

CHAPTER FIVE

TRANSPORTATION AND THE ENVIRONMENT



Introduction

In 1969, Congress enacted the National Environmental Policy Act, (NEPA). Under Section 2 (42 USC & 4321) this act, and its subsequent amendments, “establish a national policy for the environment that encourages productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the nation, and to establish a Council on Environmental Quality.” In terms of transportation, the goal of NEPA environmental analysis is to determine the alternative that best fulfills the purpose and needs statements for a transportation project with the least impact to the environment, at a reasonable cost. NEPA law directs the lead governmental agency to consider impacts to environmental resources specifically regulated by other federal and state laws, such as:

- ❖ Section 4 (f) of the U.S. Department of Transportation Act, which considers impacts to publicly-owned parks and recreation lands, wildlife and waterfowl refuges, and historic properties.
- ❖ Section 6 (f) of the Land and Water Conservation Fund Act, which considers impacts to grant-assisted public recreation lands.
- ❖ Section 7 of the Endangered Species Act, which considers impacts to threatened and endangered species.
- ❖ Section 106 of the National Historic Protection Act, which considers impacts to cultural resources.
- ❖ Section 404 of the Clean Water Act which considers impacts to wetlands and waters of the United States.
- ❖ State laws such as PA Chapter 93, which sets water quality standards for waters of the Commonwealth.
- ❖ The Farmland Protection Policy Act, enacted to prevent the unnecessary or irreversible conversion of prime and unique farmland soils to nonagricultural uses.

It is recognized that governmental agencies can achieve significant benefits by incorporating community and environmental values into transportation decisions early in the planning process and carry these considerations through transportation project development and delivery rather than waiting until project development stages of transportation decision-making to deal with community and environmental issues that can result in significant delays in project completion. In the past, environmental analyses conducted in the NEPA process were often disconnected from the analysis used to prepare transportation plans, transportation improvement programs, and supporting studies. These analyses and decisions occurring transportation planning often were not well documented and did not carry through to the NEPA process. Because the analyses were either not adequately documented or overlooked, steps had to be repeated in the NEPA process, resulting in additional projects and delays. Therefore, considering community and environmental issues in identifying, defining and prioritizing projects up front in the long range transportation planning process can lead to better results.



Aerial View of US 220 Corridor Environmental Features West of Williamsport

A federal SAFETEA-LU requirement of long range transportation planning is to include an environmental overview and identification of potential environmental mitigation activities to preserve, restore and maintain environmental resources resulting from implementation of transportation projects. Environmental mitigation activities are those actions that are designed to avoid, protect, minimize, or compensate the impacts to the human and natural environment. These activities may involve formulation of policies, programs and specific strategies. Further, federal SAFETEA-LU law requires consultation with the regulatory and resource agencies “responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning development of the transportation plan.”

Therefore, in fulfillment of federal requirements, the purpose of this plan chapter will be to provide an overview of key environmental resources found within Lycoming County; discuss how WATS transportation planning will pursue environmental mitigation

activities in a manner which respects the overall preservation of these resources and attempts to avoid or minimize environmental impacts when identifying and developing transportation projects using the newly created PennDOT Linking Planning and NEPA process; and ensure consultation with the appropriate environmental regulatory and resource agencies, which will be more fully described later in this Chapter.

Lycoming County Environmental Overview

Lycoming County is rich in scenic and natural resources, including mountains, woodlands, wildlife, vegetation, agriculture and water sources. These resources form unique and scenic landscapes. Natural resources are discussed in two broad categories: water resources and land resources. The major development centers of the county are located along the West Branch of the Susquehanna River. An abundance of open space lands exist adjacent to developed communities as well as within the floodplain.

Water Resources

Rivers and Streams

Lycoming County is completely situated within the Susquehanna River Basin. The major water body, the West Branch of the Susquehanna River, runs almost horizontally through the county for a distance of 38 miles. This river collects all the water from numerous streams and tributaries (total 2,200 miles in length) formed within the surrounding mountains. The water resource of the river is the largest in the county by a wide margin, and prime scenic areas and farmlands are found along much of the river frontage. Major tributaries include Pine Creek, Larry’s Creek, Lycoming Creek, Loyalsock Creek, and Muncy Creek. Lycoming County waters support various fish species. Rainbow, brook and brown trout, panfish, large and small mouth bass, and muskellunge live in rivers, streams, and lakes throughout the county, and are highly valued by fishermen throughout the region. The six watersheds in Lycoming County are illustrated below in term of their size.

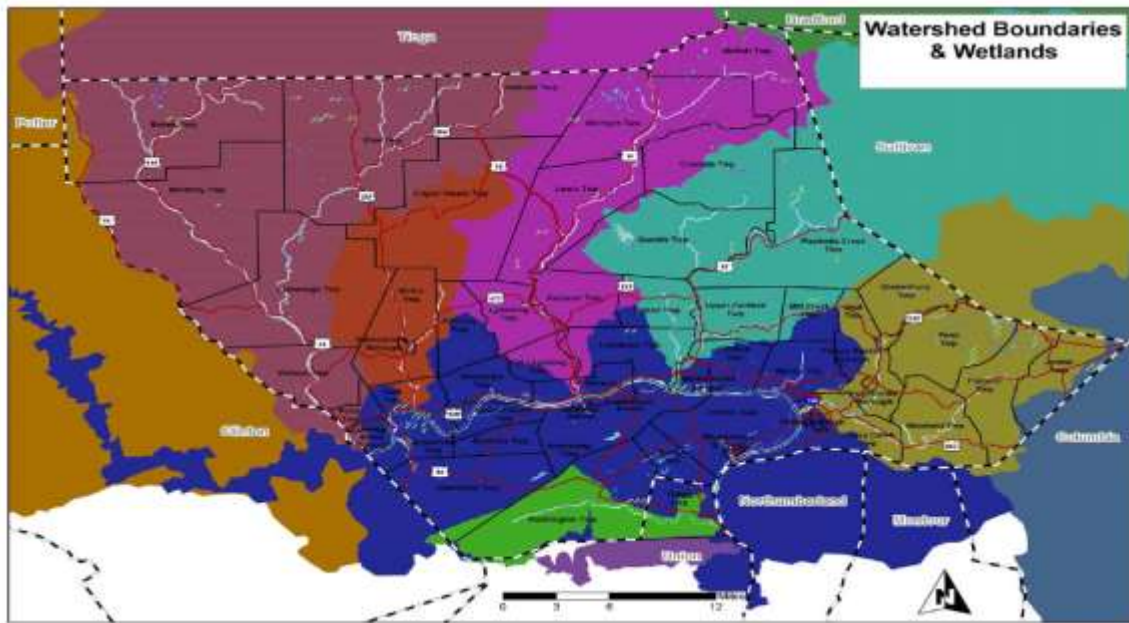
Watershed	Acres	% of Watershed within Lycoming Co
Pine Creek	633,867	33.8%
Larrys Creek	56,958	100%
Lycoming Creek	173,079	81%
Loyalsock Creek	317,689	33.1%
West Branch Susqueha	270,783	1.54%
Muncy Creek	131,179	64.9%

Each watershed is a complex network of natural resources – topography, water, soil, flora, fauna, etc. A watershed is an area of land where all of the underground and surface water goes into the particular place, such as a lake or river. When surface waters run downhill, they carry all kinds of non-point source pollution, (NPS), sediments and other materials into our hydrologic system depositing in streams, lakes, wetlands and groundwater. EPA has identified NPS pollution as one of the most significant contributing factors in the decline of watersheds and water quality. The West Branch Susquehanna River is a watershed that is impaired by NPS pollution, primarily as a result of farming, disturbed riparian buffers, and land development.



Streambanks have been eroding and collapsing under pressure from seasonal stormwater and floodwaters. The natural strength of the streambanks has been weakened by management practices such as tree removal and uncontrolled livestock access to the waterway. Lycoming County encourages streambank preservation programs and preservation of natural undeveloped water retention areas. Lycoming Creek and Big Bear Creek, a tributary to Loyalsock Creek have also been restored through applied theories of fluvial geomorphology where natural channel design techniques have been used to direct stream flows and improve sediment and gravel carrying capacity, thus improving water quality and stream habitat, however major recent floods have caused damage to such stream improvements. Acid mine drainage from Tioga County into downstream Lycoming County watersheds have also been an issue where remediation efforts have been underway for some time.

The West Branch Susquehanna River and Pine Creek are the designated water trails in the County.



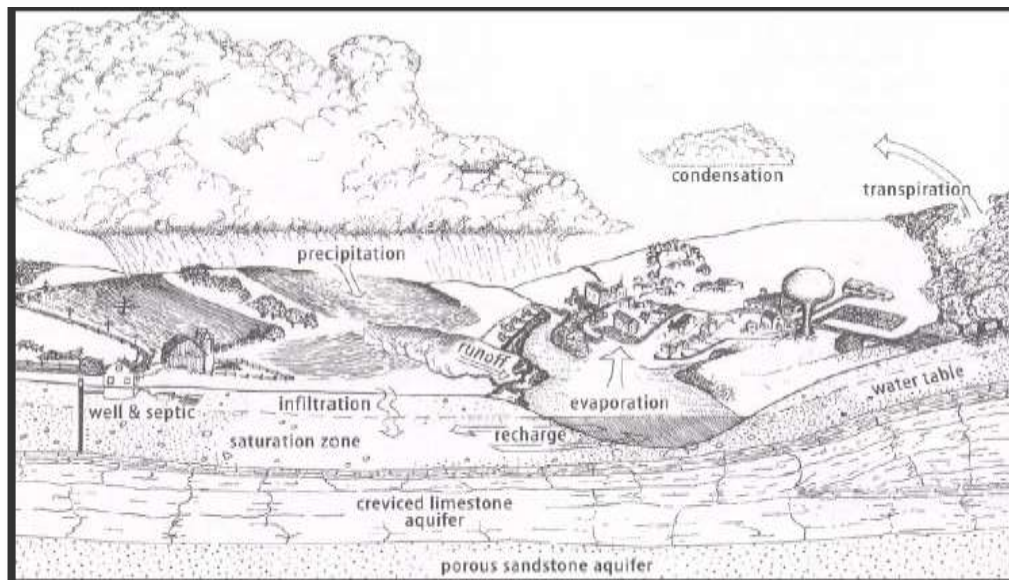
Wetlands

Lycoming County encompasses 4,645 acres of wetlands or about .6% of total county acreage. Wetlands are important habitats necessary for the survival of a host of aquatic and terrestrial species and integral parts of the hydrologic system necessary for the maintenance of water supplies, water quality and flood control. Three indications for wetlands include hydric soils, plants adapted to life in wet environments, and the presence of water during growing season. The National Wetland Inventory areas have been identified, and wetlands identified as part of the Natural Area Inventory should be included as part of open space protection planning due to their impacts on water quality. The National Wetlands Inventory maps are general indicators of wetlands in the County; site specific determinations of wetlands should be conducted as part of the transportation project development process. There are 12,613 acres of hydric soils in the county.



Groundwater

In terms of groundwater, the glacial lake and stream deposits are the most productive sources in Lycoming County. These deposits underlay the majority of industrial areas in the county and have been exploited for large supplies of water at numerous locations. Much of Lycoming County relies on groundwater as a source of drinking water, therefore protection of this resource is essential to preserve the quality of life in the county. The quality of the natural groundwater is not high in many areas. Although well water may be potable, often it is not palatable without treatment (eg sulfur taste and odor). Pollution of groundwater from non-point sources, such as agriculture, has not been identified as problematic in a widespread degree. Historically, groundwater resources have provided an adequate water supply to wells in the region. However, in recent years, water supply has not been as reliable.



Groundwater may seem to be a limited resource, but is part of the much larger hydrologic cycle. Source: Huron River Watershed Council.

Stormwater Management

A number of watersheds within the county are experiencing stormwater management problems, some of which are severe. This contributes to flood damages, degraded water quality, and a reduction in the biodiversity. Design of controls for managing stormwater should incorporate Best Management Practices, (BMPs), and infiltration to improve the quality of discharges and runoff. PA Act 167 requires counties to prepare stormwater management plans that provide standards for controlling runoff from new development on a watershed basis. The County has completed an Act 167 Comprehensive County-wide Stormwater Management Plan with implementing ordinance in 2011.



Lycoming County Stormwater Drain Marker Initiative

High Quality / Exceptional Value Watersheds

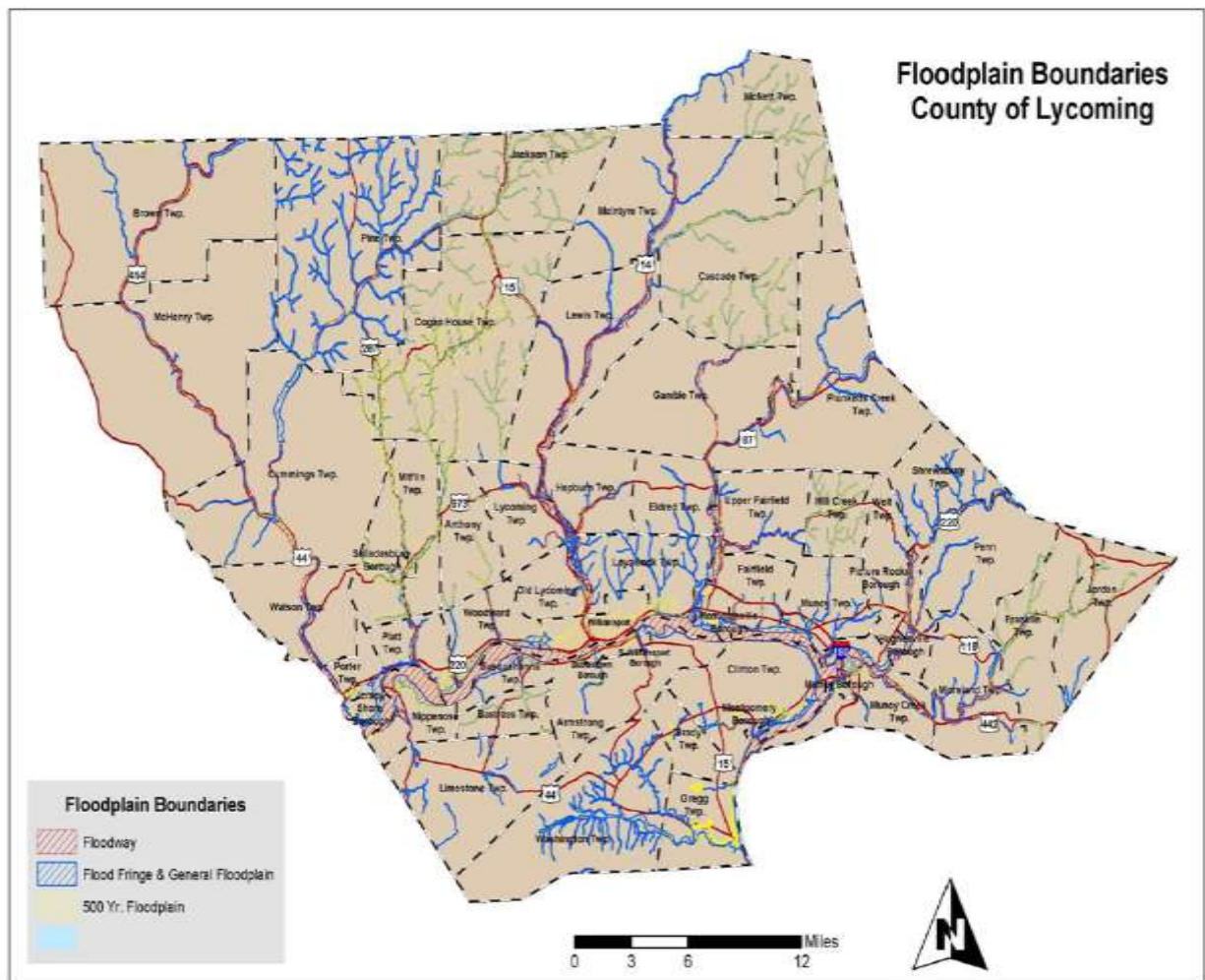
Lycoming County has 193 high quality / exceptional value streams encompassing 1,240 miles where the county supports watershed overlay provisions especially for the Susquehanna River, Loyalsock, Lycoming, Pine and Muncy Creek corridors along with the Mosquito Creek watershed and lands owned by the Williamsport Municipal Water Authority. These watersheds are excellent fresh water fisheries having the benefit of good water quality, which supports warm water species and cold water species. Native brook trout inhabit the cold-water streams, while large and small mouth bass and muskies populate the warmer waters. A large portion of the Appalachian Plateau, which is located in the County, has been designated as either exceptional value or high quality watershed under PA Chapter 93 Water Quality Standards. There are over 117 miles of wild trout streams and 154 miles of stocked trout streams throughout the county.



White Deer Hole Creek

Floodplains

Because of the vast network of 2,200 miles of the river and streams, many areas of the county are situated in the regulatory floodplain. Because floodplains are relatively flat and have good soils, they are convenient for development. However, natural flooding cycles can cause tremendous damage to man-made structures. Therefore, accurate delineation and floodplain management practices are imperative to reduce hazards and ensure a healthy ecosystem. Lycoming County is active in regulating further expansion of existing floodplain development and pursues funding for property buyouts and retrofits in the floodplain.



Land Resources

Topography

Lycoming County is located within two geomorphic provinces, the Appalachian Plateau Province and the Valley and Ridge Province. The Appalachian Plateau, differentiated by rolling hills dissected by steep stream valleys, is found north of the Susquehanna River. The Allegheny Front, the distinctive wall of mountains north of Williamsport, separates the two provinces. The Ridge and Valley Province, a series of sharp-crested ridges and narrow valleys, is found south of the Susquehanna River, extending in an arc from southwest to northeast across the central part of the state. Areas of steep slope mainly follow stream valleys, especially in the northern region beyond the Allegheny Front. Portions of the County's landscape are underlain by limestone based geologic formations that are susceptible to the formation of solution caverns and sinkholes. Also known as Karst topography, these areas are considered to be both hazardous, because of the danger of collapse, and beneficial because they provide unique habitats, mineral sources and recreational opportunities. A major sinkhole (Maple Hill Sinks) likely fed from underground springs in Brady Township near ElimSPORT periodically causes severe and prolonged flooding along State Route 2001 (ElimSPORT Rd) that shuts down a portion of the roadway and causes substantial detours disrupting the local community for uncertain periods of time.



ElimSPORT Road Flood Closure Due to Sinkhole Flooding

Forests

In Lycoming County, more than 70% of the land area is forested. Over 60% of forest cover falls within the oak-hickory and associated varieties classification, the most common forest type in Pennsylvania. Maple-beech-birch and associated species are the second most prevalent. Other varieties include cherry, ash, white pine and hemlock. These areas serve many purposes including watershed protection, wildlife habitat, outdoor recreation, and a source of income from wood crops. It should be noted that forested open space performs the crucial role of stormwater absorption and groundwater recharge, which reduces the severity of flooding for downstream properties and urban communities. Lycoming County supports incentives for sound forest management and encourages development of forest stewardship plans to promote forest retention.



Forested open space in western Lycoming County

Top 10 Natural Areas of Statewide Significance in Lycoming County

County Rank	Site Name	Location	Natural Feature
1	Crystal Lake Camp Wetlands	Plunketts Creek Twp.	Wetlands and vernal ponds
1	Sand Spring Barren	Plunketts Creek Twp.	Fair to good quality Ridgetop Dwarf - tree forest Community
2	Eiswert Cave/Glade	Limestone Twp.	Limestone glade natural community and cave complex
2	Clay Mine Swamp	Brown Twp	Good populations of 2 rare invertebrates in shrub swamp
2	Mohn Mill Ponds	Washington Twp.	2 rare plant species and a good occurrence of a natural community
3	Algerine Swamp	Brown Twp.	Boreal conifer swamp community
3	Maple Hill Sinks	Washington & Brady Twps.	Best statewide occurrence of an Ephemeral/Fluctuating Limestone Sinkhole pond Community
3	Morris Run Cliff	Brown Twp.	2 PA-listed animals and potential for one other
3	Engle Run Site	Cascade & Plunketts Twp.	Exceptional Value Stream; High - gradient Clearwater Creek natural community
3	Nippenose Springs	Limestone Twp.	Largest 2nd magnitude spring in PA

Source: A Natural Areas Inventory of Lycoming County, Pennsylvania, 1993

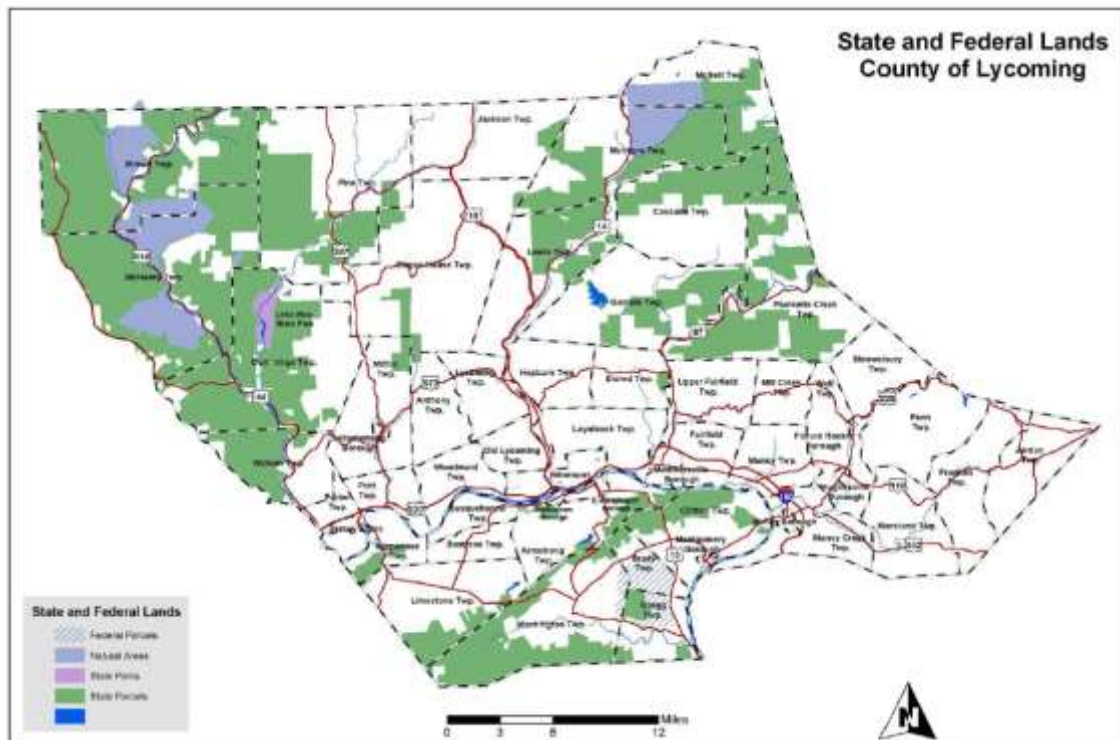
Other Wild and Natural Areas include: Bark Cabin, Torbert Island, Miller Run, Lebo Red Pine and Devils Elbow Natural Areas and Algerine, Wolf Run and McIntyre Wild Areas.

Wildlife

The large number of acres of forestland, waterways and open space land areas previously described support and abundance and variety of habitat. This habitat supports a variety of wildlife, including a variety of small birds and animals, big game animals, and many migratory birds. Game species, such as deer, black bear, turkey, grouse, pheasant and coyote, thrive in forest and forest edge habitats. Non-game species flourish as well including bobcat, otter, herons, bald eagles, osprey, hawks, and owls. The county supports wildlife protection through state agencies and local, private organizations.

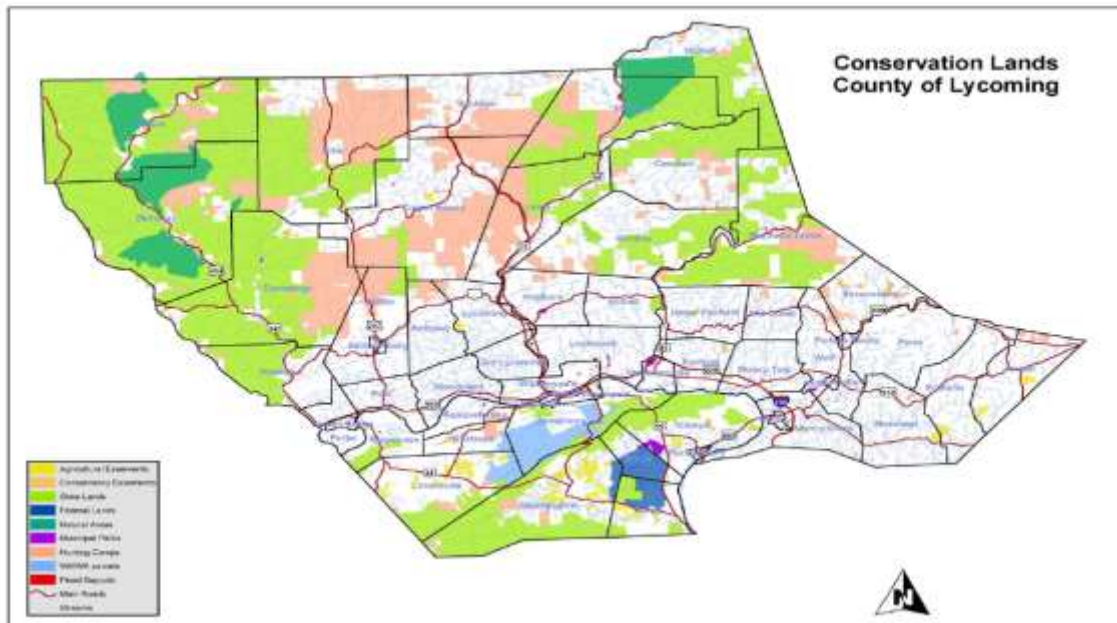
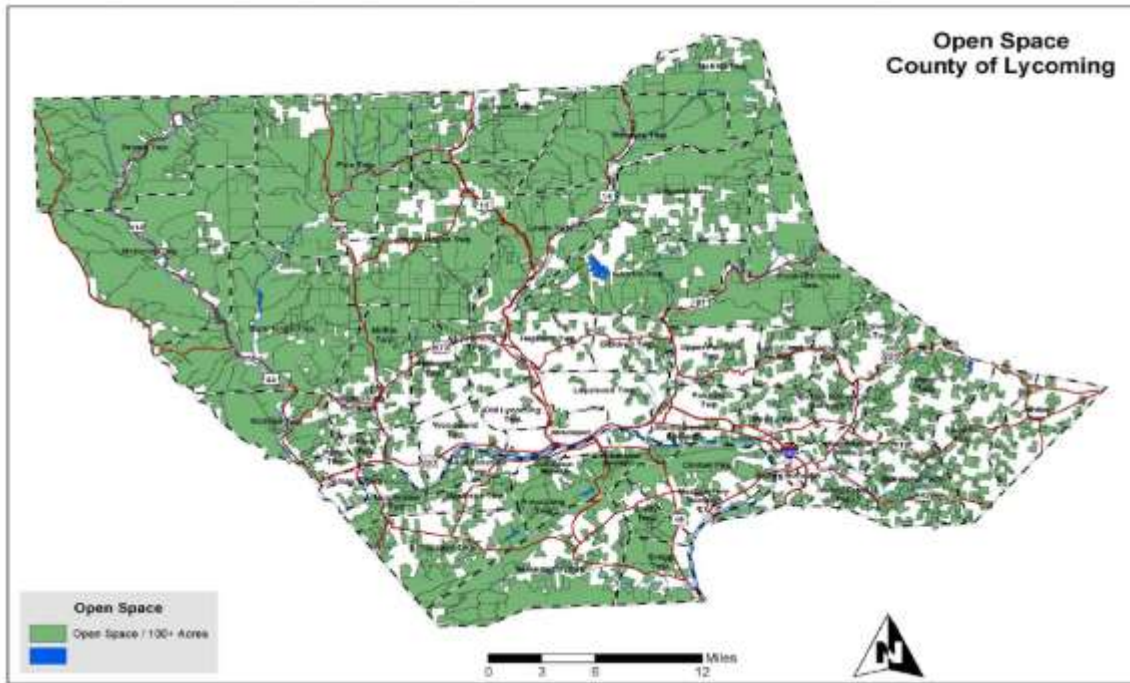
State and Federal Lands

There are extensive public land holdings in Lycoming County. These lands comprise more than 30% of the total land area within the County. A majority of the mountainous area is State Forest or State Game Land, especially in the northern portion of the county. The Tiadaghton State Forest is the largest of the state forests in the county with small portions of Sprout and Tioga State Forests also reaching into the county. Private development is not permitted under current State policy. Timber production on these lands is managed by the PA DCNR Bureau of Forestry and State Game Commission. There are natural gas exploration operations permitted and occurring on these lands but the primary use generally consists of outdoor recreation.



Large Parcel Landowners

Privately owned land parcels of 100 or more acres comprise 66% of the total land area in the County with the majority of this acreage being State Lands and Hunting and Fishing Clubs. These areas have remained intact over many years and have not been the subject of development or subdivision, with the exception of agricultural farms.



Steep Slopes / Highly Erodible Soils

A significant portion of the county has slope gradients equal to or in excess of 25%. A number of soils are highly sensitive to disturbance and development. The highly erodible soils are typically found on the steep slopes, which cover about 50% of the county land area. These soils are unstable under conditions of disturbance and pressure and contribute sediment to surface waters and can increase flooding.

Although current zoning does not prohibit development in these locations, in most cases development plans are required to incorporate erosion and sedimentation controls and a soil stability analysis along with defining an aquatic resource buffer width graduated on the slope gradient.

Agricultural Soils & Preservation Efforts

Lycoming County has an abundance of agricultural Prime Farmland Soils currently in agricultural uses. These soils are well drained, however in many areas steep slopes are a limitation to development or agricultural uses. The Prime Farmland Soils produce the highest yields with minimal additional inputs. There are 106, 000 acres of Prime Farmland Soils in the county which is 13 % of total county land area. The next most productive soils are classified as Soils of Statewide Importance where 110,000 acres fall in this classification county-wide yielding another 14% of total county land area. Many farmland protection programs use soil classifications



Agricultural fields in southern Lycoming County

The most popular form of agricultural protection throughout the county is the Clean and Green Program, in which 368,590 acres or 575 square miles are currently enrolled representing nearly half of all the land area in the county. However there are only limited acres enrolled in the Agricultural Security Area Program or permanently protected through easements. The agricultural landscape is most prominent in the eastern and southern regions of the County. Here, soils readily support crop production and pasturing. Lycoming County is continually active to identify farmland that should be permanently preserved for agricultural use considering soil quality and local paths of development and infrastructure availability in the identification and enrollment process to expand Agricultural Security Areas and Clean and Green Programs, where appropriate.

Historic / Archaeological / Cultural Resources

Lycoming County has many significant cultural, historic and archaeological resources that define our local heritage that should be protected. It is the policy of the county to conserve these resources, promote state and federal historic preservation programs locally through identification and application of historic properties to the PA Inventory and National Register of Historic Places eligibility list. There are 36 properties located throughout the county that are either eligible or listed on the National Register of Historic Places with 21 of these properties situated in the City of Williamsport. Further, the county encourages development of guidelines for historic site / district redevelopment with flexibility for conversion and adaptive re-use of historically significant structures, including use of Historic District Overlays, where appropriate. Williamsport Millionaires Row and the Muncy Historic Districts are excellent and among the most prominent examples of historic districts in the County with outstanding architectural and historic structures, many of which have been recently restored. In addition, there are also several Century Farms that have been held by the same family for over 100 years.

National Register of Historic Places Properties/ Districts List

- ✚ Williamsport City Hall
- ✚ U.S. Post Office in Williamsport
- ✚ Peter Herdic House
- ✚ St. James Episcopal Church
- ✚ Hart Building
- ✚ Lycoming County Courthouse Site
- ✚ Reading – Halls Station Bridge
- ✚ English Center Suspension Bridge
- ✚ Lewis Township Stone Bridge
- ✚ Hilborn Bridge, Brown Township
- ✚ Porter Township Bridge
- ✚ Cogan House Wooden Covered Bridge
- ✚ Lairdsville Wooden Covered Bridge
- ✚ Buttonwood Wooden Covered Bridge
- ✚ Plunketts Creek Township Bridge
- ✚ Jersey Shore Historic District
- ✚ Muncy Historic District
- ✚ Millionaire’s Row Historic District

State Historical Markers in Lycoming County

Marker Name	Location
Lycoming County	Lycoming County Courthouse, W Third Street
Antes Fort (Plaque)	Pa. 44, 1 Mile E. of Jersey Shore
Blooming Grove Dunkard Meeting House (Plaque)	Meetinghouse, .8 mi E of Balls Mills, .7 mi S pf Pa. 973.
Bowman Field	Off of 4th Street in front of the Ball Field, near the office of the Field Bldg.
Captain John Brady	SR 2014 (Old Pa. 147) .8 mi N of Muncy
Carl E. Stotz	Original Little League Field W. Fourth Street
Civilian Conservation Corps.	Rte. 14, 4 mi N of Trout Run
Dietrick Lamade	W 3rd & Williams Street Grit Bldg.
Eagle Grange #1	Rte. 15 and E Blind Rd. Montgomery
Fort Antes	Main and Seminary Sts. Old US 220 in Jersey Shore
Freedom Rd. Cemetery	SR 2033 and SR 2008. .3 mi on Freedom Rd from Bloominggrove
Muncy	SR 2014 (ol Pa. 147) N of Muncy
Muncy	Pa. 405 N of Muncy, in front of the Muncy Valley Hospital
Muncy Mills	Junct. Pa. 405 and 442 E of Muncy
Pennsdale Meeting House	Junct. SR 2051 (Former LR 41054) and Township Rd. (LR 41154) near Pennsdale
Peter Herdic House	407 W. 4th Street
Pine Creek Presbyterian Church	Thomas Street Exit, then S into the borough of Jersey Shore. R onto Railroad St. .7 mi
Sheshequin Path	1.2 mi S of Rte 14 at Trout Run on Rt 15
Sheshequin Path	Pa. 14 1.4 mi NE of Trout Run
Sheshequin Path	Pa. 14 at Marsh Hill, just off the intersection of Pleasant Stream Rd and 14.
Suequehanna Log Boom	US 15 just S of Wmspt
W D Crook and Sons	One College Ave. Outside the Alvin Bush Campus Center, Wmspt. Turn L off Maynard onto College Ave.
Williamson Road	Corner of old Rt 15 and Eckman Rd. Hepburnville on the west side (old US 15)
Williamsport	Washington Blvd and River Ave
Williamsport	US 15 S at Williamsport

Source: Pennsylvania Historical Museum Commission



The county also supports close coordination with archaeological protection organizations to inventory and protect sites of archaeological significance. The Ault site, which is located along the Susquehanna River near the Canfield Island archaeological site (Riverfront Park in Loyalsock Township) contains the remains of a fortified Native American village. It is Lycoming County's most significant archaeological site to date. Discovered in 1993, thousands of artifacts have been uncovered, some dating back 3,500 years. It is protected permanently by a conservation easement.



In terms of major cultural resources, Lycoming County is blessed with excellent facilities and programs to especially in regard to visual and performing arts with the Williamsport Area serving as a major cultural arts and events center showcased by the Community Arts Center. The Williamsport Areas also has worldwide recognition as the origin and host for the Little League Baseball World Series as well as home of Bowman Field the second oldest functioning minor league baseball park in the nation. The Thomas T. Taber Museum and James V. Brown Library are other significant cultural facilities in Williamsport.



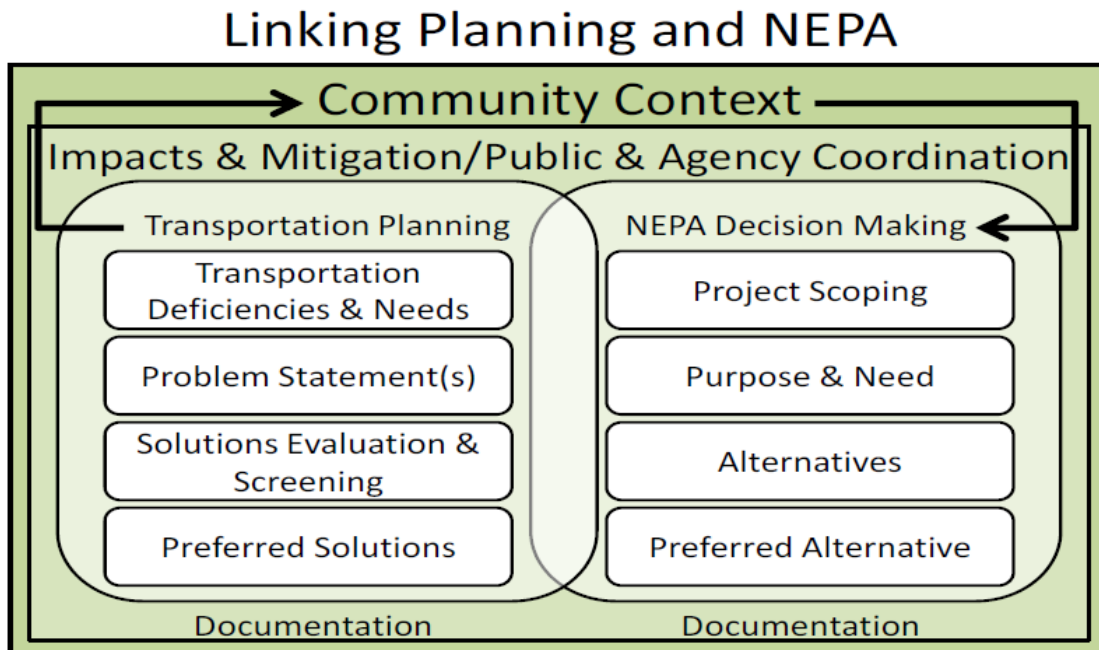
Community Arts Center

Linking Planning and NEPA

The goal of linking planning and the National Environmental Policy Act (NEPA) initiative is to successfully integrate NEPA-type activities into the planning phases by:

- ❖ Establishing a clear link from the existing/planned land use in municipalities, counties and regions to the transportation planning and programming processes which are affected by land use decisions, and which can affect future land use decisions. All involved should understand how each part of the process affects another.
- ❖ Establishing a clear understanding of the types of information to be collected, activities to be conducted, and the time of both, and documenting each to the appropriate levels, so that the documentation meets standards to be used in state (PA Act 120) and federal (NEPA) environmental study documentation.

Identification of significant resources and then avoidance, minimization, and mitigation of impacts of transportation projects on communities and resources are often consistent with the goals and objectives set forth in the long range transportation planning process:



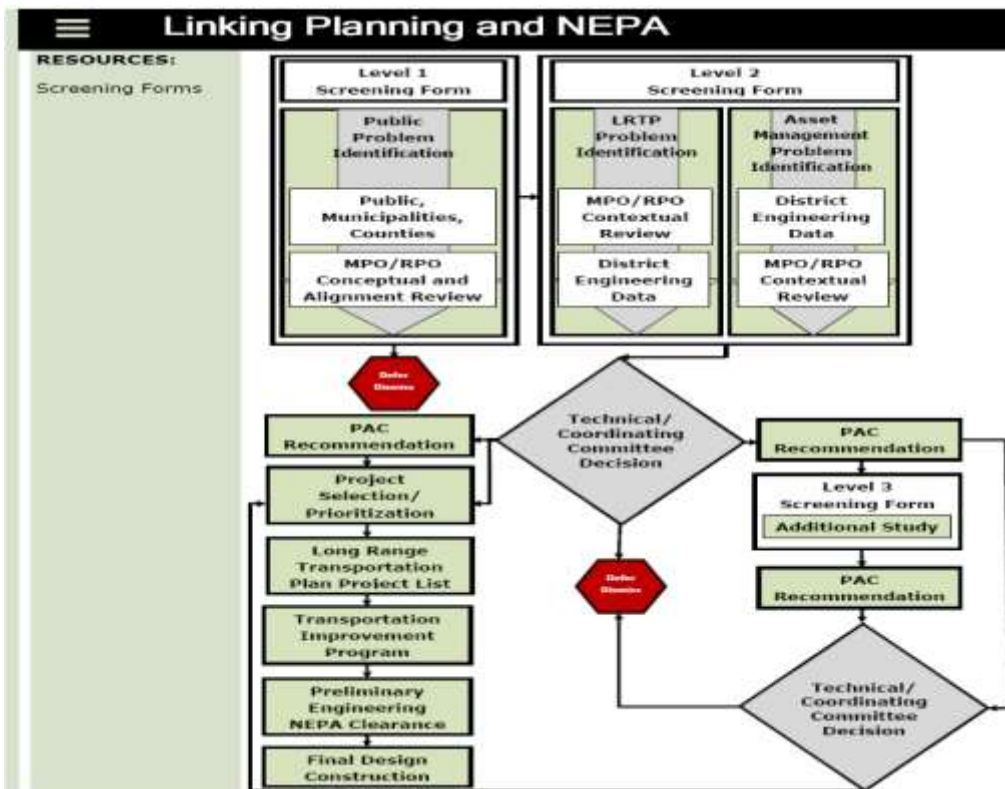
Source: PennDOT Developing Regional Long Range Plans

Methodology Approach

When undertaking Linking Planning and NEPA assessments of potential projects for inclusion in the Long Range Transportation Plan, the WATS MPO utilizes the following methodology approach to conduct an initial assessment of a project’s potential impact on environmental resources based on PennDOT guidance.

Screening Forms

PennDOT has recently developed screening forms to facilitate the Linking Planning and NEPA process. These screening forms have three review levels. Level 1 Screening Forms enable project advocates to better understand the context, potential fatal flaws, risks and cost associated with addressing a transportation problem. The Level 1 screening form is used by the WATS MPO, PennDOT and other appropriate parties to collect more data, as needed, so that a more detailed Level 2 Screening Form can be completed. The Level 2 screening form is intended to provide more detailed information on the transportation problem area’s land use; community context; environmental, historical, and cultural impacts; updated information on potential solutions or approaches; and updated costs and funding information. The desired outcome of this stage is the identification of the problem on the Long Range Plan’s prioritized project list, however some problems may be deferred or require additional definition. In such cases, a Level 3 screening form should be completed to provide further analysis of the potential impacts to environmental; societal and cultural resources among other considerations.



Essential to the screening form completion is a clear statement of purpose and need. The NEPA requires a Purpose and Need statement to briefly specify the underlying purpose and need to which the planning agency (WATS MPO) is responding in proposing alternatives including the proposed action. A Purpose and Need statement can be derived from the transportation planning process. Examples of Purpose and Need Statements are illustrated below:

Example of Needs	Example of Purpose
There is existing congestion on the roadways serving the subject area this is projected to worsen in the future.	The purpose of the proposal is to provide transportation mobility and safety improvements, relieve further congestion, and provide east-west access and mobility in the circumferential corridor south of the city.
There are safety concerns because of deficiencies in the roadway network.	
There is poor east-west mobility for truck access to redevelopment sites in the region.	
There is no circumferential transit service.	
There is poor east-west mobility from the region to the international airport.	

Guidance for Establishing the Purpose and Need Statement in Planning

Should be a statement of the transportation problem (not a statement of a solution).

Should be specific enough so that the range of alternatives developed will offer real potential for solutions to the transportation problem.

Must not be so specific as to "reverse engineer" a solution.

May reflect other priorities and limitations in the area, such as growth management, land use planning, and economic development.

Chapter 3 provided an inventory of existing transportation facilities along with an assessment of their condition and operational performance. The Linking Planning and NEPA screening form process employed in this plan update focuses on highway and bridge needs as the capital projects among the other modes such as transit, air and rail service already are undergoing detailed environmental reviews in order to receive the required level of environmental clearances. In addition, those highway and bridge projects that are already programmed for federal / state funding on the WATS MPO FFY 2013-2016 federally approved Transportation Improvement Program, (TIP) have been "grandfathered" from the screening process as the MPO has already selected the projects prior to the official PennDOT kick-off of the screening process or in some cases

environmental clearances from the appropriate regulatory jurisdictions have already been issued or are near issuance. Finally, in late June, 2013 PennDOT publicly released a list of transportation projects referred to as the “Decade of Investment” that could be undertaken provided that the PA General Assembly approved additional state transportation funding which has not yet occurred. Although the WATS MPO supports the need for these Decade of Investment projects sufficient time has not been provided in this plan update cycle to properly screen all 63 proposed highway and bridge projects as part of linking planning and NEPA.

Therefore, the WATS MPO has decided to undertake a linking planning and NEPA screening of all 108 structurally deficient state and locally owned bridges described in Chapter 3 that are proposed for inclusion in this Long Range Plan Update as purpose and need has been clearly established and excellent condition data is available for all of these structures through bridge inspection reports. The LCPC working with PennDOT District 3-0 have completed Level 2 screening forms for all 108 structurally deficient bridges that are proposed for federal and state funding that will be identified in Chapter 7. The WATS MPO intends to complete screening forms for the remainder of Decade of Investment projects proposed in Lycoming County in the near future and amend the Long Range Plan accordingly showing the results of this screening process prior to programming these additional projects for funding on the Transportation Improvement Program.

Once the screening forms have been completed and entered into the PennDOT Linking Planning and NEPA database, the next step in the process is for PennDOT and Planning Partners to conduct a PA Natural Diversity Inventory search.

PA Natural Diversity Inventory, (PNDI) Search

The PA Natural Heritage Program (PNHP) is a partnership between the PA Department of Conservation and Natural Resources, (DCNR), the Western PA Conservancy, the PA Game Commission, and the PA Fish and Boat Commission. The PNDI is the database informing the Environmental Review function of the PNHP. The PNDI system is managed by DCNR in order to build, maintain and provide accurate and accessible ecological information needed for conservation, development planning, and natural resource management.

The PNHP partnership conducts inventories and collects data to identify and describe the Commonwealth’s most rare and significant ecological features. These features are entered into the PNDI database, and include plant and animal species classified as rare, threatened, endangered, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern plant and animal populations and unique geologic features. Site specific information describing these features is stored and integrated data management system consisting of GIS-based layers and accompanying data, thus comprising the PNDI information system. The PNDI is continually updated to include recently discovered plants, animals, significant natural communities and unique geological features / locations.

The PNDI information system staff are not the sole authority for making determinations involving PNDI resources. Rather, the primary statutory authority for PA listed resources resides with four separate jurisdictional agencies; PA DCNR (managing PA native wild plants and information on terrestrial invertebrates, significant natural communities and geologic features) ; PA Fish and Boat Commission (management of fish, reptiles, amphibians, and aquatic organisms); PA Game Commission (management of PA wild birds and mammals) ; and U.S. Fish and Wildlife Service (responsible for federally listed proposed and candidate species under the Federal Endangered Species Act as a shared responsibility with the appropriate state agency).

The PNDI Environmental Review and Project Planning Tool is an on-line search mechanism where project sponsors can provide data that will enable early identification of threatened or endangered and special concern species and resources that can help avoid serious adverse effects and save time and money during the project development process. During instances when the PNDI search indicates “potential impacts”, early consultation with the proper jurisdictional agencies is crucial as this can minimize associated delays and cost and facilitate the integration of more effective conservation measures into project planning. Also, where the PNDI search results in “potential impacts” this means the project is located in the **vicinity** of an endangered and threatened species and **needs to be reviewed in more detail** by the jurisdictional agency /ies indicated on the search result (environmental receipt).

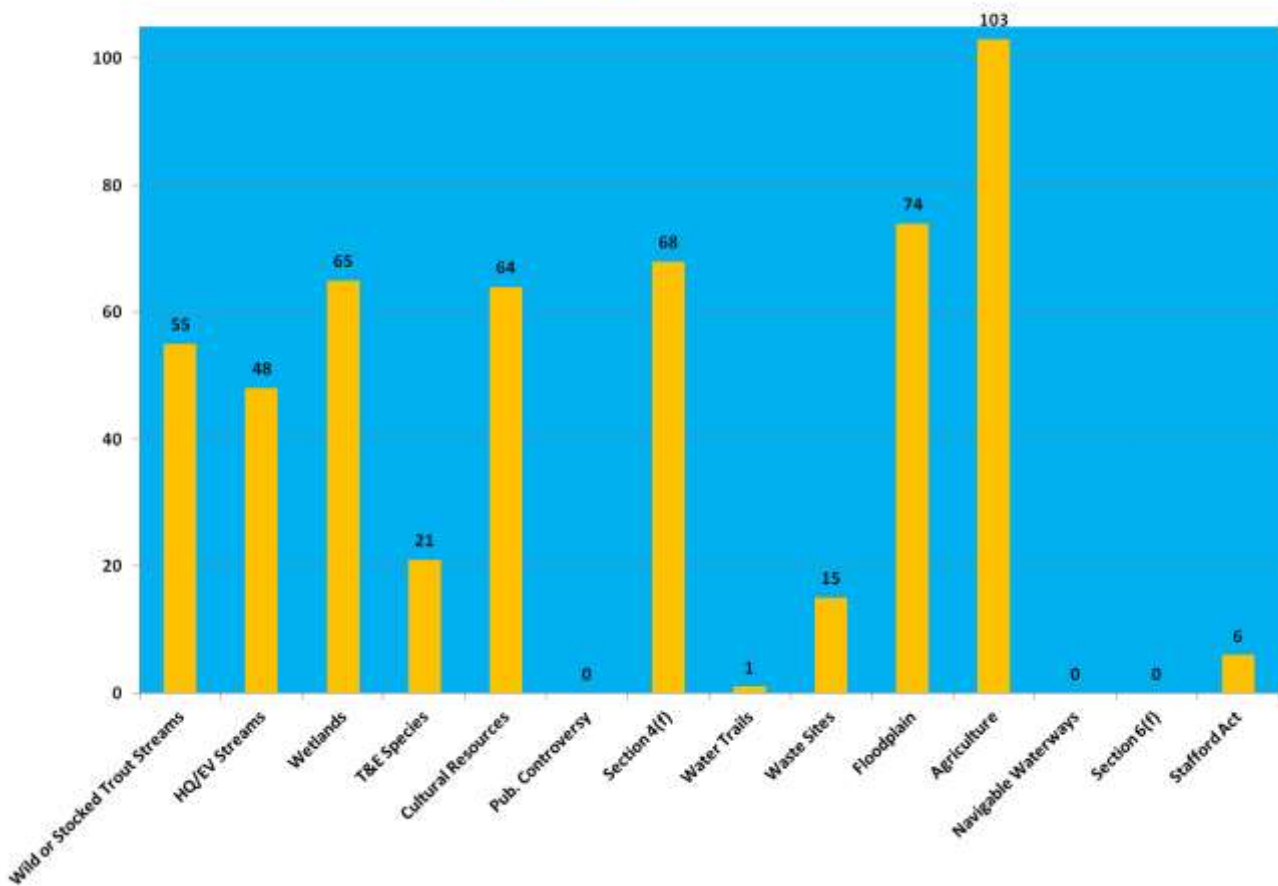
Where potential impacts are identified, the receipt will provide appropriate jurisdictional agency contact information to facilitate further review and coordination. A clearance or recommendation letter from the jurisdictional agency / ies indicated on the receipt is required as proof that the applicant consulted with the jurisdictional agency /ies regarding the potential impacts to threatened or endangered species. The clearance or recommendation letters must be submitted along with the PNDI receipt to DEP with the permit application.

The PNDI information system is not the only means to identify threatened and endangered and special concern species and resources that may be affected by a proposed DEP permitted activity. The PNDI system contains only known occurrences of threatened and endangered species and special concern species and resources. A large part of the state has not yet been surveyed. Therefore, the absence of a record in the PNDI system does not mean that there are no resources of concern on any particular site.

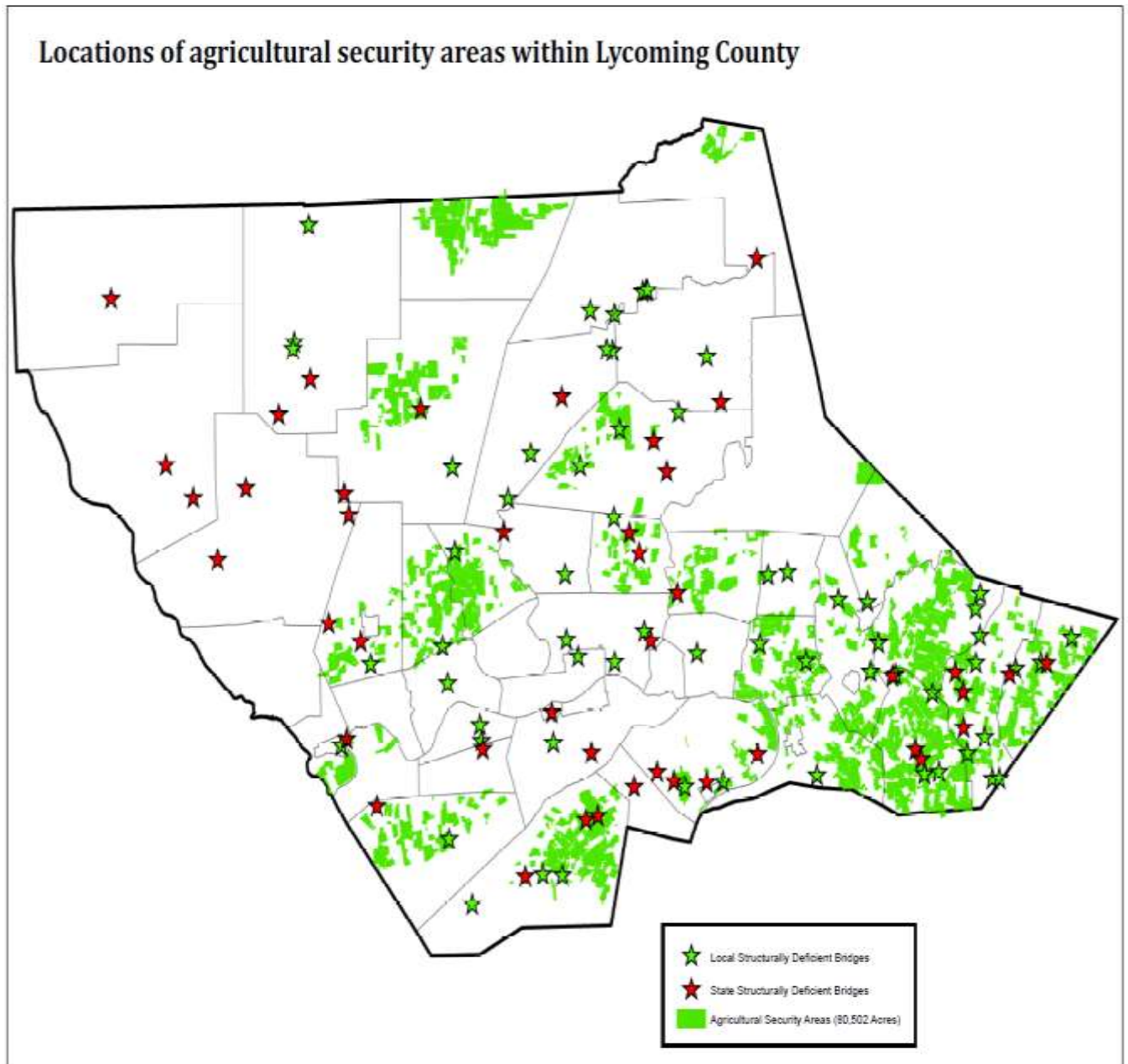
PNDI searches are valid for one year from the date of the search. If a permit application or permit registration request is submitted more than one year after the initial search, or conclusion of coordination with the jurisdictional agency (whichever is later) then a new PNDI search is required.

The chart below summarizes the results of the PNDI searches for the 108 state and locally owned structurally deficient bridges proposed for inclusion in the WATS Long Range Transportation Plan. The “proposal” is defined as a proposed bridge project and the “proximity” between the resource and the bridge project locations is typically within less than one mile. Again, this chart does not mean that a resource is actually affected by the project. It means that the project is in the vicinity of the resource and that the project needs to be reviewed in greater detail by the appropriate regulatory jurisdictional agency/ies.

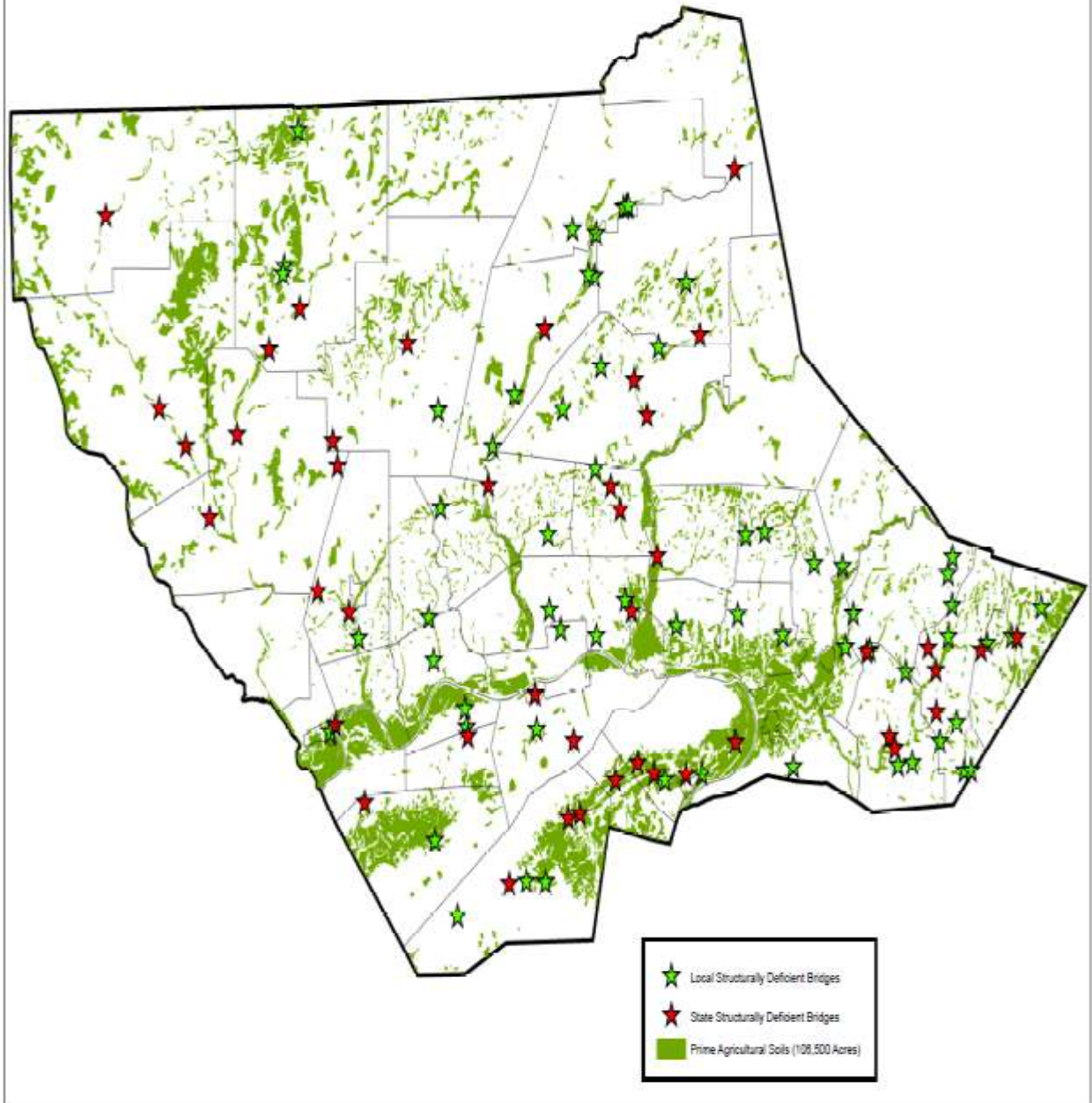
Number of Proposals by Resource with Potential Environmental Impacts
 *Based on GIS survey of proximity of resources identified in the L RTP



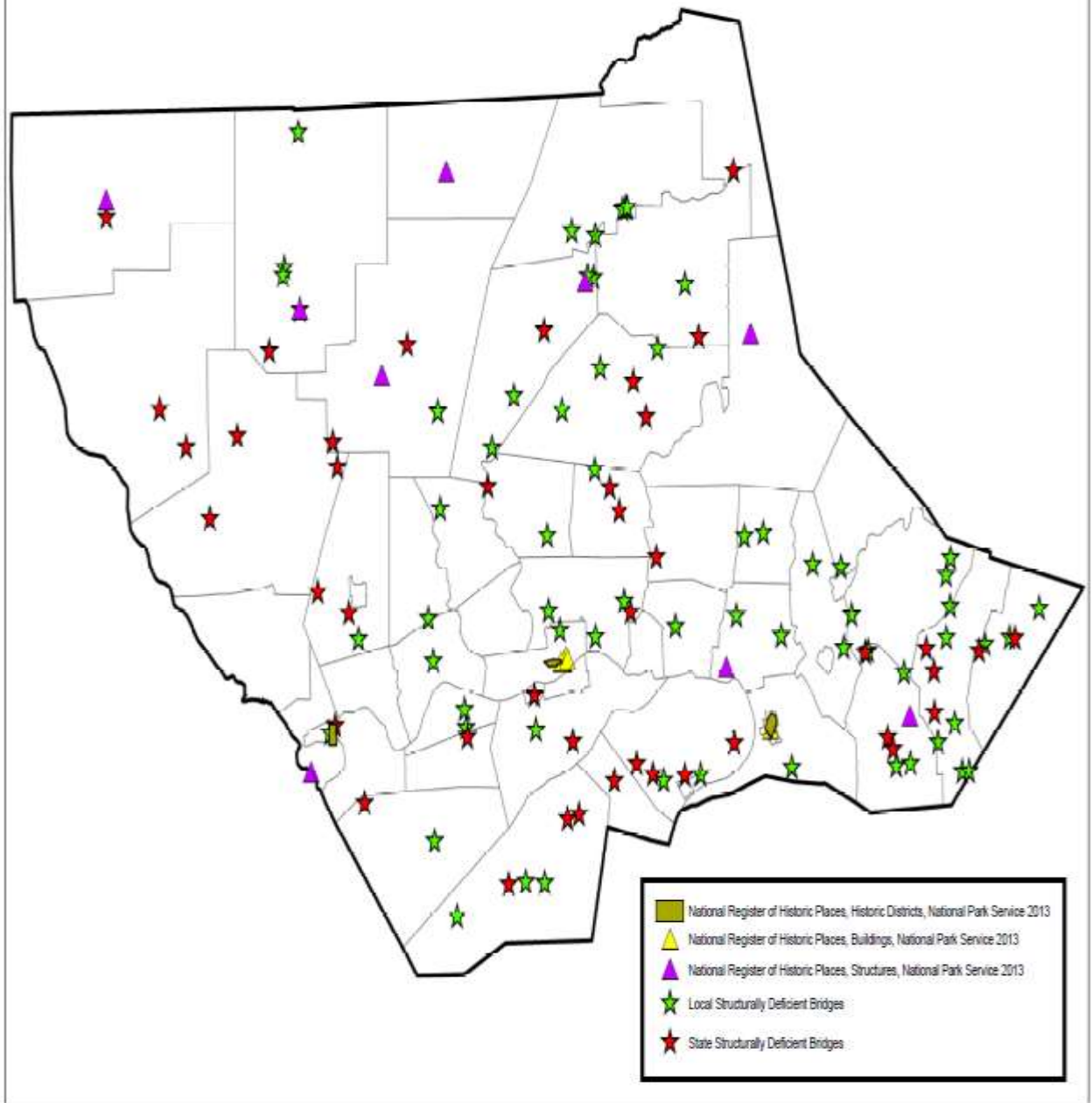
The following maps provide an overview of each of the environmental resources screened in the PNDI search in relation to the specific locations of the structurally deficient bridges.



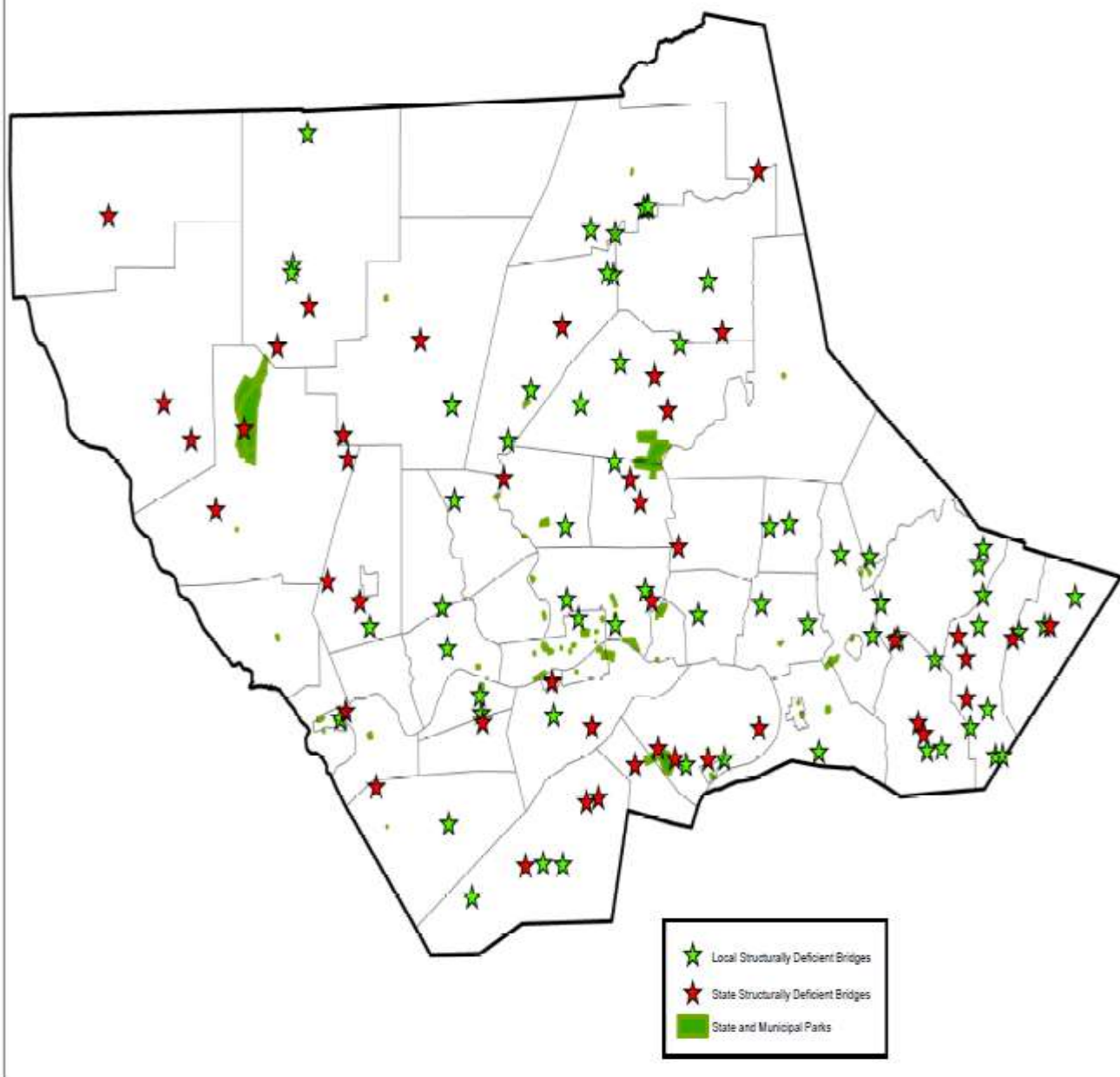
Locations of prime agricultural soils within Lycoming County



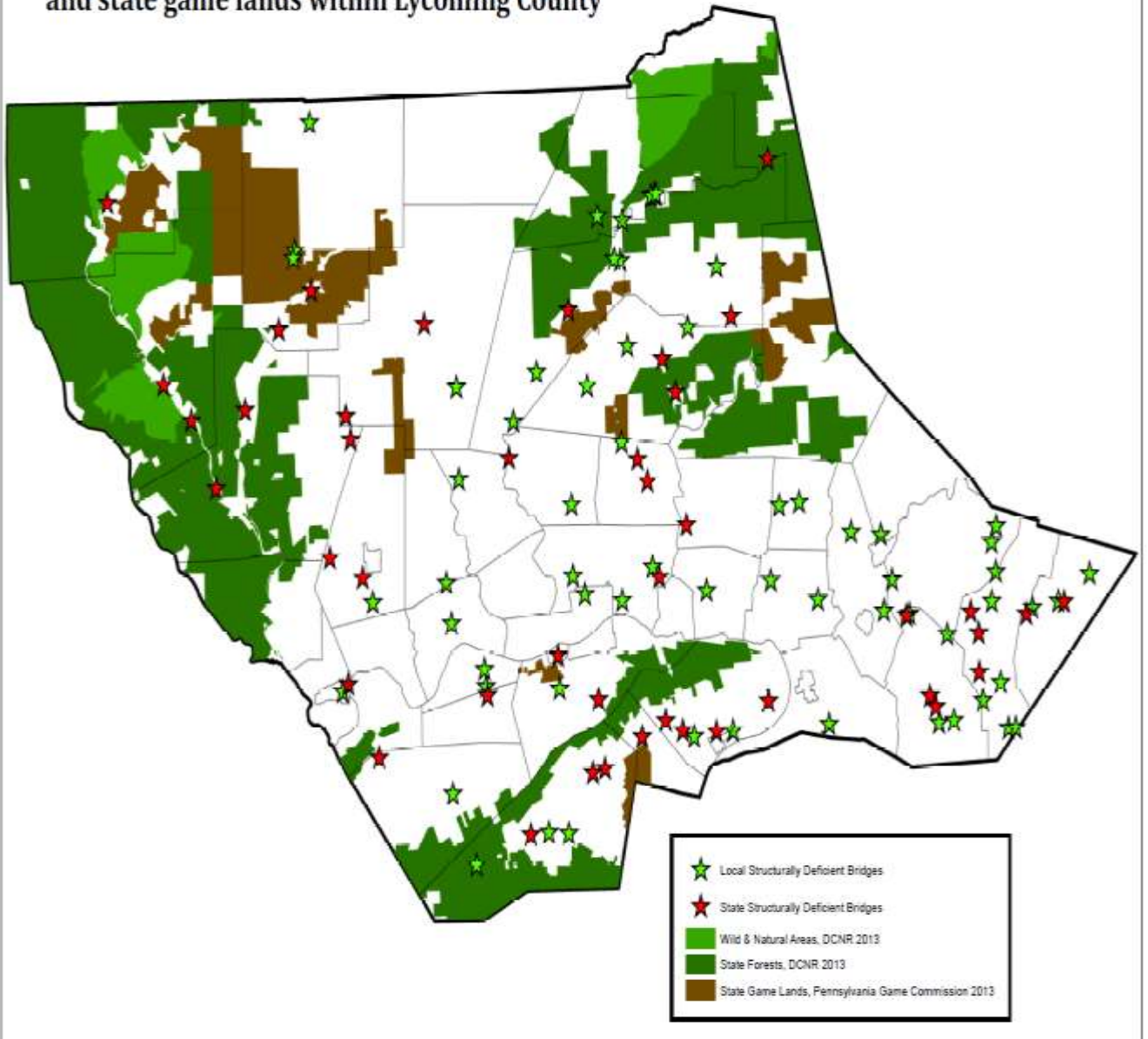
Locations of historic places within Lycoming County



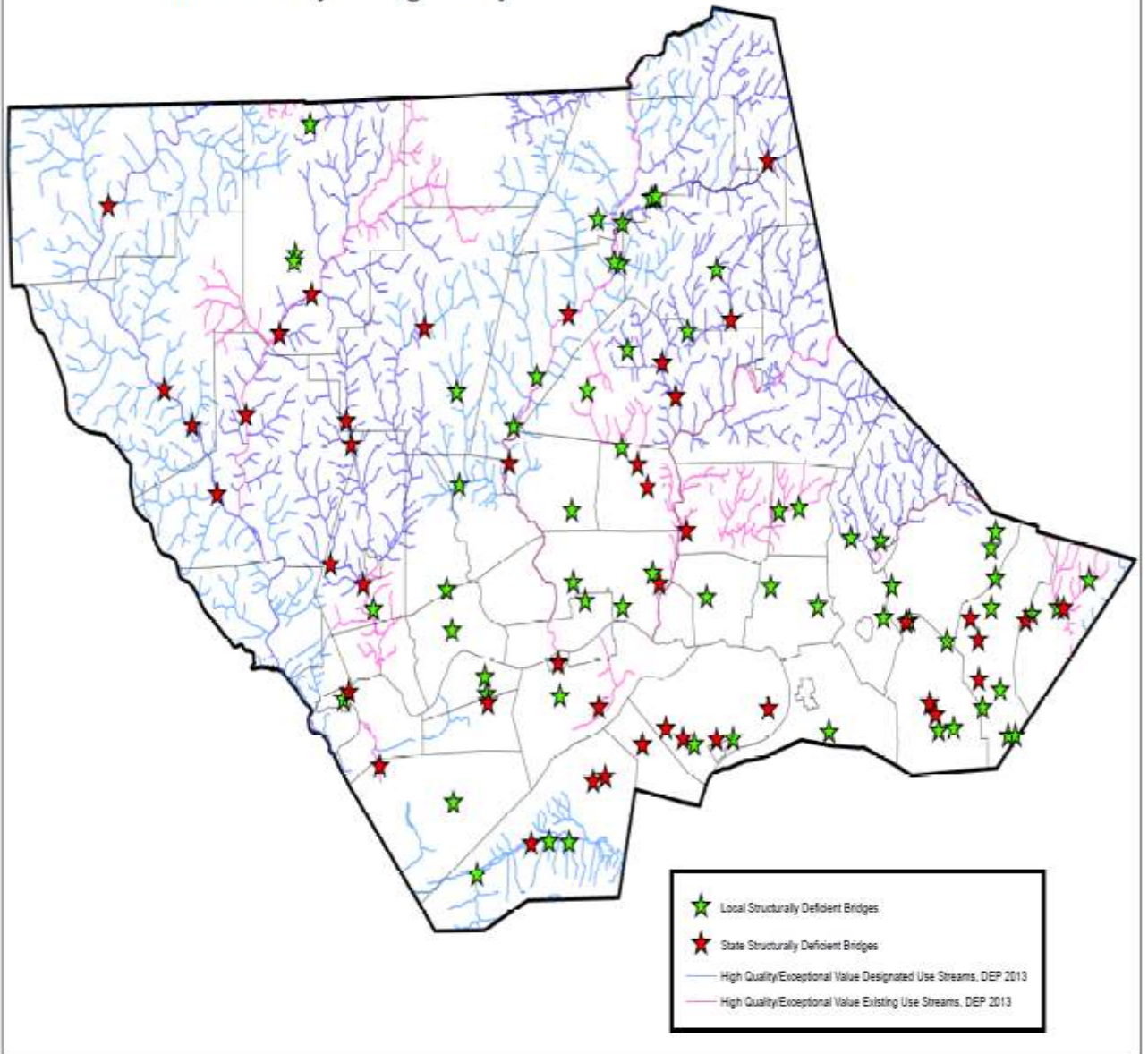
Locations of state and municipal parks within Lycoming County



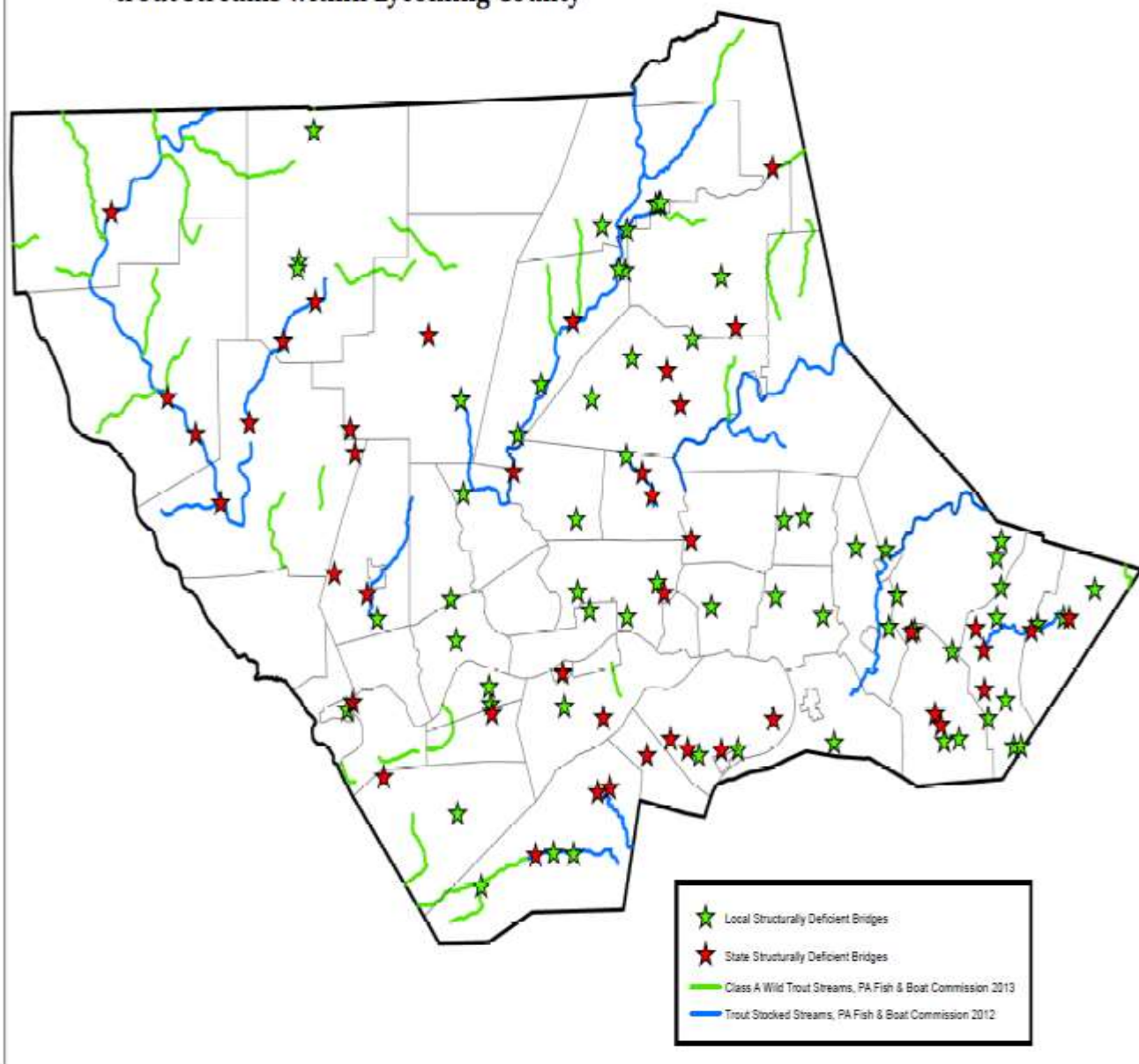
Locations of state forests, wild & natural areas,
and state game lands within Lycoming County



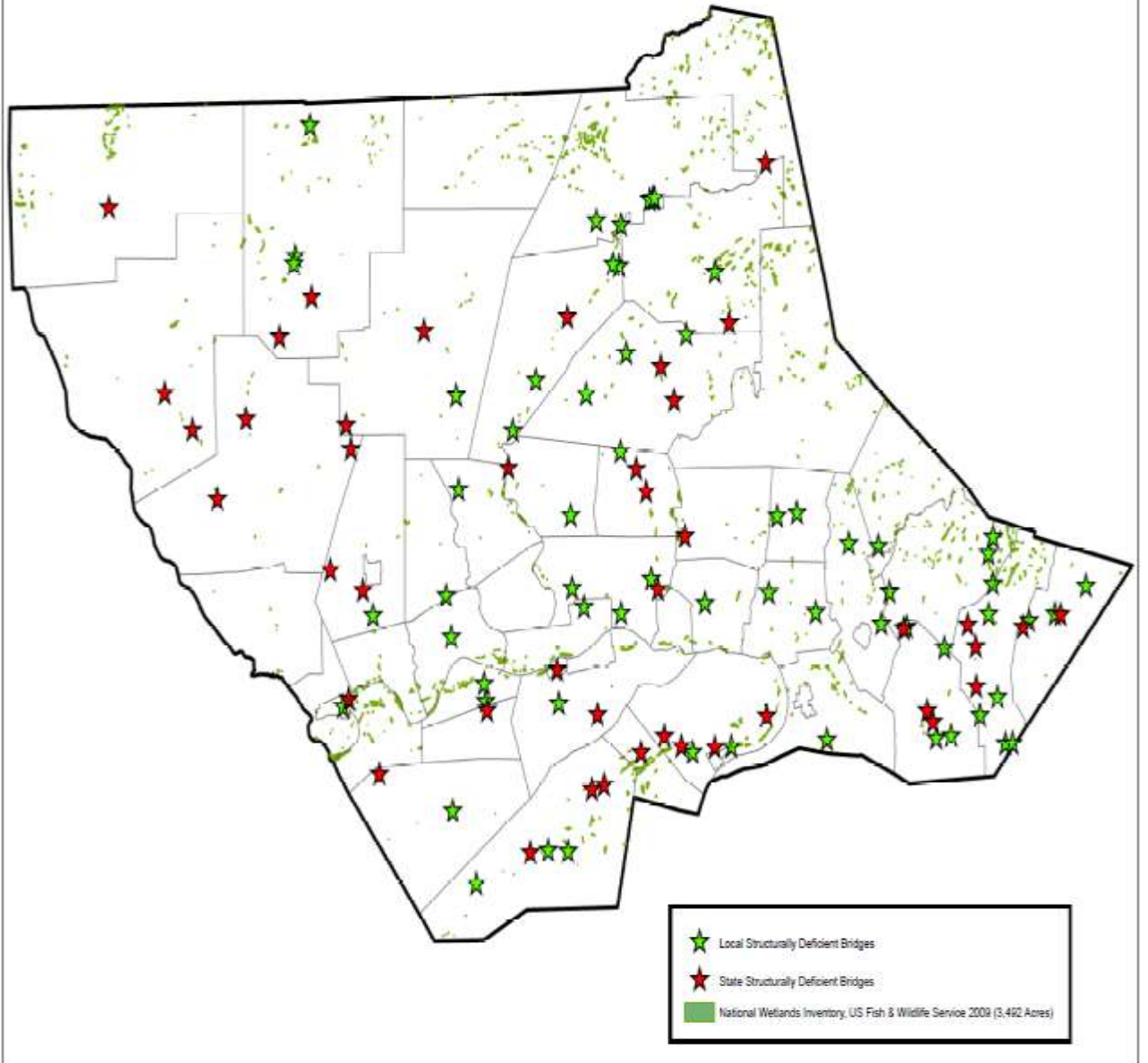
Locations of high quality/exceptional value streams within Lycoming County



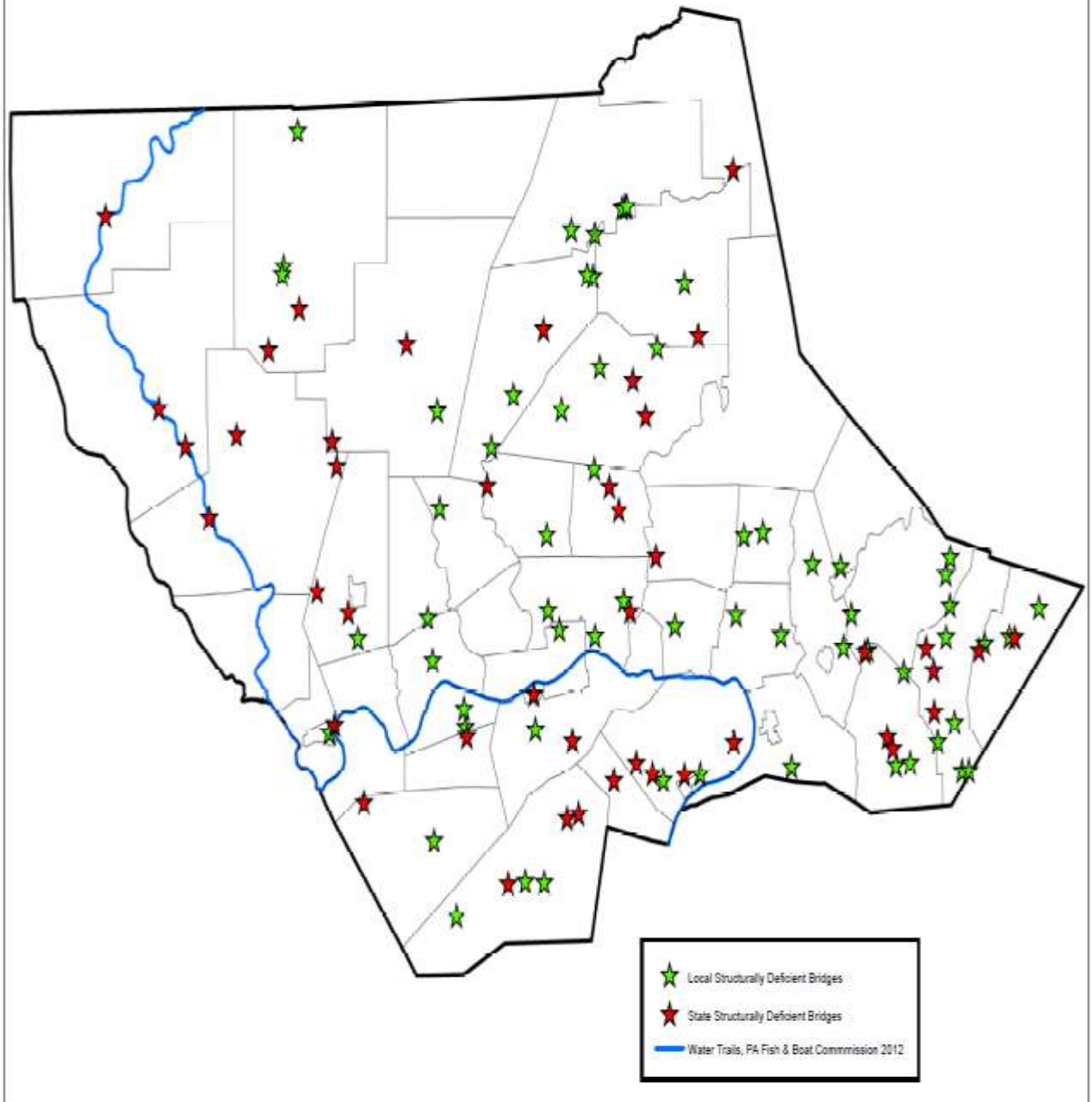
Locations of Class A wild trout and stocked trout streams within Lycoming County



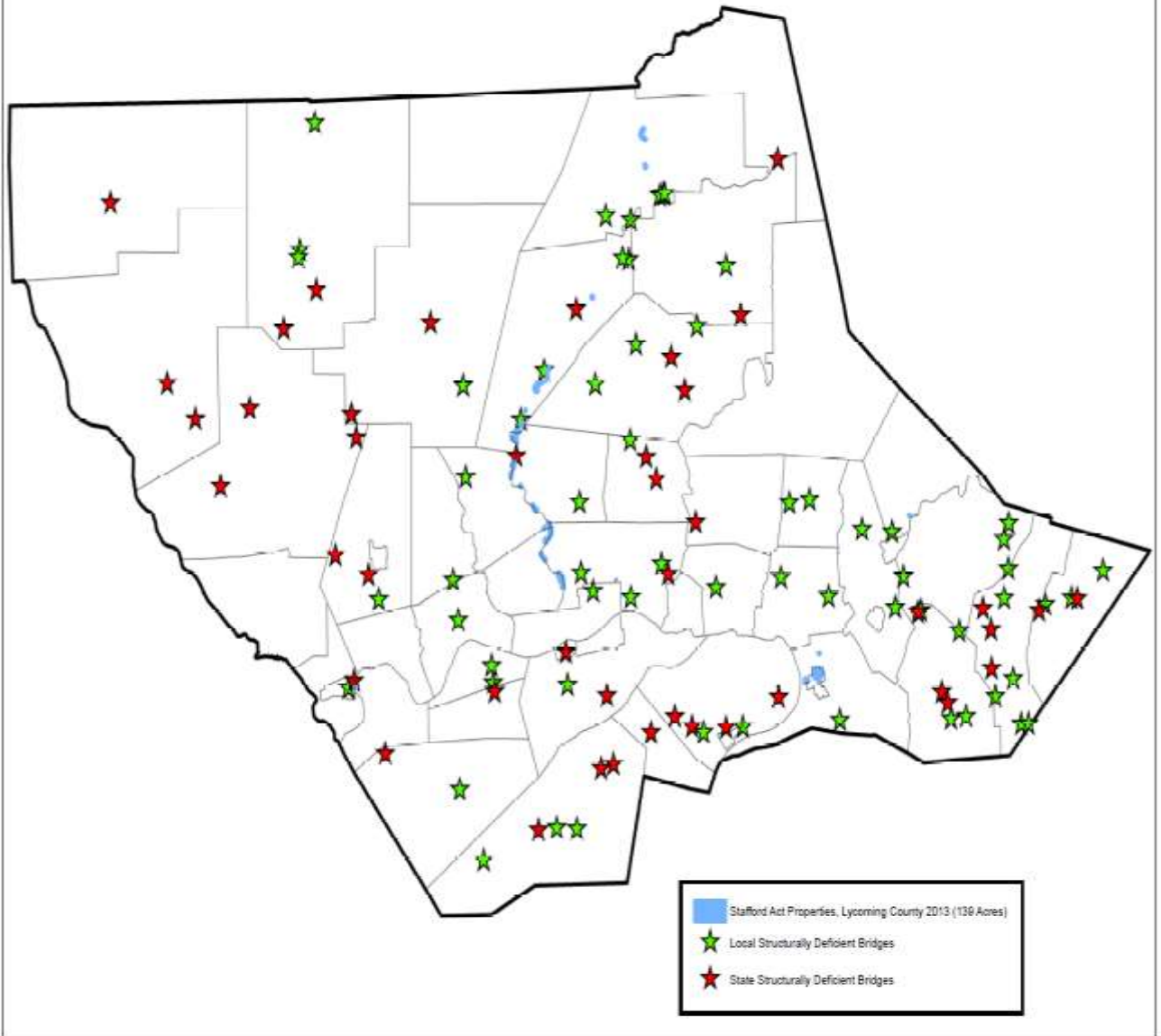
Locations of wetlands within Lycoming County



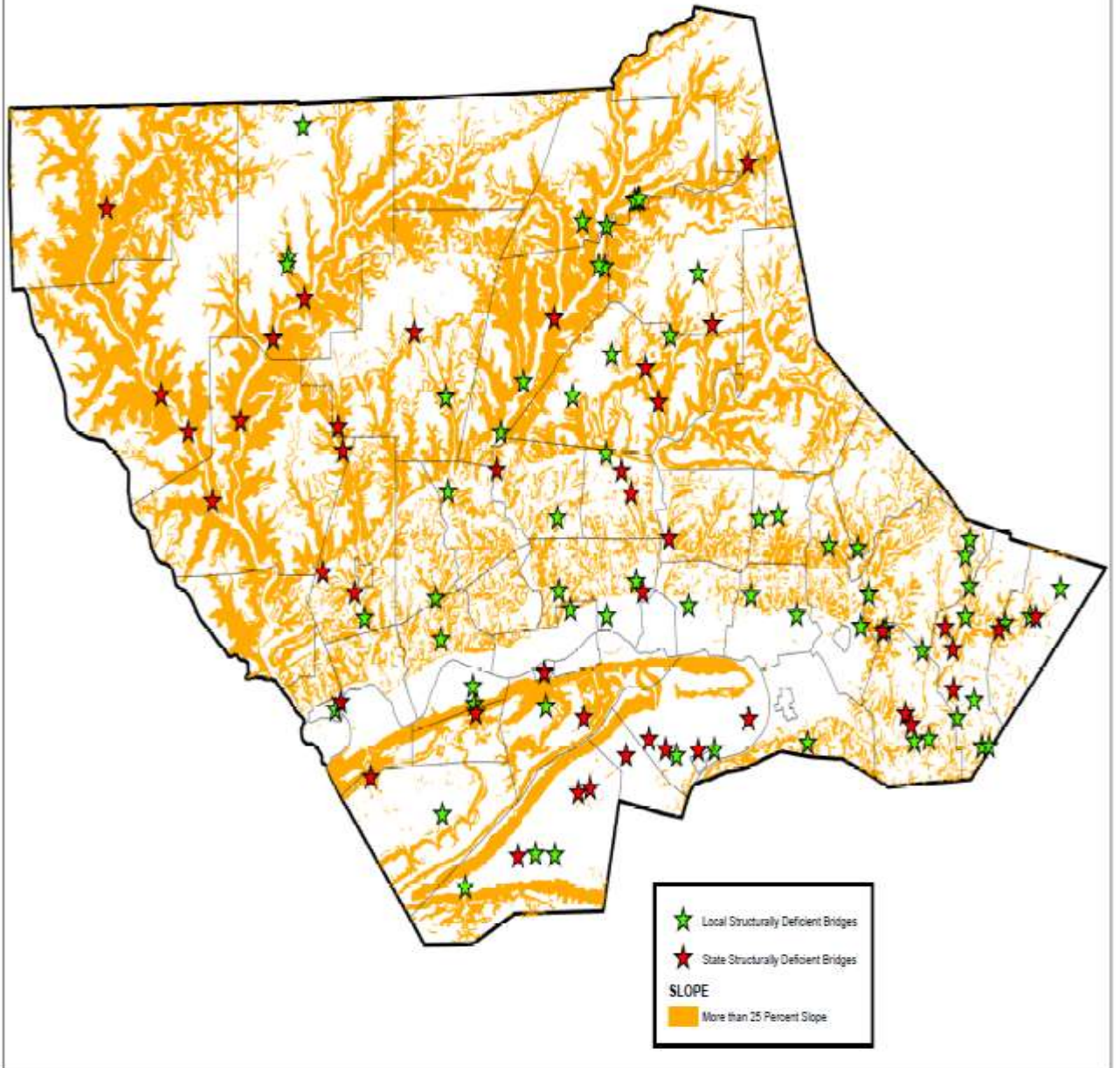
Locations of water trails within Lycoming County



Locations of Stafford Act properties within Lycoming County



Locations of steep slopes within Lycoming County



Potential Environmental Mitigation Measures



Historic English Center Suspension Bridge

Transportation investments can have a direct, indirect or cumulative impact on the sensitive resources protected under NEPA. 40, CFR SS 1500-1508 defines these impacts as follows:

Direct Impacts: caused by the transportation project and occur at the same time and place.

Indirect Impacts: caused by the transportation project and occur later in time or farther removed in distance. These impacts may include changes in population, land use patterns, effects on the environment, etc..

Cumulative Impacts: caused by incremental impacts of the transportation project when added to other past, present, and reasonably foreseeable future actions.

In Lycoming County, these resources likely include agriculture, wild or stocked trout streams, high quality / exceptional value streams, wetlands, cultural resources, public park and recreational lands, floodplains and flood buyout areas, waste sites and threatened and endangered or special concern species.

Federal law requires consultation with state and federal regulatory and resource agencies to assist in the identification of potential environmental impacts and mitigation activities as conducting such consultation during the plan development process helps link the transportation planning process with the analysis of potential adverse impacts from individual projects under NEPA during project development.

In Pennsylvania, the Agency Coordination Meeting, (ACM) is a forum where regulatory and resource agencies meet on a regular basis to discuss potential issues on various transportation projects (typically the more complex Environmental Assessment or Environmental Impact Statement projects), as well as review potential environmental concerns related to projects contained in the long range transportation plans. The ACM resource agency participants include:

- *PA Department of Transportation*
- *PA Department of Environmental Protection*
- *PA Department of Agriculture*
- *PA Fish and Boat Commission*
- *PA Department of Community and Economic Development*
- *PA Department of Conservation and Natural Resources*
- *PA Game Commission*
- *PA Historical and Museum Commission*
- *U.S. Army Corps of Engineers*
- *U.S. Environmental Protection Agency*
- *U.S. Fish and Wildlife Service*
- *Federal Highway Administration*
-

Lycoming County Conservation and Environmental Education Trail



The Lycoming County Planning Commission will present the WATS Long Range Transportation Plan to ACM in October, 2013. The following programmatic commitments will be proposed by the Williamsport MPO when identifying and advancing transportation improvement projects through the planning process:

**WILLIAMSPORT MPO PROGRAMMATIC COMMITMENTS
ENVIRONMENTAL REVIEW AND MITIGATION ACTIVITIES**

- Continue to use the Linking Planning and NEPA (LPN) system to identify land use/agriculture areas and opportunities to avoid, minimize and mitigate impacts as proposals move from the WATS Long Range Transportation Plan to the WATS Transportation Improvement Program.
- Work with PennDOT to identify potential wetland banking sites or other mitigation measures identified jointly by resource agencies and PennDOT Engineering District 3-0. Use National Wetland Inventory hydric soils in screening, but realize this information may have to be verified using ground truthing for project specific impacts. Consider developing local data for the screening process that includes exceptional value wetlands and drinking water resources. Consider mitigation opportunities such as adding parks and trails, resource banking and creating riparian buffers. Also consider opportunities for public / private partnerships in mitigation.
- Work with the PA Historical and Museum Commission on an approach to cultural and historic preservation and advanced mitigation. As part of bridge project development, evaluate historic structures and potential historic districts surrounding ineligible truss bridges to determine if structures not meeting criteria for the National Register may still contribute to a historic district.
- Consider the use of predictive modeling and topographical guidelines to anticipate where there may be undiscovered archaeological sites.
- Consider the use of historic county maps and aerial photography to determine the locations of resources including major farms, churches, canal and railroad facilities.
- Investigate opportunities during planning and programming to avoid 4 (f) properties for those proposals indicating a potential use of 4 (f) properties.
- Continue early coordination with the PA Game Commission, PA Fish and Boat Commission, PA Department of Conservation and Natural Resources, and U.S. Fish and Wildlife Service.
- Consult with appropriate parties on issues such as important bird and mammal areas, threatened and endangered species issues, where indicated through the project development process, and especially where projects require tree removal.

- For projects where in-stream work is required, consult PA Fish and Boat Commission resources to determine if seasonal restrictions are warranted.
- Consult the PA DEP Chesapeake Bay Watershed Implementation Plan for issues that may have an effect on the WATS Long Range Transportation Plan and activities which can be advanced through the project development process, such as urban stream restoration, abandoned mine reclamation, and dirt and gravel road erosion and sediment control.
- Consider advanced mitigation opportunities, such as stream acid mine drainage restoration as a banking opportunity for stream impacts.
- Consider performance measures related to environmental resources, such as measuring storm water run-off with pollutants, measuring impacts on TMDLs, improvements to dirt and gravel roads owned at the municipal level and number of users on bike / pedestrian trails.

Due to the WATS MPO and PennDOT focus on asset management and maintenance first involving minor or no right of way acquisition regarding the vast majority of projects contained in this Long Range Plan, substantial mitigation efforts are not likely to be required. Small scale mitigative actions most likely will occur at proximate individual project locations. The LCPC is housing all of the PNDI environmental receipts for each of the Long Range Transportation projects that have undergone the linking planning and NEPA screening and PNDI search process which will be used as a starting point by the WATS MPO and project sponsors in advancing each project through the appropriate environmental reviews and coordination.

