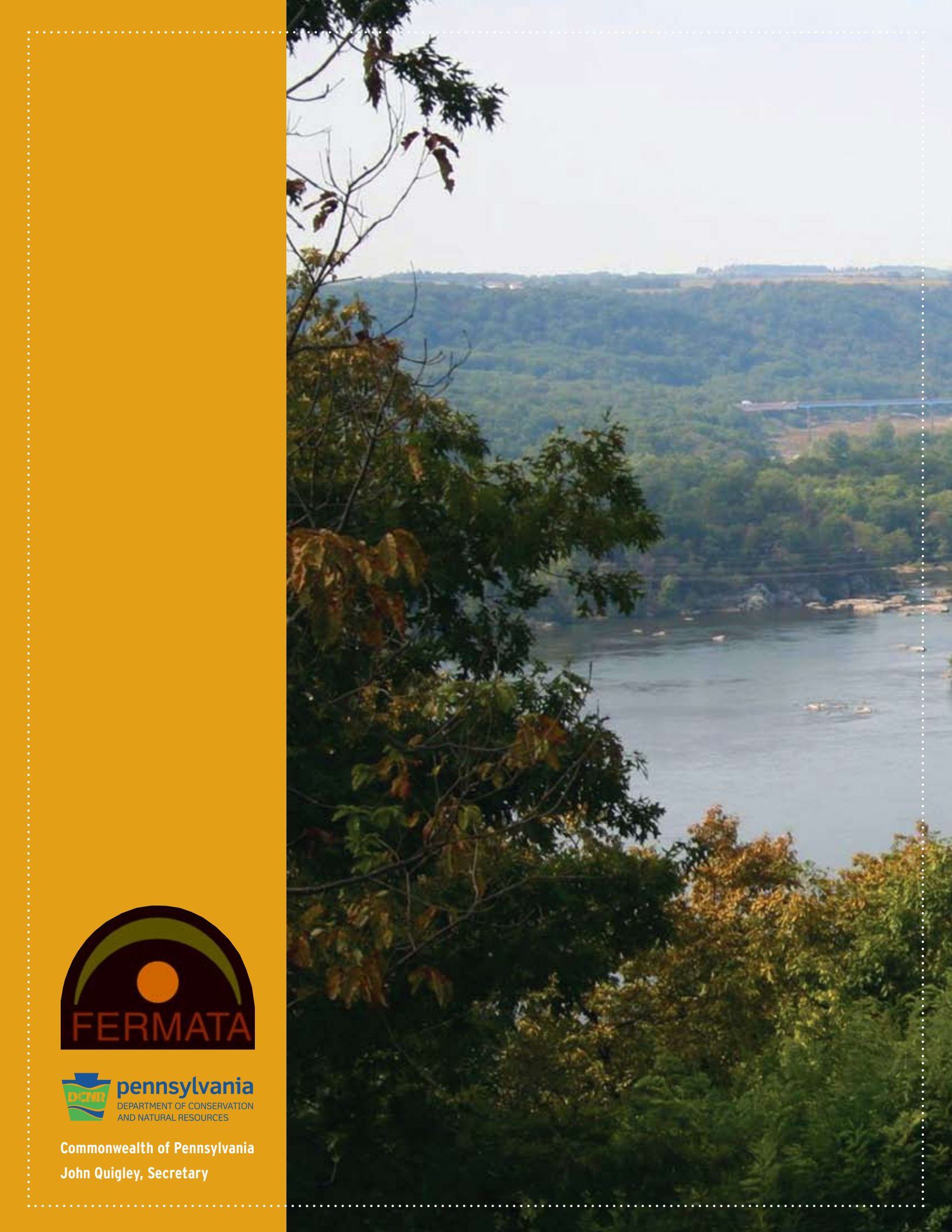
7. Develop paddling day trips that include strong thematic focus on birding, geology, and petroglyphs. Through-paddling is uncommon and difficult now because of the lack of camping opportunities and the need to portage around dams. Most of the water is flatwater, which makes it easier to develop mini water trails. There are many interesting shallows to explore along the river that could be developed as interpretive tours.

8. Institute a DCNR river patrol to increase visibility on the river. Could also send a uniformed DCNR employee along with the PFBC patrols.

9. Acquire Lock 12 Historical Area. Interpret historical ruins. Add a hand-carry canoe launch. Promote nature exploration via kayak or foot in the shallows below the dam.

10. Acquire Otter Creek PPL lands between the road and the river to provide DCNR canoe launch and riverside campsites for paddlers, through-hikers and bicycle tours.

11. Develop a wayfinding sign plan for the corridor.



pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES

Commonwealth of Pennsylvania
John Quigley, Secretary