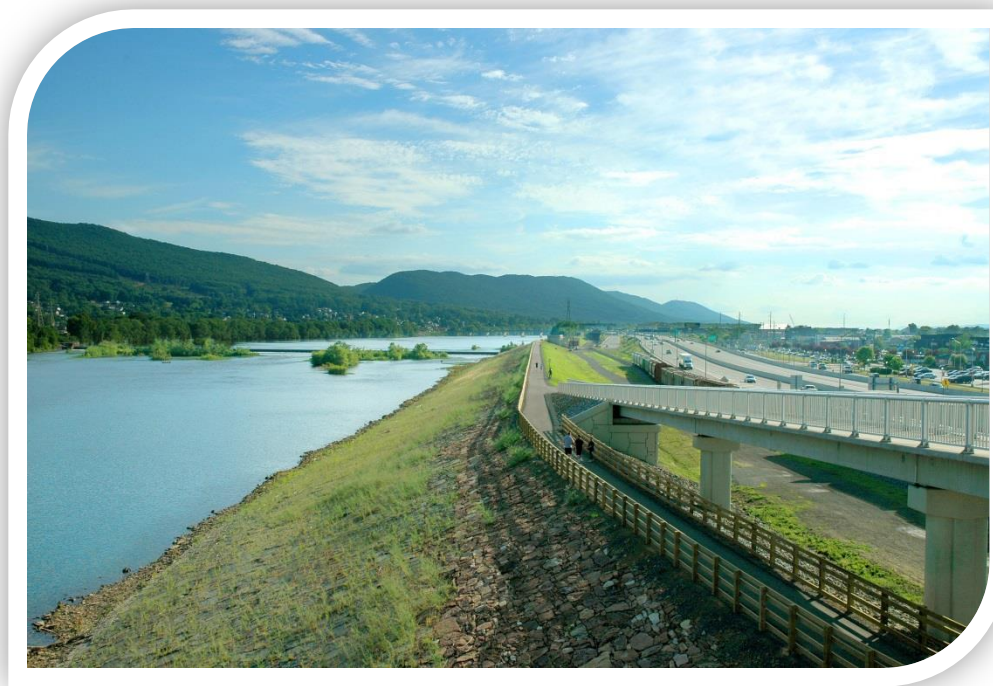


WATS LONG RANGE TRANSPORTATION PLAN UPDATE, 2018-2038

ACM Presentation
August 22, 2018



WATS Staff Presenters

Mark Murawski – Transportation Supervisor

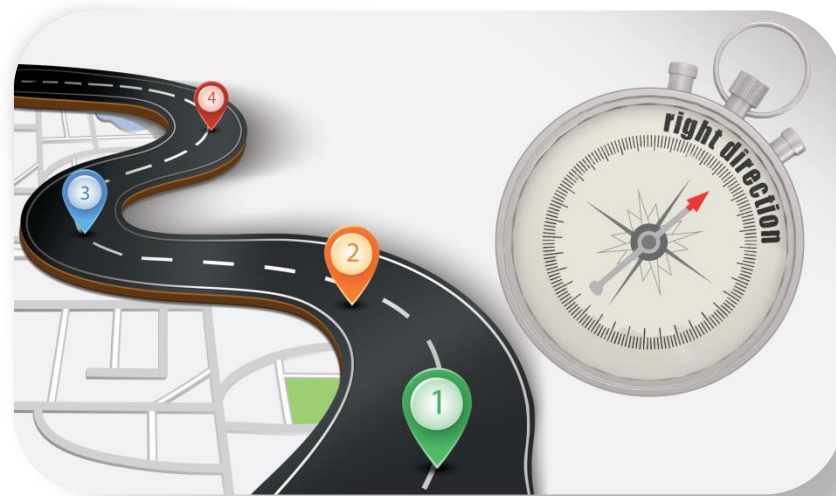
John Lavelle – Transportation Planner

Presentation Overview

- Plan Organization
- MPO Demographics
- Land Use
- Transportation Network
- Infrastructure Condition
- LRTP Project Programing
- Environmental Considerations
- Environmental Impact Mitigation

WATS Long Range Transportation Plan 2018-2038

- 20 year planning horizon
- Updated every 5 years
- Must be fiscally constrained
- Utilizes latest demographic data
- Multi-modal in scope
- Identifies potential environmental impacts through the Linking Planning & NEPA screening process
- **WATS, in partnership with Dist. 3, have taken a "fix it first" plan that is entirely focused on maintenance and safety enhancements of current infrastructure "within the existing footprint"**



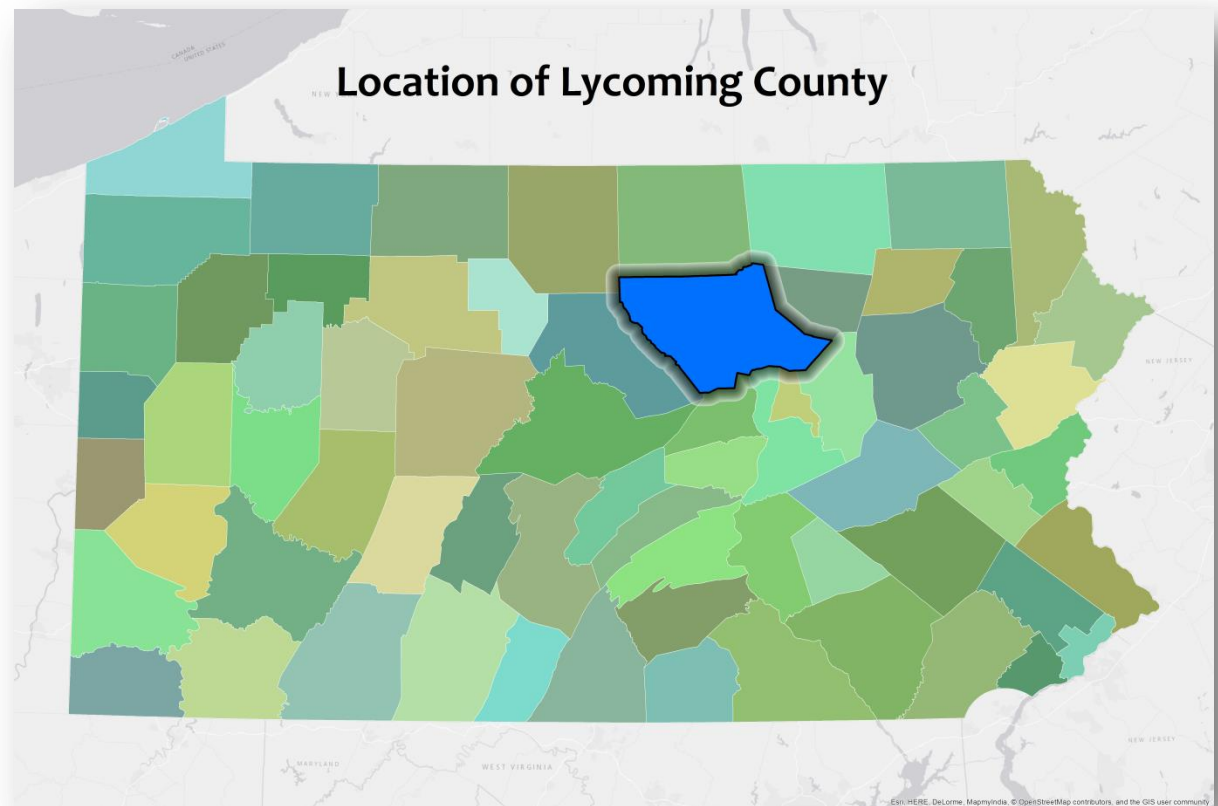
WATS at a glance

MPO comprised of:

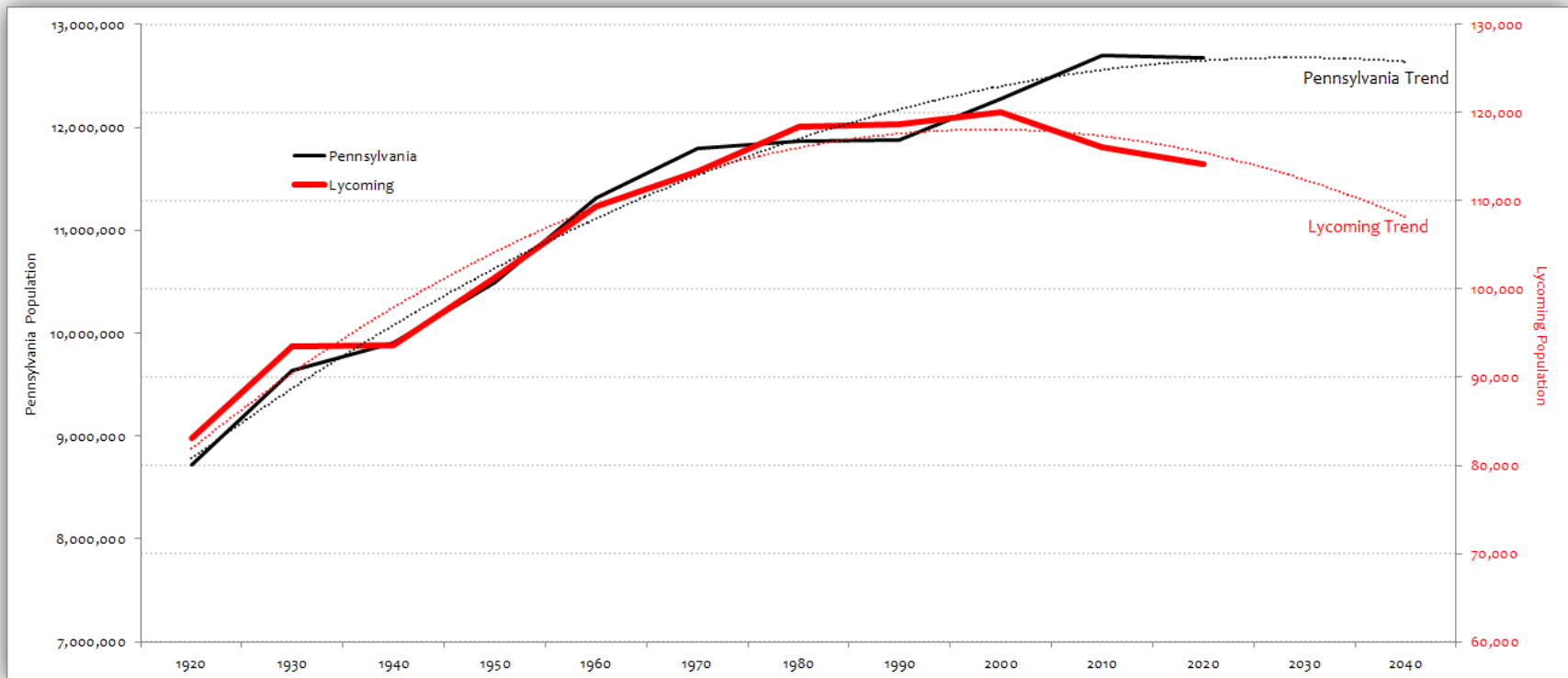
- 2 Committees
 - Technical Committee
 - Coordinating Committee
- 2 Advisory Committees
 - Transit
 - Bicycle & Ped
- Jurisdiction is the entirety of Lycoming Co.
 - Comprised of 52 municipalities
 - Geographically, largest Co. in PA
 - Pop. 116,111

Administrative Duties:

- Staff Lycoming Co. Planning Dept. & acts as the WATS Secretary



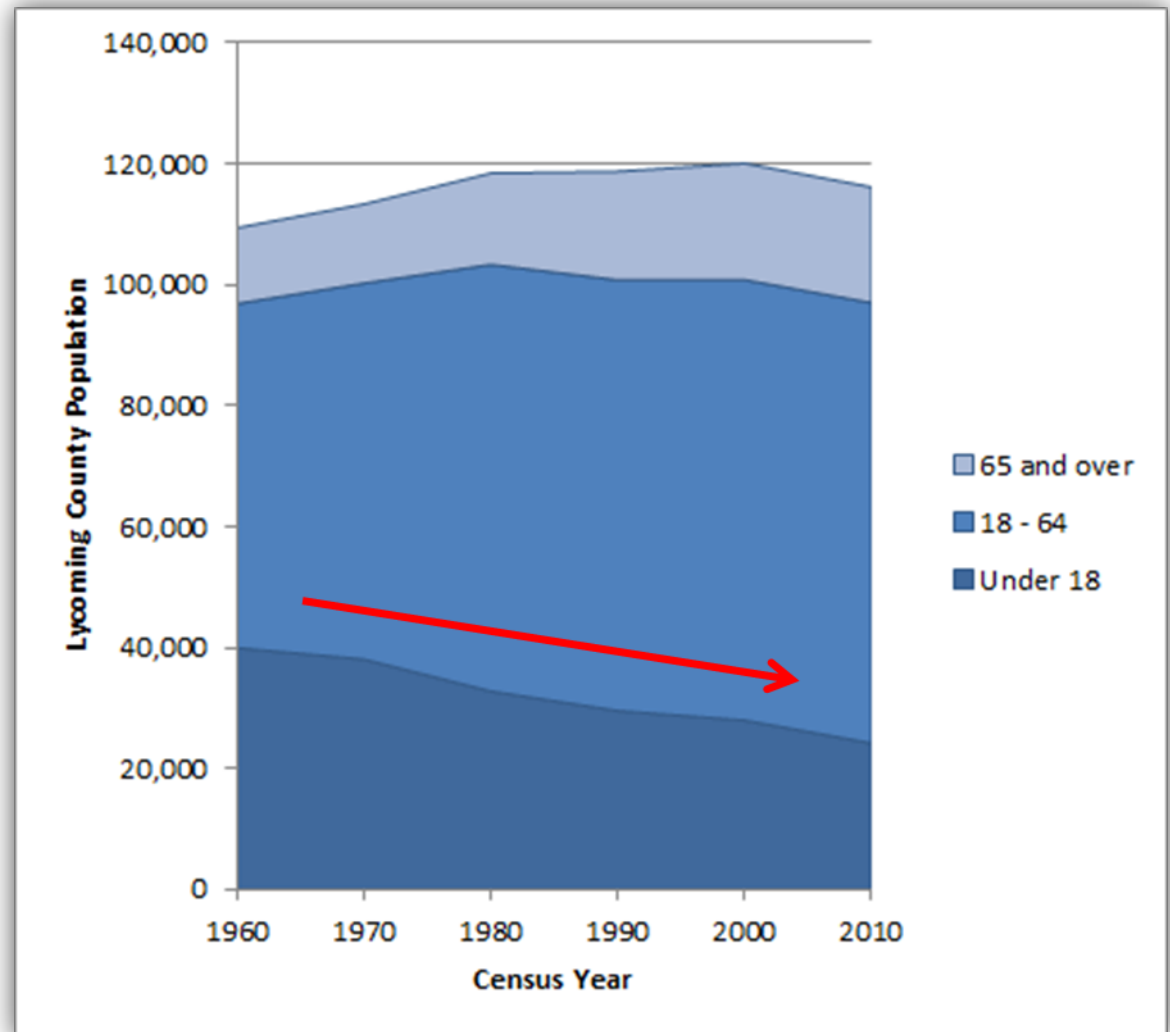
100 Year Population Trend



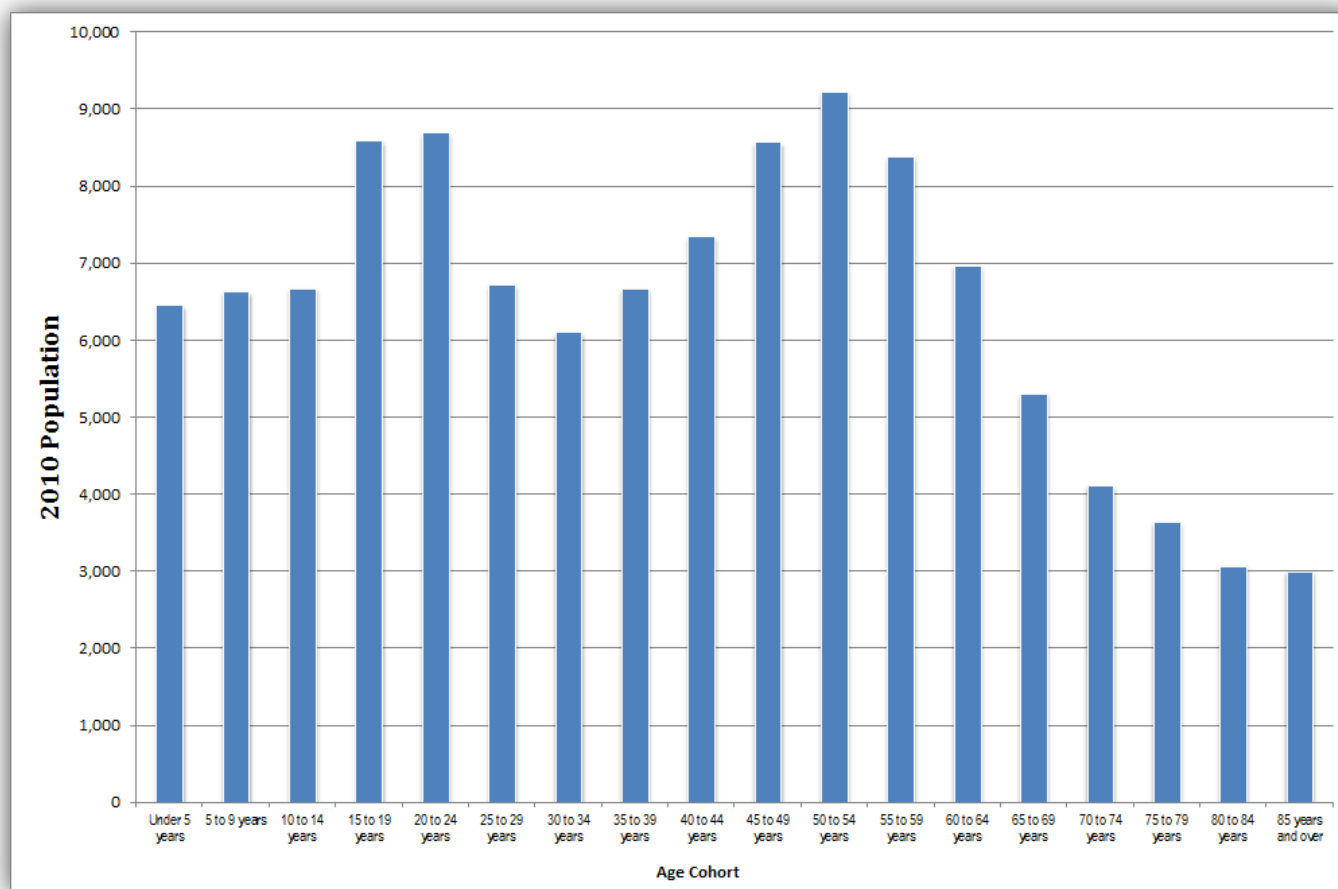
Analysis suggests that Lycoming County will continue to decrease to a size similar to that of the late 1960's by the end of the 20 planning horizon

Age Cohorts

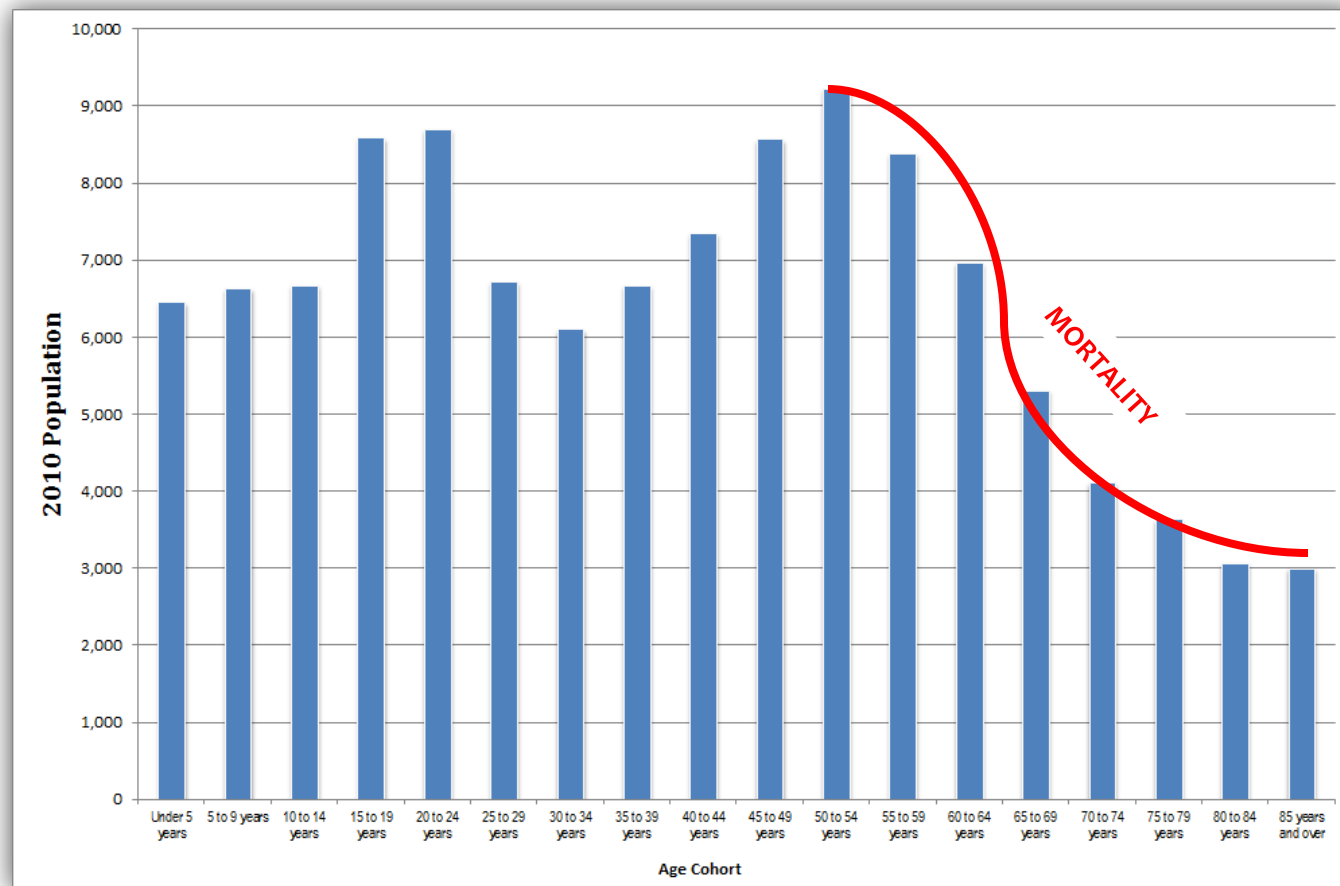
- Largest age group 18-64
- Pop. Under 18 is decreasing
- Given cohort composition, Lycoming Co. pop. will continue to decrease unless:
 - Avg. child per family increases: <1 per 2010 census; or,
 - Influx of new population increases



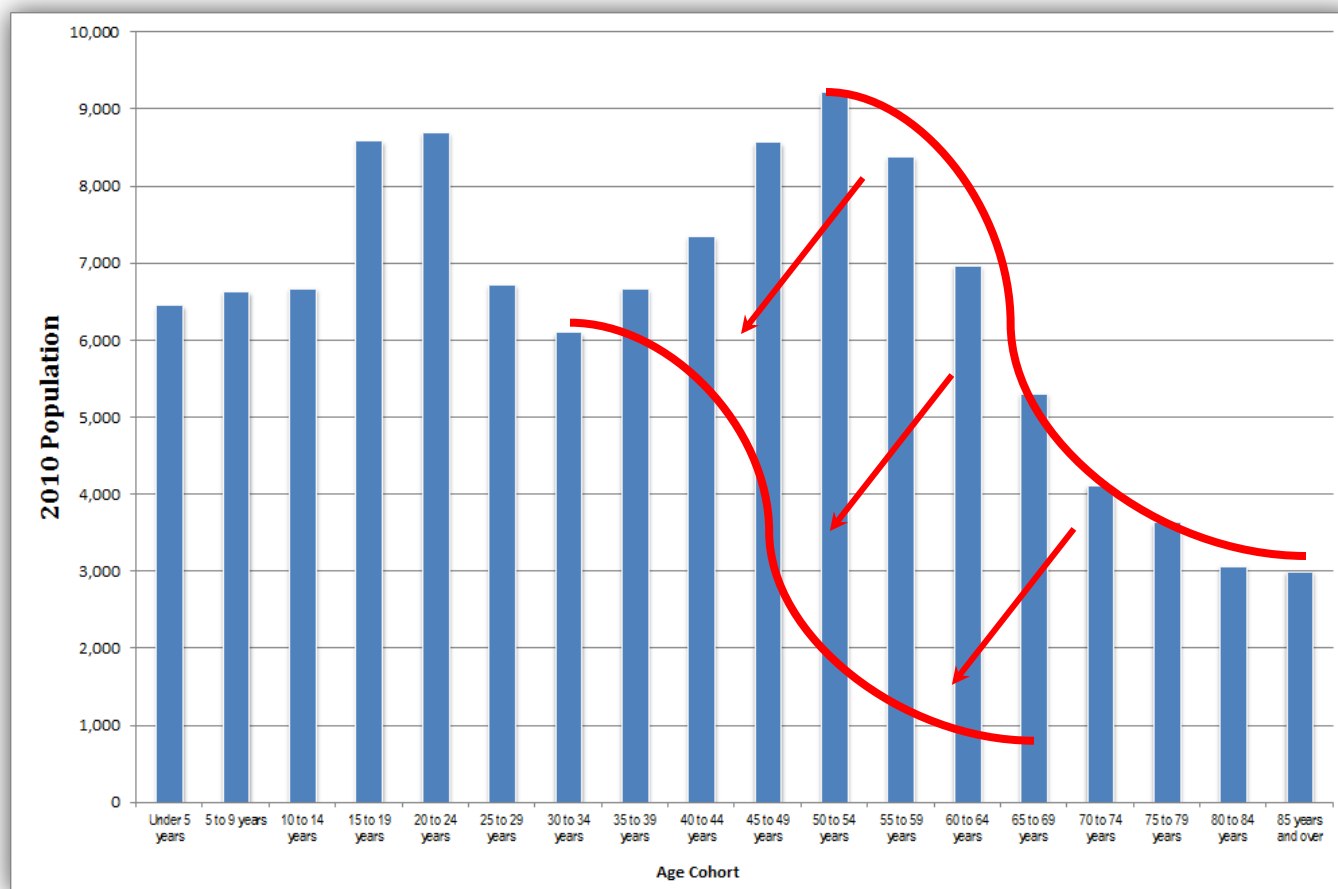
Demographics



Demographics



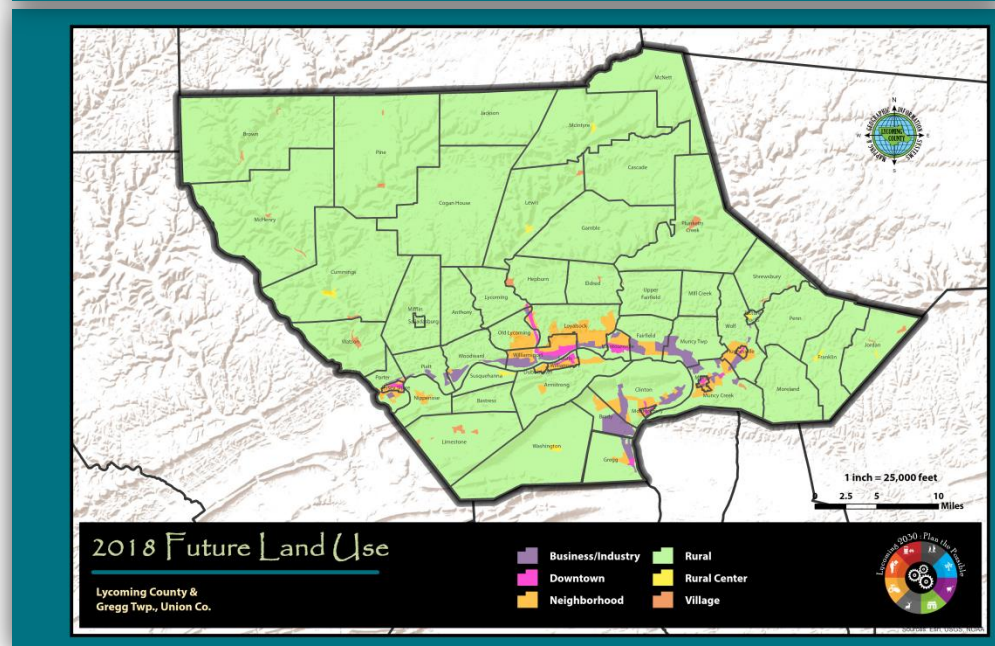
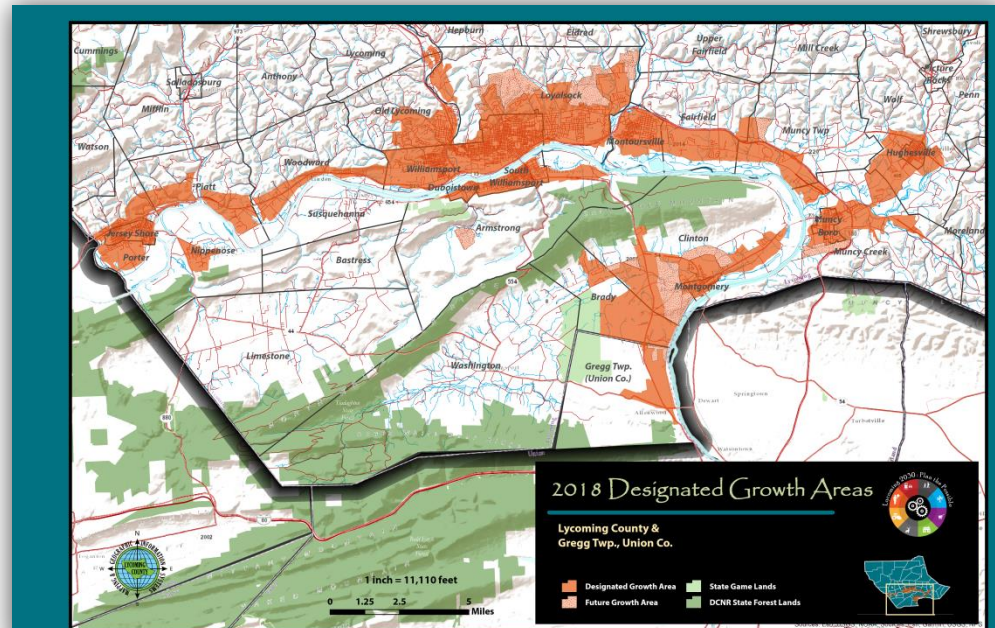
Demographics



Land Use

An update to the Lycoming County Comprehensive plan was adopted in 2018

- This maps reflect the current & desired development pattern within the County
- Key factor when determining if an area's classification is the **presence** of infrastructure



Transportation Network

Mode Highlights

Loyalsock Creek Railroad Bridge



Trade & Transit Center 2



CNG Bus Fleet Conversion



Williamsport Regional
New Airport Terminal

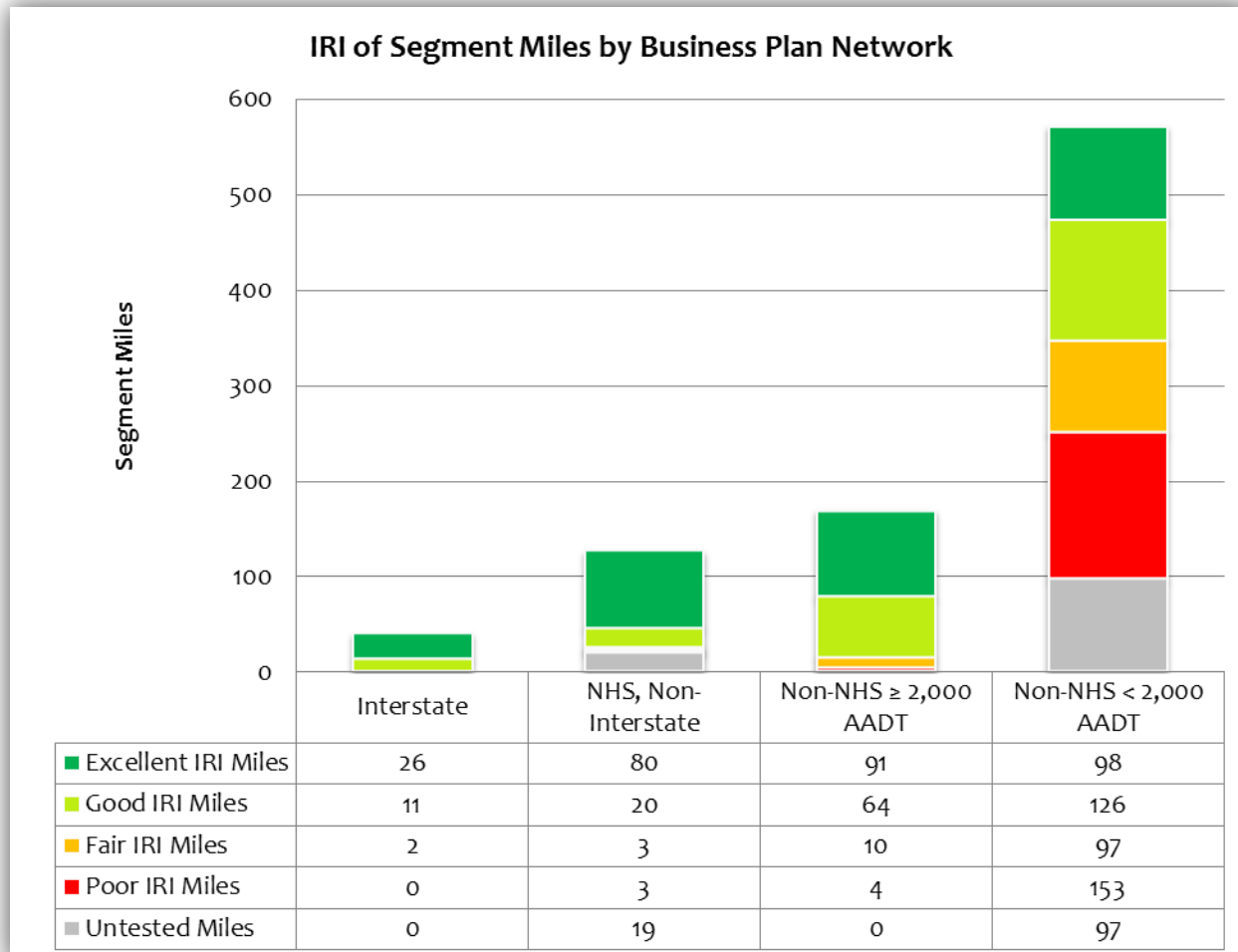


Infrastructure Condition

- Roads:
 - State-owned highway pavements within Lycoming County are in much better overall condition than statewide pavements on all business plan networks in terms of both OPI and IRI
- Bridges:
 - Lycoming County is significantly better than the state-wide averages for overall condition of state-owned bridges

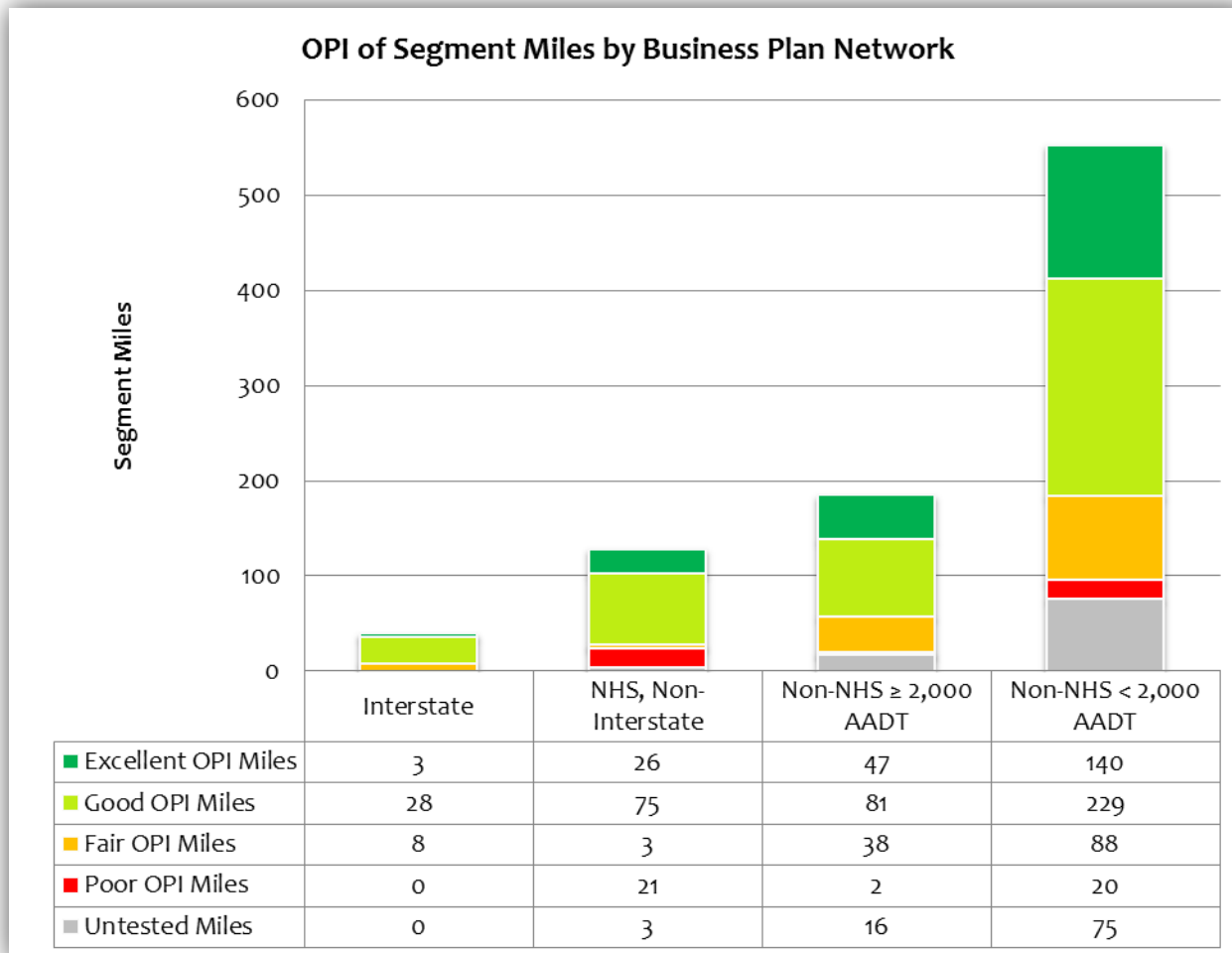
Multimodal System Inventory

- Highway System - Pavement



Multimodal System Inventory

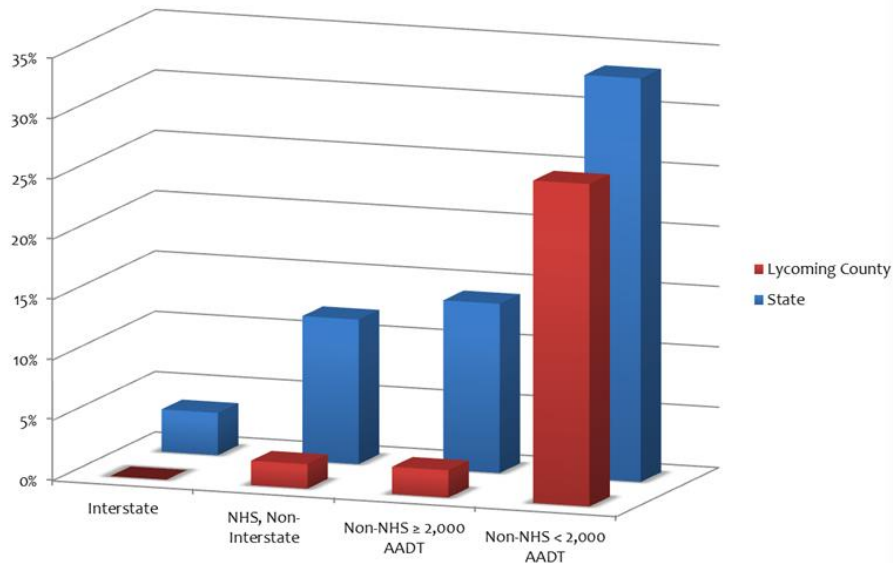
- Highway System - Pavement



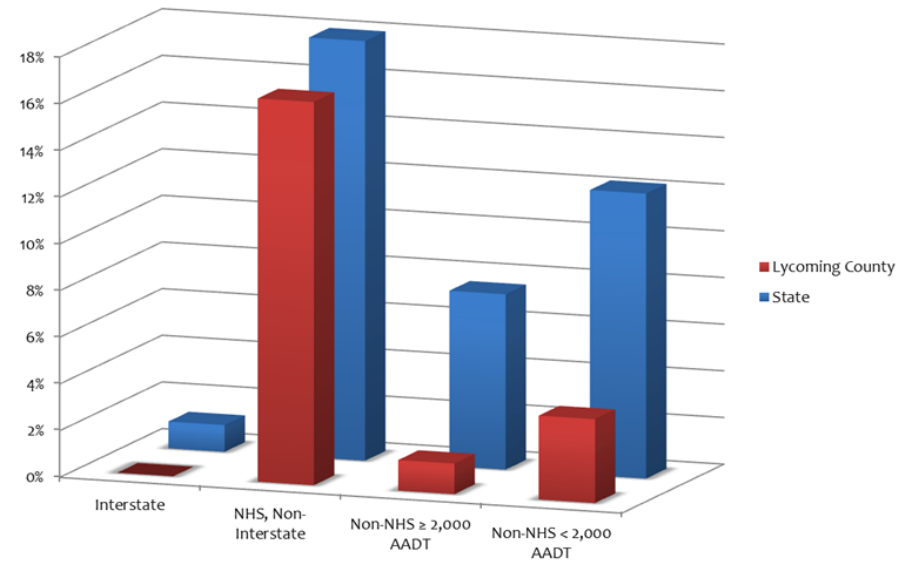
Multimodal System Inventory

- Highway System - Pavement

Percent of Segment Miles with Poor IRI by Business Plan Network

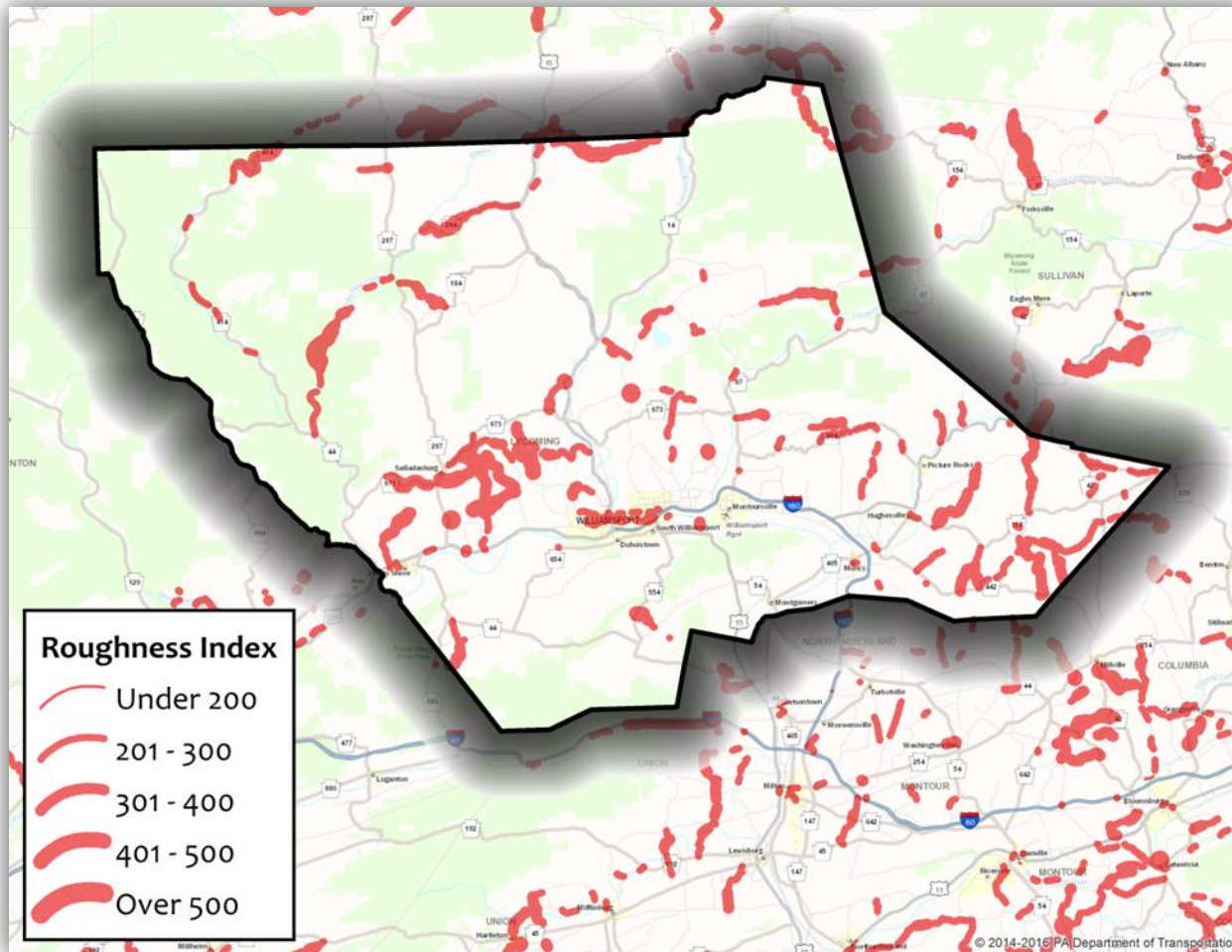


Percent of Segment Miles with Poor OPI by Business Plan Network



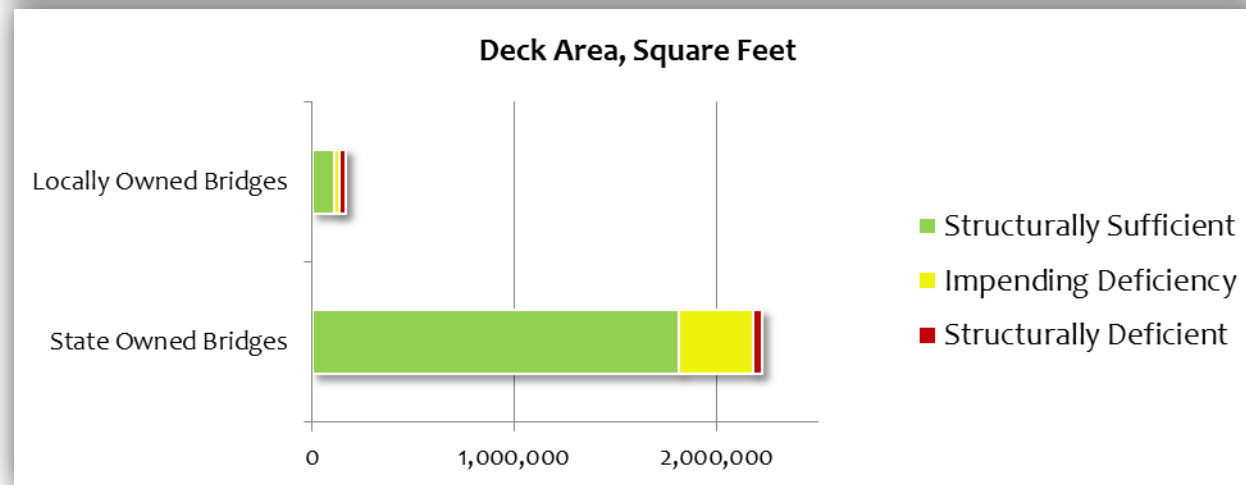
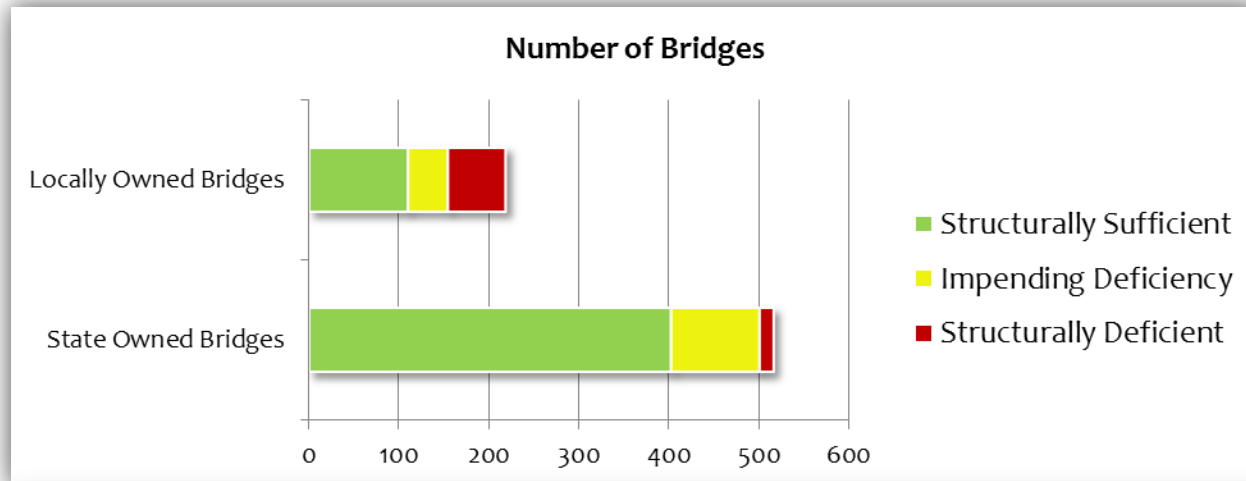
Multimodal System Inventory

- Highway System - Pavement



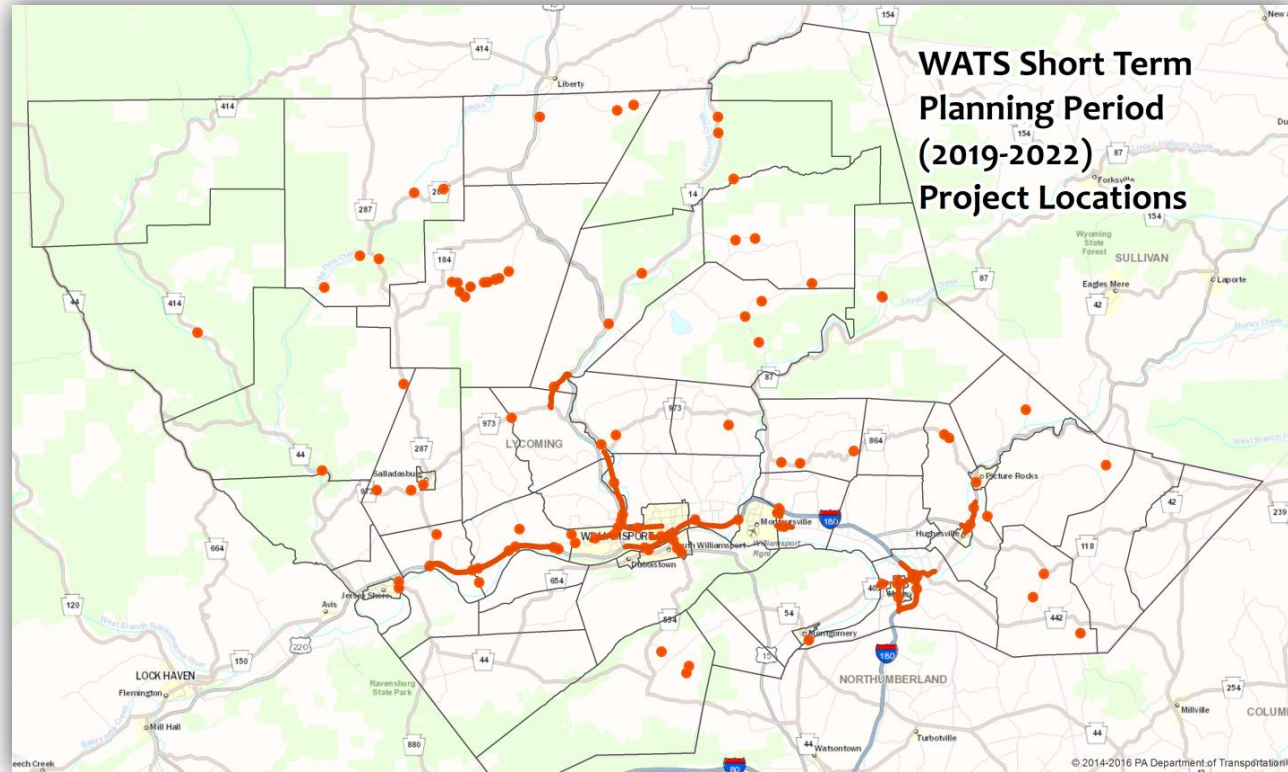
Multimodal System Inventory

- Bridges



TIP Short Term: (Years 1-4) Highway & Bridge

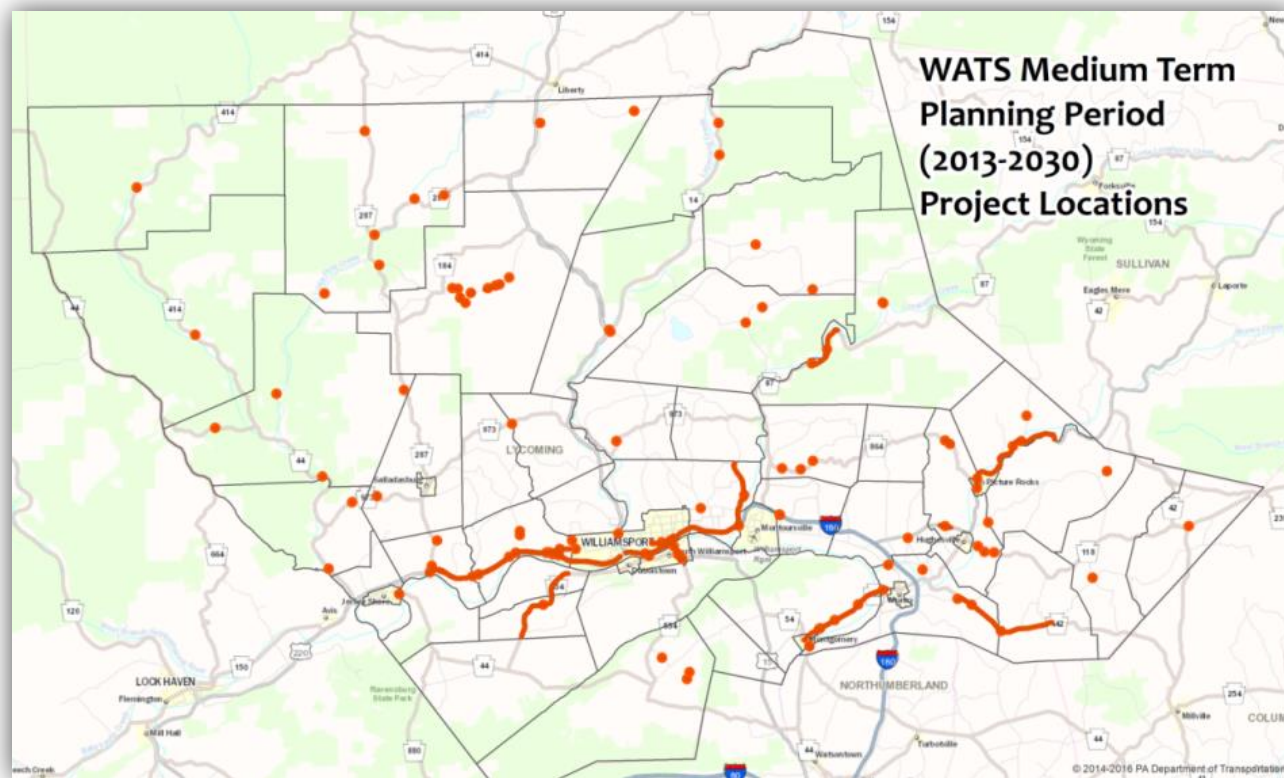
- Highest priority & projects currently underway
- Contains 71 projects
- 26 highway related projects
- 45 Bridge improvement projects
- Has already been deemed fiscally sound



Federal Fiscal Year	NHPP	STP	State Highway (Capital)	State Bridge	Off System Bridges	HSIP	TOTAL
2019	\$3,111,000	\$2,305,000	\$4,648,000	\$2,101,000	\$827,000	\$1,068,000	\$14,060,000
2020	\$3,220,000	\$2,347,000	\$5,128,000	\$2,101,000	\$827,000	\$1,090,000	\$14,713,000
2021	\$3,220,000	\$2,346,000	\$5,457,000	\$2,100,000	\$827,000	\$1,090,000	\$15,040,000
2022	\$3,219,000	\$2,345,000	\$5,995,000	\$2,100,000	\$827,000	\$1,090,000	\$15,576,000
TOTAL	\$12,770,000	\$9,343,000	\$21,228,000	\$8,402,000	\$3,308,000	\$4,338,000	\$59,389,000

WATS Medium Term

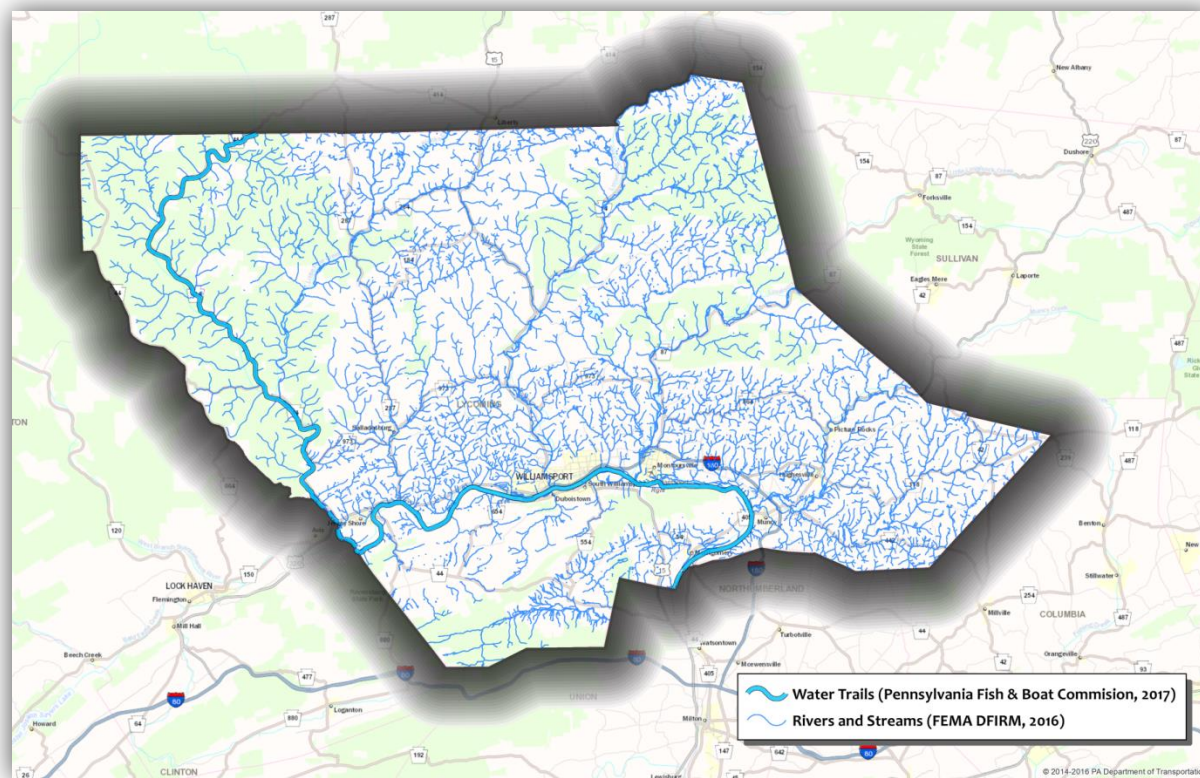
- Includes carry over projects from FFY & items not currently programmed
- Line item reserves are included to fund future asset management and safety projects.
- New projects selected based on PennDOT priorities, PM's, and LRTP guidance
- The WATS medium term projects consist of \$42,029,248 in bridge projects and \$71,454,500 in highway and safety projects.



	Federal Fiscal Year	NHPP	STP	State Highway (Capital)	State Bridge	Off System Bridges	HSIP	TOTAL
Second Four Years (2023 - 2026)	2023	\$3,219,000	\$2,345,000	\$5,994,000	\$2,099,000	\$827,000	\$1,090,000	\$15,575,000
	2024	\$3,219,000	\$2,345,000	\$5,993,000	\$2,098,000	\$827,000	\$1,090,000	\$15,574,000
	2025	\$3,219,000	\$2,345,000	\$5,993,000	\$2,098,000	\$827,000	\$1,090,000	\$15,573,000
	2026	\$3,219,000	\$2,345,000	\$5,992,000	\$2,097,000	\$827,000	\$1,090,000	\$15,571,000
	TOTAL	\$12,876,000	\$9,380,000	\$23,972,000	\$8,392,000	\$3,308,000	\$4,360,000	\$62,293,000
Third Four Years (2027 - 2030)	2027	\$3,219,000	\$2,345,000	\$5,992,000	\$2,096,000	\$827,000	\$1,090,000	\$15,570,000
	2028	\$3,219,000	\$2,345,000	\$5,991,000	\$2,096,000	\$827,000	\$1,090,000	\$15,568,000
	2029	\$3,219,000	\$2,345,000	\$5,990,000	\$2,095,000	\$827,000	\$1,090,000	\$15,568,000
	2030	\$3,219,000	\$2,345,000	\$5,990,000	\$2,094,000	\$827,000	\$1,090,000	\$15,566,000
	TOTAL	\$12,876,000	\$9,380,000	\$23,963,000	\$8,381,000	\$3,308,000	\$4,360,000	\$62,272,000
GRAND TOTAL		\$25,752,000	\$18,760,000	\$47,935,000	\$16,773,000	\$6,616,000	\$8,720,000	\$124,565,000

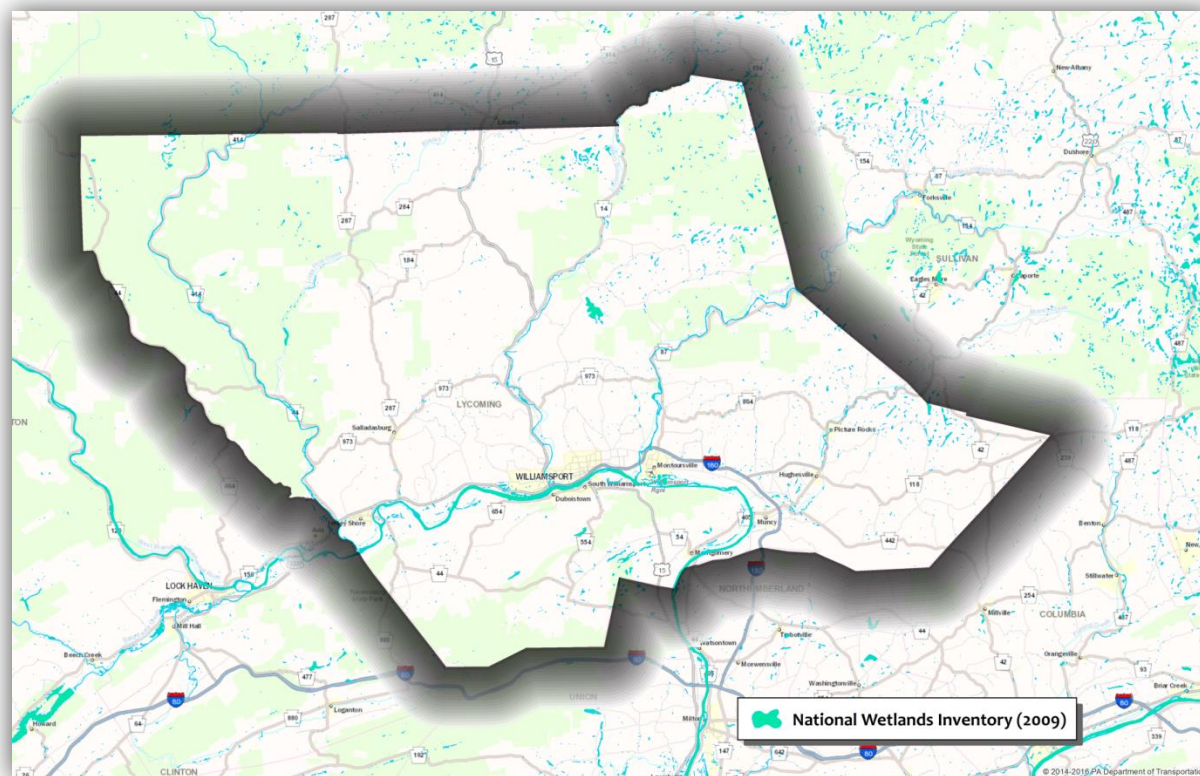
Rivers & Streams

- Entirely within the Susquehanna River Basin
- Appx. 2,200 miles of stream
- 5 Major Tributaries:
 - Loyalsock Creek
 - Lycoming Creek
 - Larry's Creek
 - Pine Creek
 - Muncy Creek
- Pine Creek and the Susquehanna River are designated Water Trails



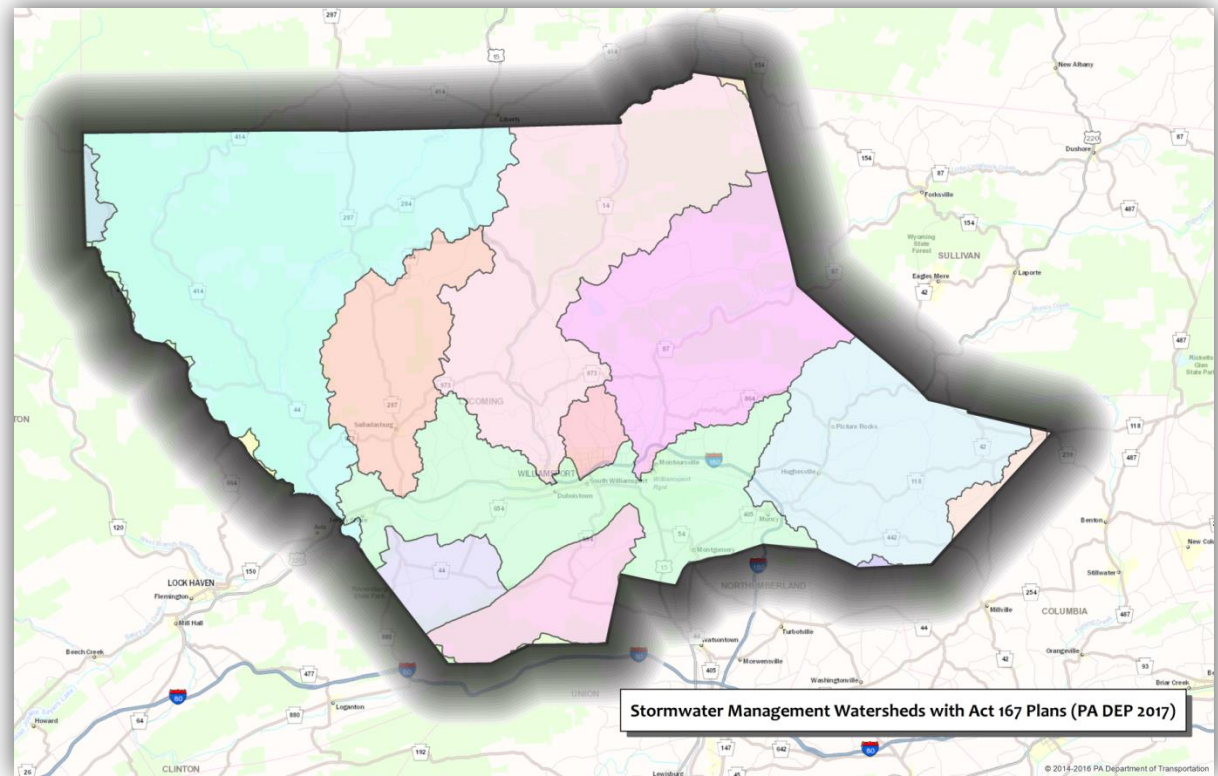
Wetlands

- 4,645 acres of wetlands(.6% of total county acreage)
- The MPO understands that the National Wetlands Inventory maps are general indicators
- Site specific determinations should be conducted as part of the transportation project development process
- There are 12,613 acres of hydric soils in the county



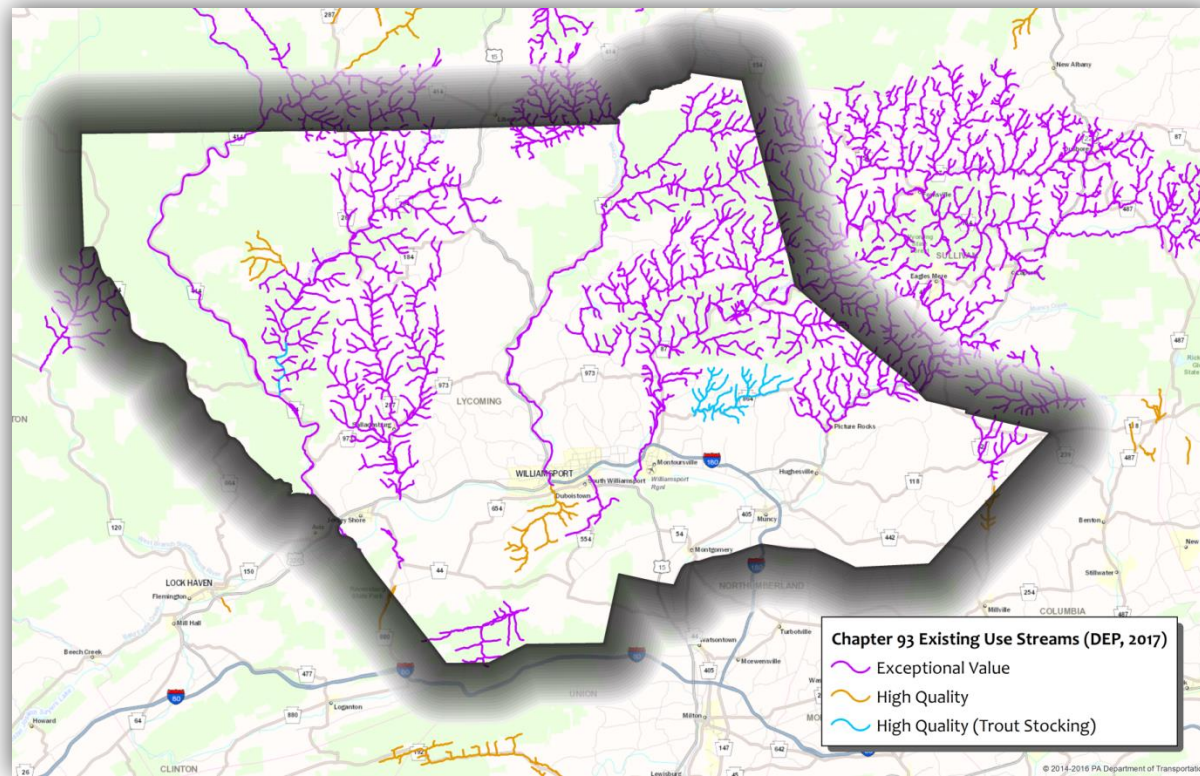
Stormwater Management

- County-wide Act 167 Stormwater Management Plan was adopted in 2011
- All 52 municipalities have a form of Stormwater regulations
 - Either in a stand alone ordinance or the SLDO



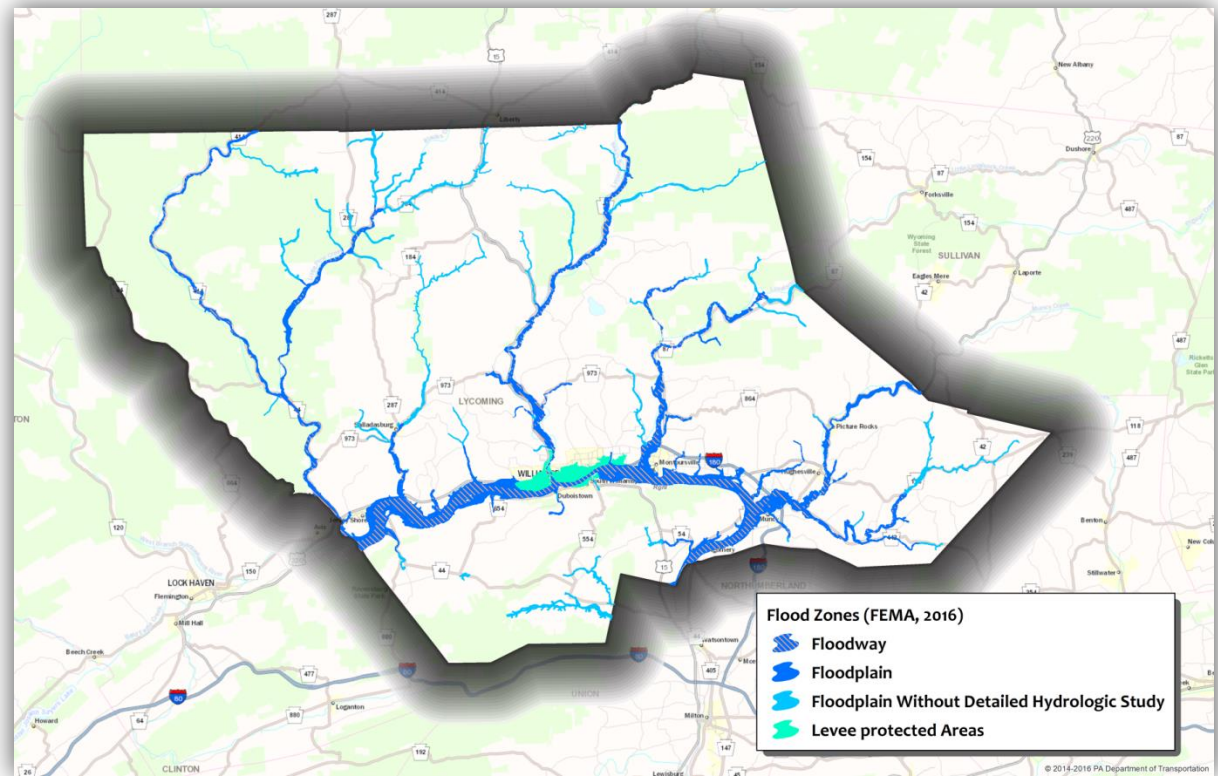
High Quality / Exceptional Value Watersheds

- 193 high quality / exceptional value streams (1,240 miles)
- Excellent freshwater fisheries, which supports both warm & cold water species:
 - Native brook trout
 - large and smallmouth bass
 - muskies
- > 117 miles of wild trout streams
- > 154 miles of stocked trout streams throughout the county.



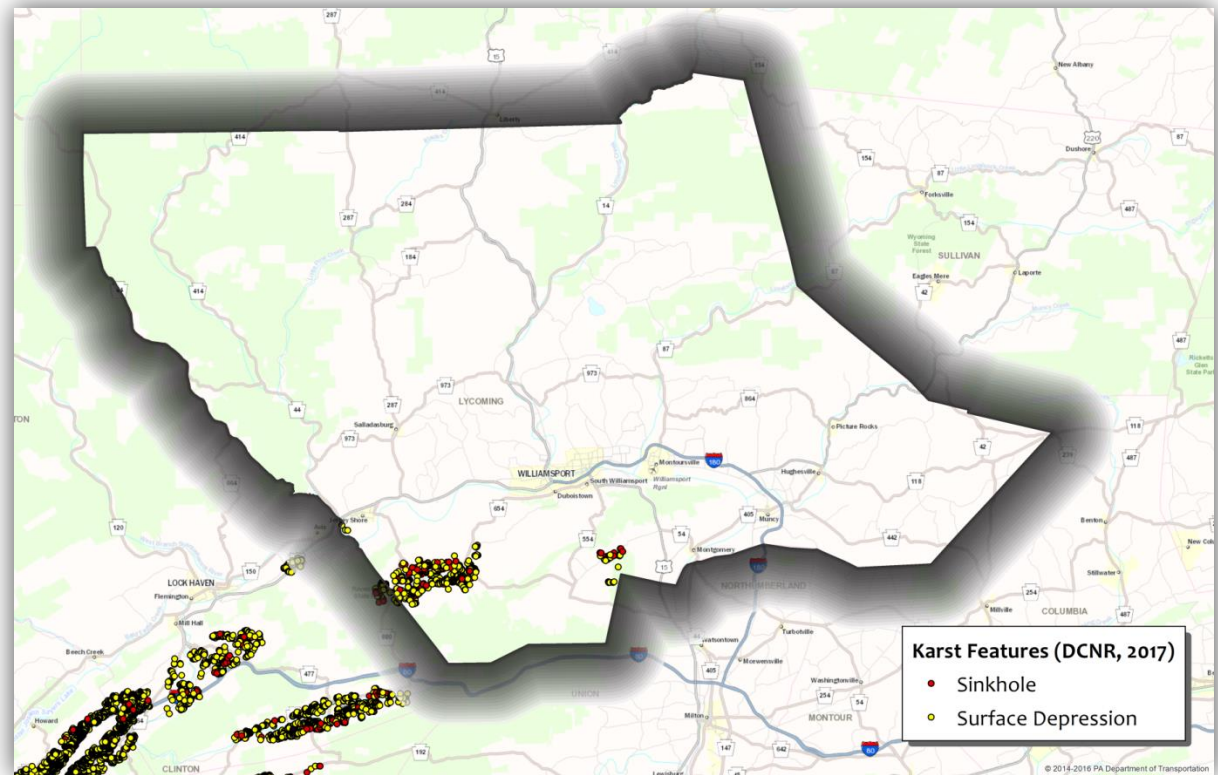
Floodplains

- Given the amount of stream miles throughout the County – regulatory floodplain is a constant concern
- Accurate delineation and floodplain management practices are imperative to reduce hazards
- Lycoming County is active in regulating floodplain development & pursues funding to mitigate flood prone properties



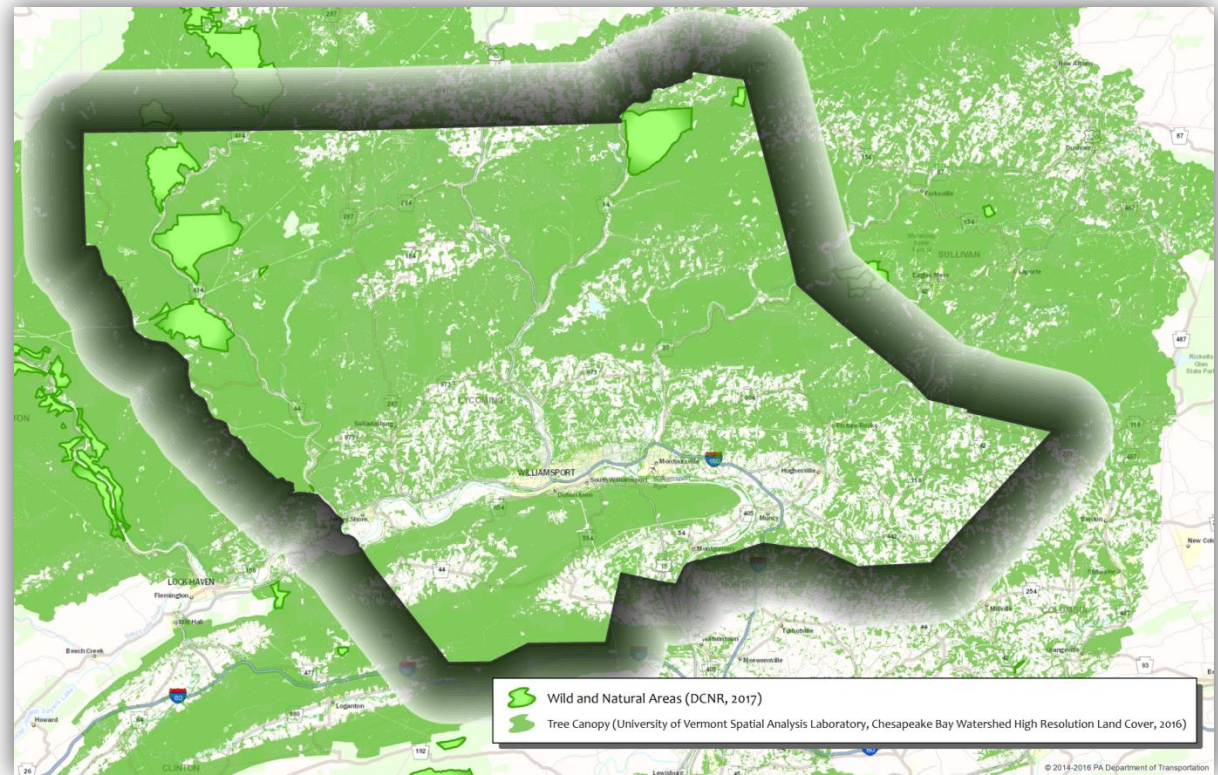
Karst Geology

- The County's southern portion contains Karst topography which is prone to the formation of caverns and sinkholes
- These areas are considered to be both hazardous, and beneficial because they provide unique habitats, mineral sources
- A major sinkhole (Maple Hill Sinks) periodically causes severe and prolonged flooding along SR 2001 (Elimsport Rd)



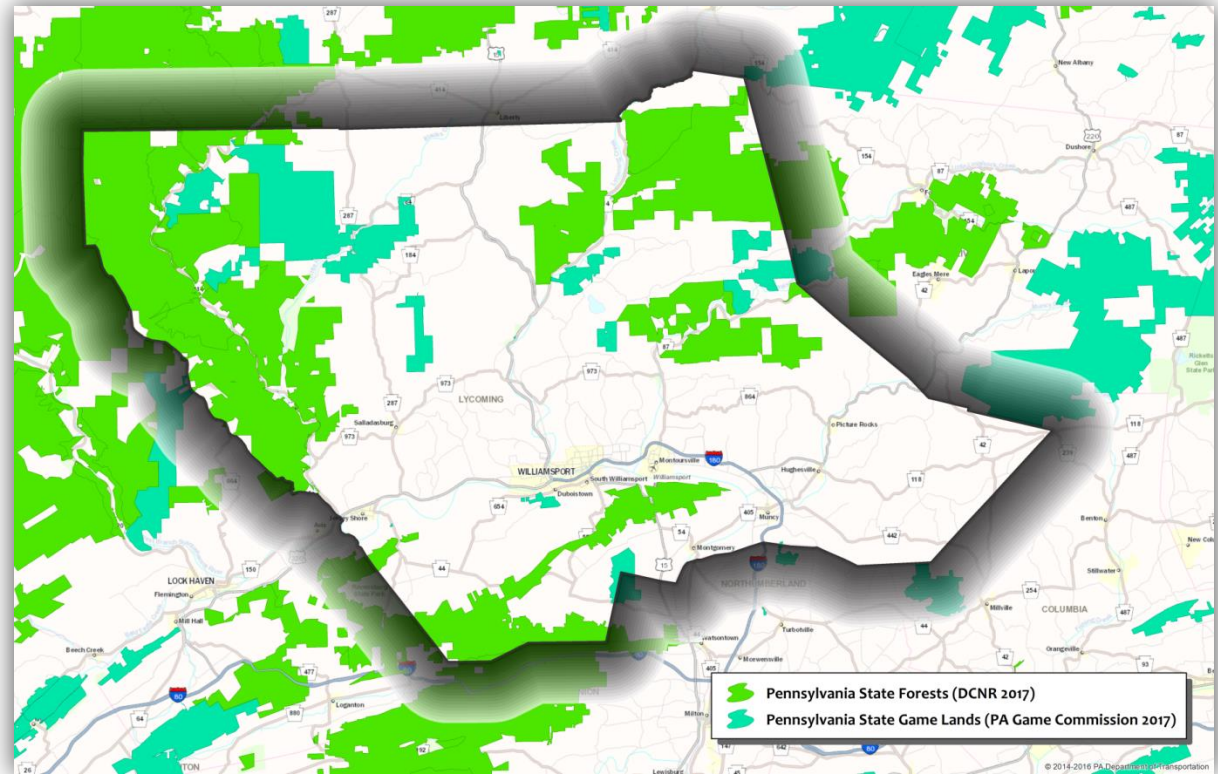
Forests

- >70% forested
- >60% of forest cover is classified as oak-hickory & associated varieties
 - Most common forest type in PA
- Serves many purposes including:
 - Watershed protection,
 - Wildlife habitat,
 - Outdoor rec, and
 - Timber harvesting
- Lycoming Co. supports sound forest mgmt. & encourages development of forest stewardship plans



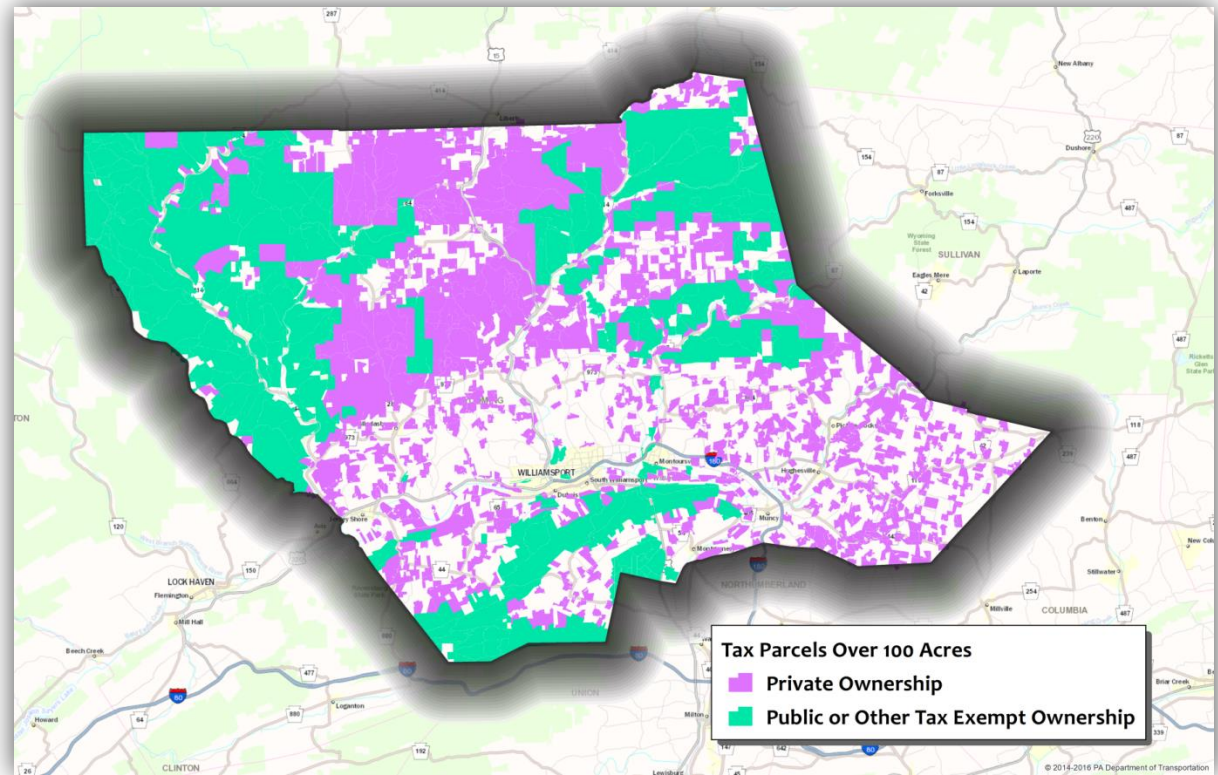
State & Federal Land

- There are extensive public land holdings in Lycoming County
 - > 30% of the total land area
- A majority of the mountainous area is State Forest or State Game Land
 - Tiadaghton State Forest is the largest in the county
- While primarily used for outdoor rec., there are numerous natural gas operations within these lands



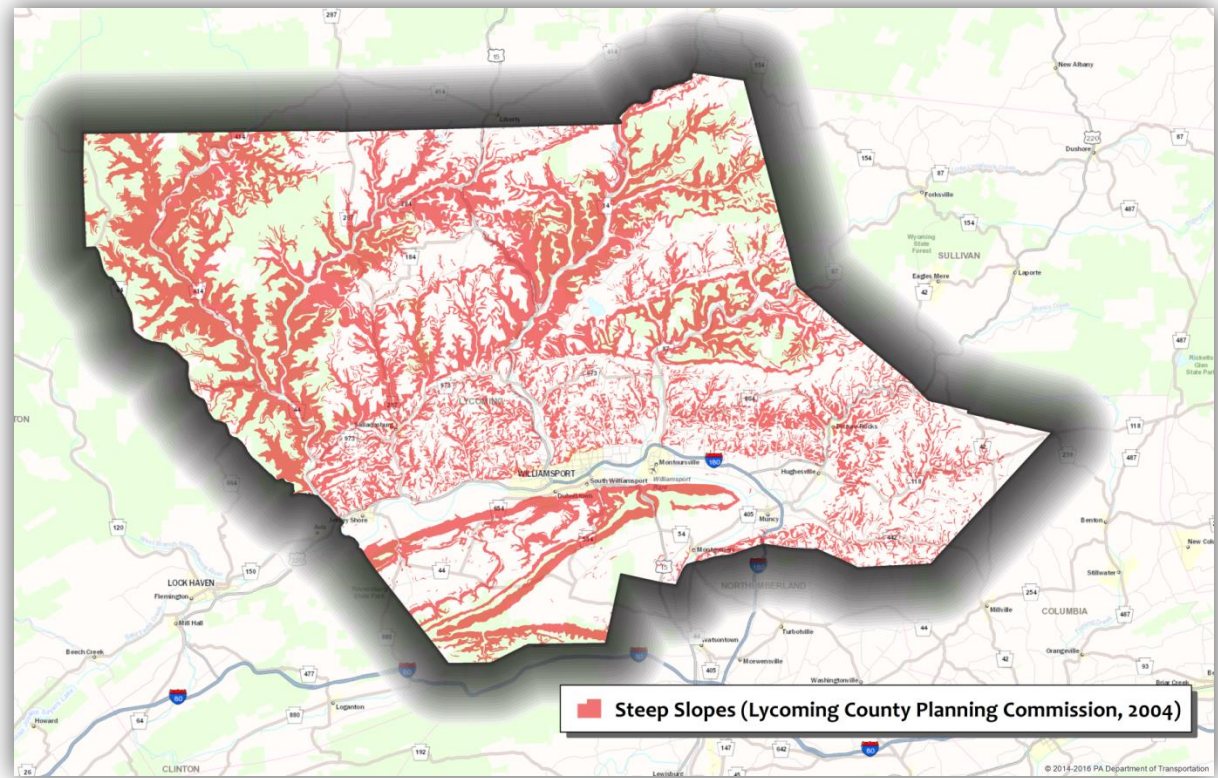
Large Parcel Landowners

- Land parcels of 100 or more acres comprise 66% of the total land area in the County
 - Majority of these land holders are Hunting & Fishing Clubs, Farms & the Commonwealth
- With the exception of farms – these parcels have remained largely intact and are not subjected to intense development pressure



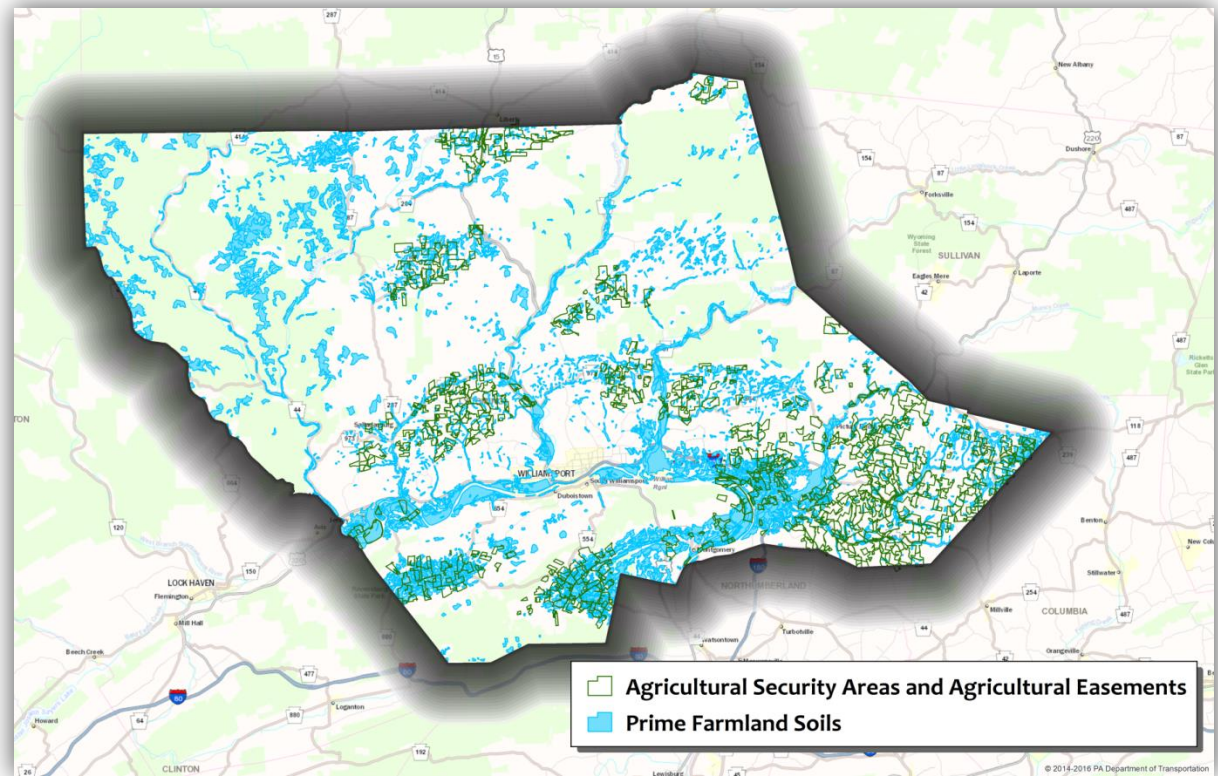
Steep Slopes

- Steep slopes cover about 50% of the County
- Disturbance of these areas can contribute sediment to surface waters and increase flooding
- Land use ordinances attempt to mitigate this issue through limiting steep slope development, stormwater mgmt. & road design
- Conservation Dist. also regulates E&S controls per NPDES guidance



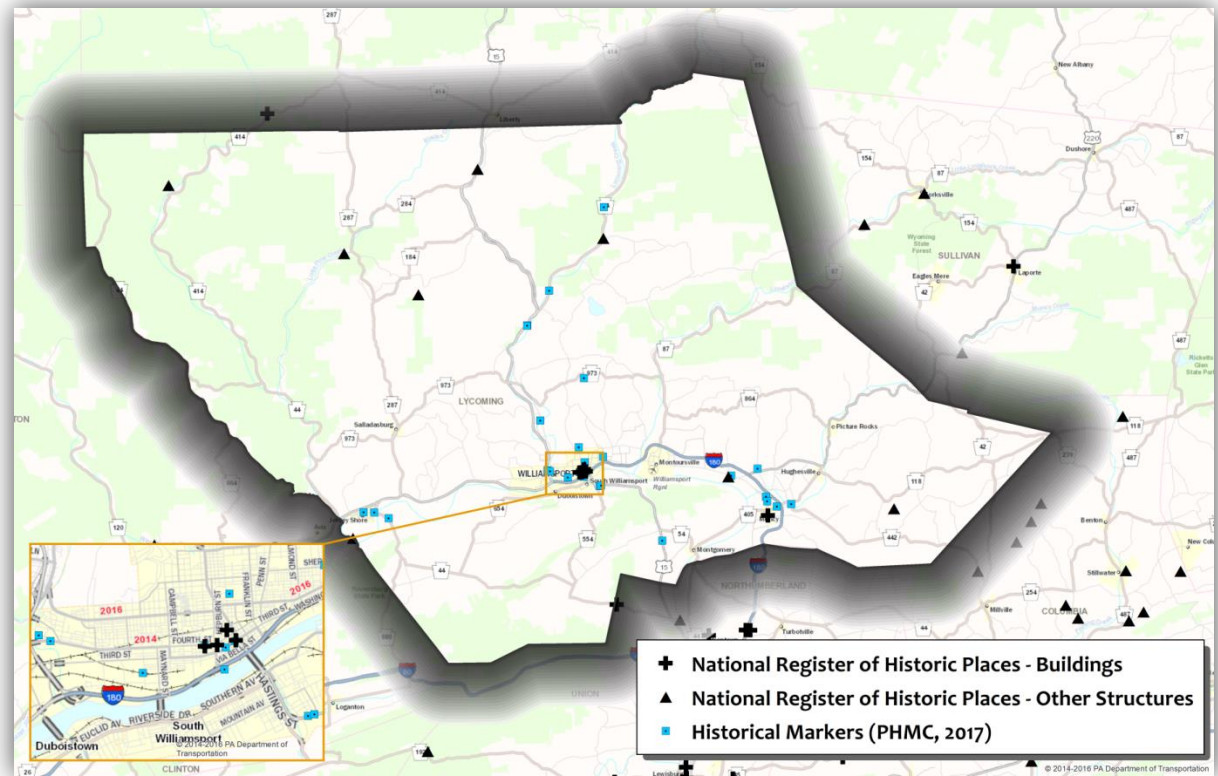
Agricultural Soils & Preservation Efforts

- The County contains 106,000 ac. of Prime Farmland Soils
 - 13% of total Co. land area
- There are 110,000 ac. classified as Soils of Statewide Importance
 - 14% of total Co. land area
- There are 368,590 ac. currently enrolled the Clean and Green Program
- The County actively tries to identify farmland that should be preserved for agricultural use



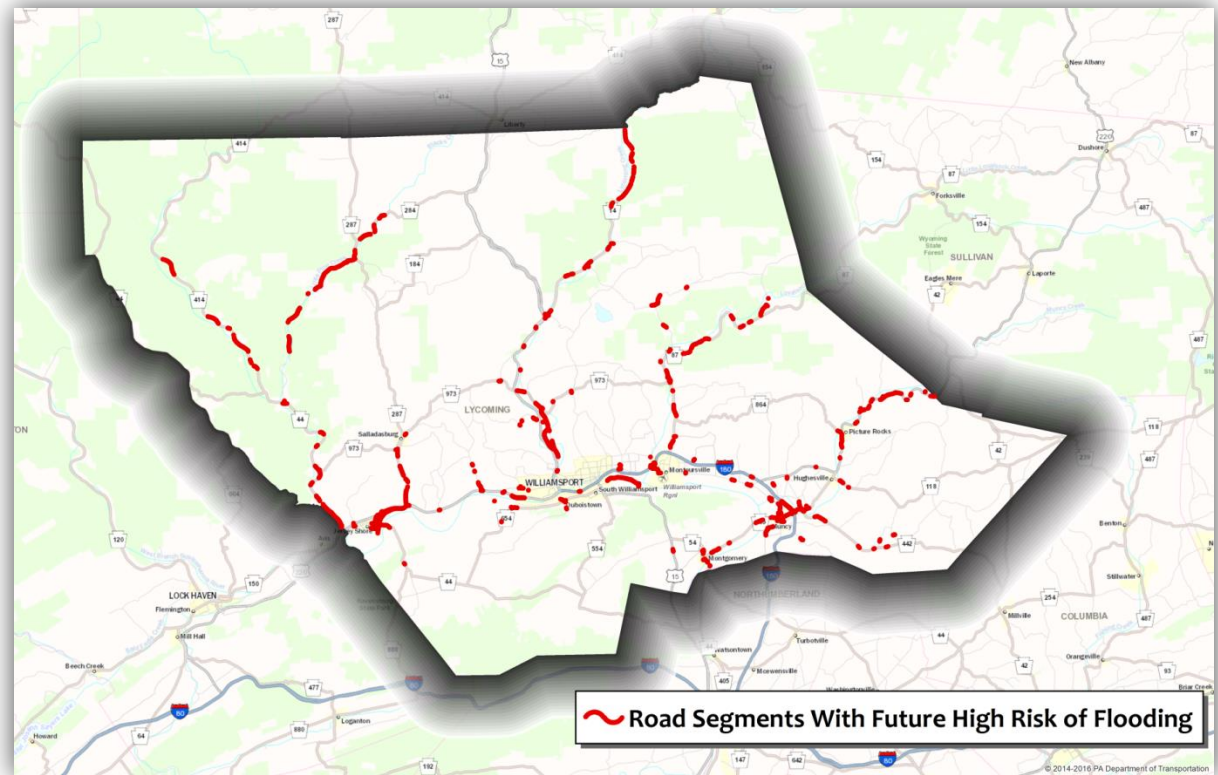
Historic, Archaeological, & Cultural Resources

- 36 properties throughout the County that are either eligible or listed on the National Register of Historic Places
 - 8 of these registered places are architecturally significant bridges
- Muncy Borough and Williamsport have the County's only regulated historic districts
- Notable historic sites include:
 - Ault Site (Native American Village)
 - Original Little League Field



Flood Vulnerability

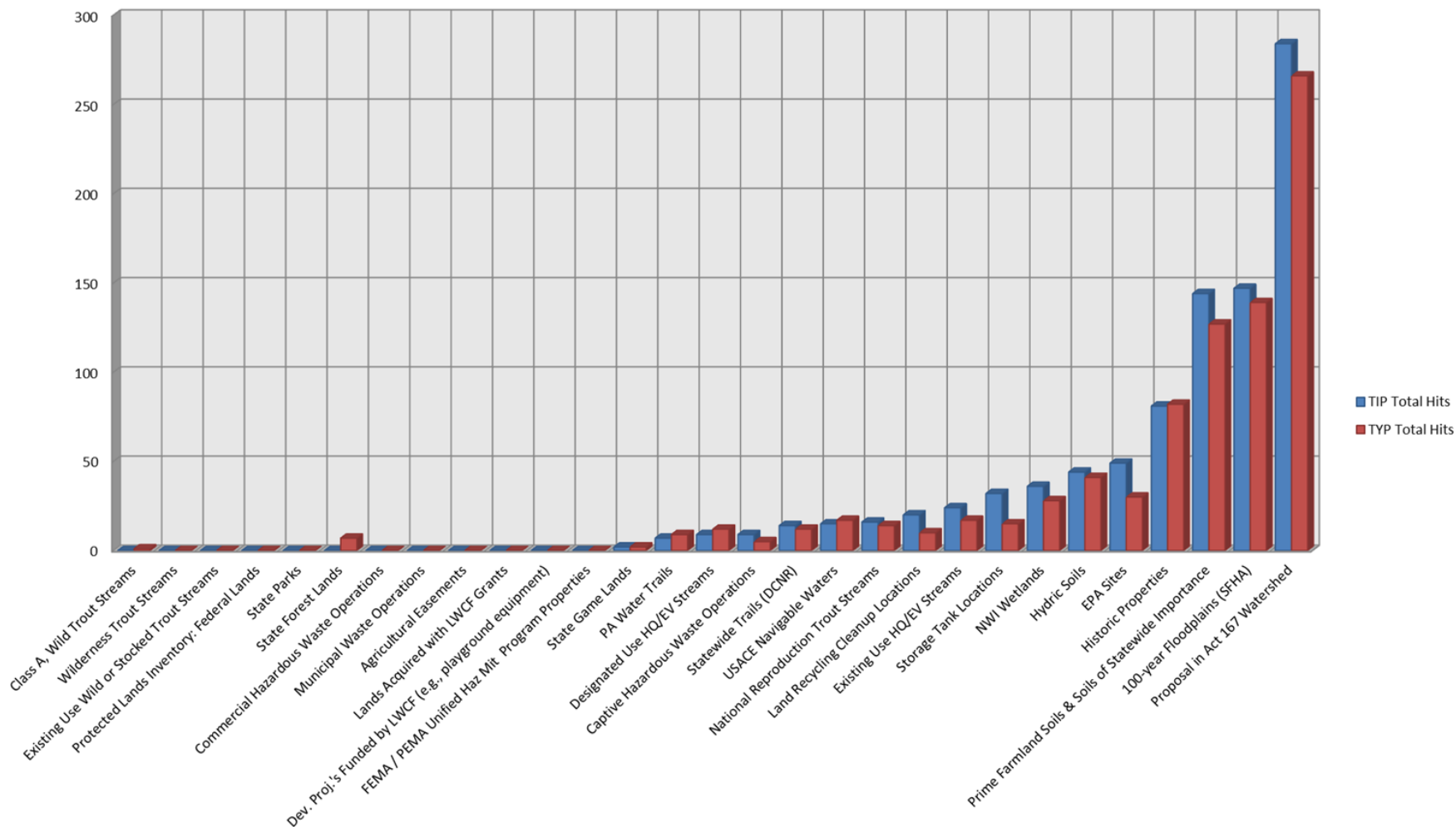
- The County's HMP details flooding as the #1 natural hazard within Lycoming Co.
 - T.S. Lee caused nearly \$50MM in public damage
- The WATS MPO has made targeted improvements to evacuation and emergency response highway routes
- New bridges are designed to improve hydraulic waterway capacity, where appropriate



Environmental Impact Analysis

Performed with PennDOT Guidance

Environmental Impact Analysis

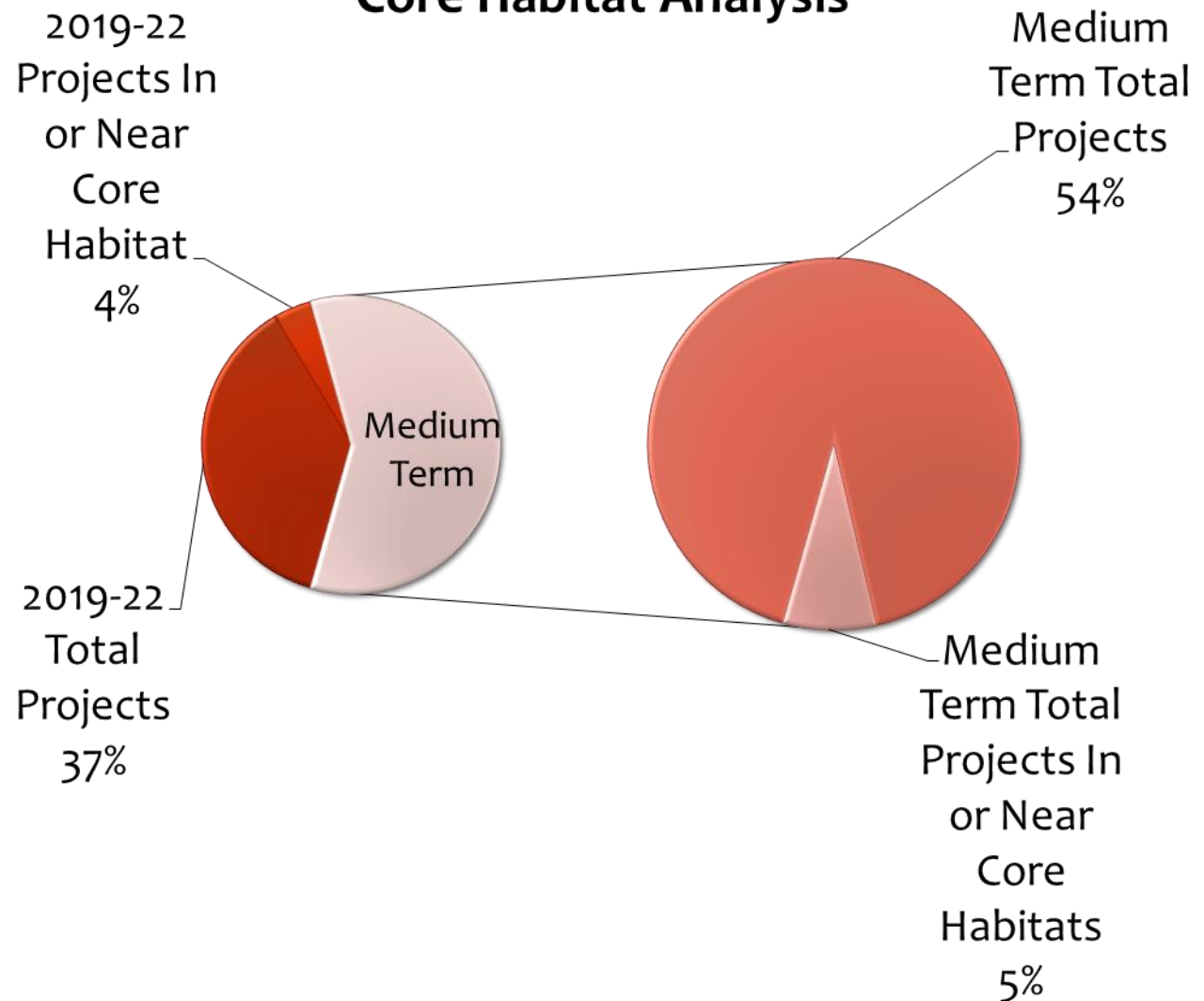


Threatened and Endangered Species

While we **DO** have T&E species within Lycoming County, it is **not typical** to encounter a situation where PennDOT Dist. 3-0 has to mitigate for impact of T&E species.

This is due to the nature of the projects listed within the Williamsport MPO TIP & 12 Year Program.

Nature's Network Imperiled Species Core Habitat Analysis



Environmental Impact

Mitigation Strategies

- WATS MPO and PennDOT are **primarily focused on asset management and maintenance**
- A vast majority of the projects contained in this LRTP involve **minor or no right-of-way acquisition**
 - Substantial mitigation efforts are not likely to be required
 - Small scale mitigation located at individual project locations as needed
- LCPC will house all PNDI environmental receipts for each Long Range Transportation project that has undergone the linking planning and NEPA screening and PNDI search process
 - Will be utilized by the WATS MPO to advance projects through the appropriate environmental reviews and coordination

Environmental Impact

Mitigation Strategies

- Utilize PennDOT District 3-0's Wetland bank, when needed
 - Also work with District 3-0 to identify potential wetland banking sites in other watersheds
- Ensure an accurate screening process by continually updating GIS environmental layers with the most recently available data
 - Notable layers include: hydric soils, national wetland inventory, locally produced data (drinking water resources, EV streams, wetlands)
- Consider mitigation opportunities such as adding parks & trails, resource banking, and creating riparian buffers

Environmental Impact

Mitigation Strategies

- Work with the PHMC on an approach to cultural and historic preservation and advanced mitigation
- Investigate opportunities during planning and programming to avoid 4 (f) properties for those proposals indicating a potential use of 4 (f) properties
- Maintain continual contact and coordination with the requisite resource agencies on all projects
 - Agencies include: PA Game Commission, PA Fish and Boat Commission, PA Department of Conservation and Natural Resources, & U.S. Fish and Wildlife Service

Environmental Impact

Mitigation Strategies

- 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

WATS LRTP Public Review Schedule

<i>Public Meeting</i>	<i>Date/Time</i>	<i>Place</i>	<i>Topics Discussed</i>
WATS Technical Committee	9/11/17 10:00 AM	Executive Plaza, 330 Pine St, Williamsport PA	Plan Update Kickoff
WATS Coordinating Committee	9/25/17 1:00 PM	Executive Plaza, 330 Pine St, Williamsport PA	Chapter 2
WATS Technical Committee	12/4/17 10:00 AM	Executive Plaza, 330 Pine St, Williamsport PA	Opportunity for Public Input
WATS Coordinating Committee	12/18/17 1:00 PM	Executive Plaza, 330 Pine St, Williamsport PA	Opportunity for Public Input
WATS Technical Committee	1/29/18 10:00 AM	Executive Plaza, 330 Pine St, Williamsport PA	Chapter 3
WATS Coordinating Committee	2/1/18 12:00 AM	Executive Plaza, 330 Pine St, Williamsport PA	Chapter 3
WATS Technical Committee	4/16/18 10:00 AM	Executive Plaza, 330 Pine St, Williamsport PA	Chapter 1
WATS Coordinating Committee	4/30/18 1:00 PM	Executive Plaza, 330 Pine St, Williamsport PA	Chapter 1
WATS Technical Committee	6/1/18 12:00 AM	Executive Plaza, 330 Pine St, Williamsport PA	Chapter 4
WATS Coordinating Committee	6/18/18 1:00 PM	Executive Plaza, 330 Pine St, Williamsport PA	Chapter 4
Lycoming County Planning Commission	TBA	Executive Plaza, 330 Pine St, Williamsport PA	Opportunity for Public Input
WATS Technical Committee	9/24/18 10:00 AM	Executive Plaza, 330 Pine St, Williamsport PA	Opportunity for Public Input
WATS Coordinating Committee	10/15/18 1:00 PM	Executive Plaza, 330 Pine St, Williamsport PA	Opportunity for Public Input
Lycoming County Board of Commissioners	TBA	Executive Plaza, 330 Pine St, Williamsport PA	Presentation of Final Draft of Plan
WATS Technical Committee	12/3/18 10:00 AM	Executive Plaza, 330 Pine St, Williamsport PA	Presentation of Final Draft of Plan
WATS Coordinating Committee	12/17/18 1:00 PM	Executive Plaza, 330 Pine St, Williamsport PA	Plan Adoption

Questions?

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Transportation Planner
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