



# Indirect and Cumulative Effects Report

June 2024

---

**US 6219, Section 050**  
**Transportation Improvement Project**  
*Meyersdale, PA to Old Salisbury Road, MD*



# Table of Contents

- 1 INTRODUCTION ..... 1-1**
  - 1.1 Purpose of Report..... 1-1
  - 1.2 Project History..... 1-1
  - 1.3 Study Area Description and Location ..... 1-2
  - 1.4 Project Purpose & Need..... 1-2
- 2 DETAILED ALTERNATIVES ..... 2-1**
  - 2.1 No Build Alternative..... 2-1
  - 2.2 Proposed Roadway Layout..... 2-1
  - 2.3 Common Segment Improvements ..... 2-1
    - 2.3.1 Mason-Dixon Highway..... 2-2
    - 2.3.2 Hunsrick Road Extension ..... 2-2
    - 2.3.3 Mountain Road ..... 2-2
    - 2.3.4 Clark Road ..... 2-2
  - 2.4 Alternative DU..... 2-3
  - 2.5 Alternative DU-Shift..... 2-3
  - 2.6 Alternative E..... 2-3
  - 2.7 Alternative E-Shift ..... 2-3
  - 2.8 Section 4(f) and Section 106 Minimization Alternatives ..... 2-5
- 3 METHODOLOGY ..... 3-1**
- 4 INDIRECT EFFECTS ANALYSIS ..... 4-1**
  - 4.1 Project’s Potential for Indirect Effects..... 4-1
  - 4.2 Study Area Boundaries for Indirect Effects ..... 4-1
  - 4.3 Baseline Conditions ..... 4-5
    - 4.3.1 Land Use ..... 4-5
    - 4.3.2 Natural Resources Trends..... 4-9
    - 4.3.3 Socioeconomic Trends..... 4-13
    - 4.3.4 Environmental Justice ..... 4-16
  - 4.4 Potential Beneficial and Adverse Indirect Effects..... 4-20
    - 4.4.1 Potential for Project Related Growth Effects ..... 4-20
    - 4.4.2 Potential for Encroachment Alteration Effects ..... 4-25
  - 4.5 Step 5 and 6: Determine Significance of Potential Indirect Effects and Identify Solutions or Mitigation ..... 4-32

4.5.1 Impacts Related to Project Related Growths..... 4-32

4.5.2 Impacts Related to Potential Encroachment Alternative Effects.. 4-33

**5 CUMULATIVE EFFECTS ANALYSIS..... 5-1**

5.1 Step 1: Resources to Consider ..... 5-1

5.2 Step 2: Study Area Boundary..... 5-1

5.3 Step 3: Temporal Boundary ..... 5-1

5.4 Step 4: Other Past, Present, and Reasonably Foreseeable Future Actions That Have Impacted or May Impact the Affected Resources ..... 5-3

5.4.1 Past Actions ..... 5-3

5.4.2 Present and Reasonably Foreseeable Future Actions ..... 5-4

5.5 Step 5: Potential Cumulative Impacts From Past, Present, and Reasonably Foreseeable Future Actions ..... 5-4

5.5.1 Socioeconomic Resources ..... 5-4

5.5.2 Natural Environmental Resources..... 5-5

5.5.3 Cultural Resources ..... 5-7

5.5.4 Summary of Cumulative Effects ..... 5-7

**6 CONCLUSION ..... 6-1**

**7 REFERENCES ..... 7-1**

## List of Figures

Figure 1-1: Project Study Area and Build Alternatives ..... 1-3

Figure 2-1: Additional Improvements in Northern Portion of Study Area ..... 2-4

Figure 3-1 Direct vs. Indirect Environmental Impact *Source: FHWA (2019)*..... 3-1

Figure 3-2 Cumulative Impacts *Source: FHWA (2019)* ..... 3-2

Figure 4-1: Socioeconomic Resources ICE Study Area ..... 4-3

Figure 4-2: Natural Resources ICE Study Area..... 4-4

Figure 4-3: Cultural Resources ICE Study Area ..... 4-5

Figure 4-4: Natural Resources Land Cover (1992 and 2022)..... 4-10

Figure 4-5: Map of Maryland PFA in Relation to Casselman Farm and the CRDC .... 4-21

Figure 4-6: Conceptual Direct Connections in Maryland ..... 4-22

Figure 4-7: Parcels Around the I-68 Interchange with the Greatest Development Attraction ..... 4-24

Figure 5-1: Timeline of Past Events Considered to Establish Past Temporal Boundary..... 5-2

## List of Tables

Table 3-1 Summary of Direct, Indirect, and Cumulative Effects .....	3-2
Table 4-1: Summary of Direct Impacts .....	4-1
Table 4-2: ICE Analysis Resource Effects.....	4-1
Table 4-3: Historic Population Size .....	4-8
Table 4-4: Natural Resources Land Cover Trends within the Natural Resources ICE Study Area .....	4-9
Table 4-5: County Farmland Trends from 1992 to 2017.....	4-12
Table 4-6: Population Projection (2010 to 2045).....	4-14
Table 4-7: Age of Population.....	4-14
Table 4-8: Occupied and Vacant Housing Units.....	4-15
Table 4-9: Unemployment Rates (Annual Average).....	4-15
Table 4-10: Industry Type for the Employed Population.....	4-16
Table 4-11: Minority Percentage within the .....	4-18
Table 4-12: Low-Income Percentage within the .....	4-19
Table 5-1 General Effects Determination Matrix .....	5-4
Table 5-2 Summary of Cumulative Effects .....	5-8

# 1 INTRODUCTION

## 1.1 Purpose of Report

The purpose of the Indirect and Cumulative Effects (ICE) Report is to discuss the potential for induced growth in the project area due to the potential construction of the proposed project, and to assess the collective effects that past, present, and future projects have had, and/or are likely to have, on natural, cultural, and socioeconomic resources in the project area.

The ICE report:

- Provides a brief description of the project history, study area description and location, project purpose and need, and the detailed alternatives under consideration;
- Describes the methodology used for the ICE analysis; and
- Documents the ICE analysis

## 1.2 Project History

The “US 219, I-68 (Maryland) to Somerset, Pennsylvania Needs Analysis”, prepared by the Pennsylvania Department of Transportation (PennDOT) in 1999, identified two projects with independent utility and logical termini on US 219. These projects were: US 219, Section 019 (currently Section 050) (from I-68 in Maryland to the southern terminus of the Meyersdale Bypass in Pennsylvania) and US 219, Section 020 (from the northern terminus of the Meyersdale Bypass to Somerset, Pennsylvania).

Preliminary engineering and work towards a Draft Environmental Impact Statement (DEIS) for US 219, Section 019, originally began in 2001 by PennDOT and the Maryland State Highway Administration (SHA) but was put on hold in 2007 due to funding constraints. Since that time, PennDOT has completed construction of US 219, Section 020, Meyersdale to Somerset, which opened to traffic in 2018.

The US 219, Section 020 project involved construction of a new 11-mile, four-lane, limited access roadway extending from the northern end of the Meyersdale Bypass of US 219 (a four-lane limited access roadway) to the southern end of the existing four-lane limited access US 219, south of Somerset.

The US 219 Section 050 project was re-started in 2014 as a Planning and Environmental Linkage (PEL) study. The study was completed in July 2016 and recommended two alignments that could move forward into the National Environmental Policy Act (NEPA) process: Alignments E and E-Shift. The PEL study also identified an independent, stand-alone breakout project within these two alignments in Maryland: from I-68 to Old Salisbury Road. The SHA advanced this 1.4-mile project and completed construction in 2021.

## 1.3 Study Area Description and Location

This project was re-started in 2020 and includes the proposed construction of an 8.0-mile (6 miles in Pennsylvania and 2 miles in Maryland) four-lane limited access facility on new alignment from the end of the Meyersdale Bypass in Somerset County, Pennsylvania to the newly constructed portion of US 219 in Garrett County, Maryland.

The study area extends from the southern end of the Meyersdale Bypass in Somerset County, Pennsylvania south to US 40 in Garrett County, Maryland. The study area encompasses portions of Elk Lick and Summit Townships in Somerset County, Pennsylvania, and the northeastern corner of Garrett County, Maryland. The Borough of Salisbury, Pennsylvania is also located within the middle portion of the study area, as shown in **Figure 1-1**. The study area is mostly rural, with residential and small commercial facilities, as well as larger amounts of forested areas and farmland.

## 1.4 Project Purpose & Need

The purpose of the US 219 Section 050 from Meyersdale to Old Salisbury Road Project is to complete Corridor N of the Appalachian Development Highway System, to improve the system linkage in the region, provide safe and efficient access for motorists traveling on US 219, and provide transportation infrastructure to support economic opportunities in existing and planned communities and employment/ business centers and natural resource-based industries within the Appalachian Region.

The proposed project is needed for three identifiable reasons:

- Existing US 219 does not provide efficient mobility for trucks and freight.
- There are numerous roadway and geometric deficiencies present along the existing US 219 alignment.
- The existing roadway infrastructure is a limiting factor in economic development opportunities in the Appalachian Region.

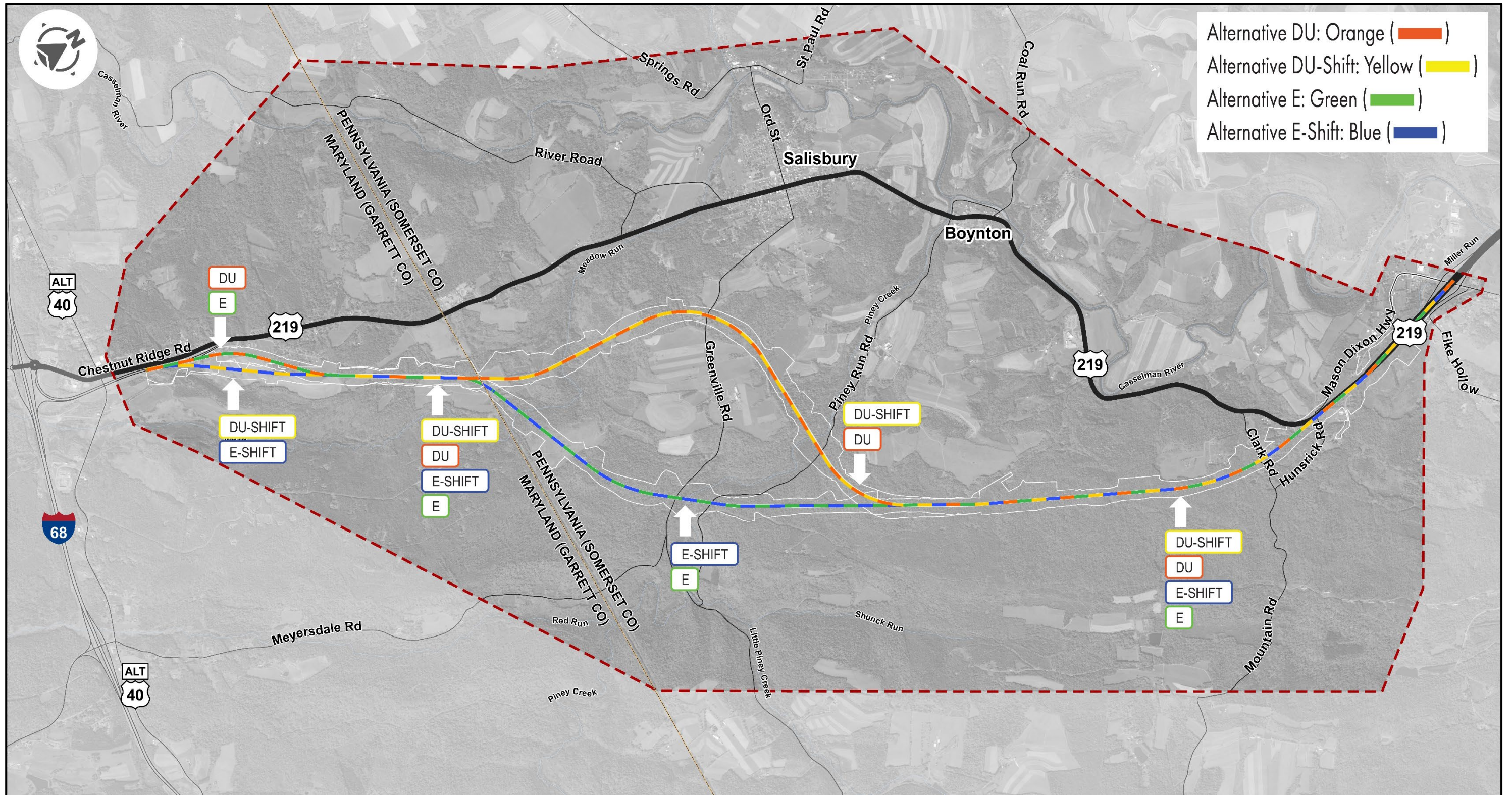


Figure 1-1: Project Study Area and Build Alternatives

## 2 DETAILED ALTERNATIVES

The proposed Build alternatives include the following:

- Alternative DU
- Alternative DU-Shift
- Alternative E
- Alternative E-Shift

Descriptions of the four Build alternatives including the No-Build alternative are presented below. The location of the four Build alternatives is presented in **Figure 1-1**

### 2.1 No Build Alternative

The No Build Alternative involves taking no action, except routine maintenance along US 219. The existing two-lane roadway between Meyersdale, Pennsylvania and Garrett County, Maryland would remain. No new alternatives or additional roadway would be constructed.

### 2.2 Proposed Roadway Layout

The typical section for each construction alternative provides a four-lane divided limited access highway with 12-foot-wide travel lanes, 8-foot wide inside shoulders and 10-foot-wide outside shoulders. The width of the median between the inside edges of northbound and southbound travel lanes is between 36 to 60 feet. Most of the median within Pennsylvania would be 60 feet wide and would transition down to 36 feet wide in Maryland to match the current roadway typical section.

### 2.3 Common Segment Improvements

There is a three-mile section of new roadway that is common to all alternatives, beginning in the northern end of the study area, at the existing Meyersdale interchange. This three-mile section also includes portions of the existing US 219 roadway and the surrounding area, including along Mountain Road and Hunsrick Road. The section continues to the south of Hunsrick Road, where it diverges from existing US 219 and crosses Clark Road. This section then turns slightly west, minimizing impacts to the Pennsylvania State Gamelands 231. This section then traverses along the bottom of Meadow Mountain. Stormwater management facilities which would result in the need for additional right-of-way and environmental impacts have also been incorporated into the design.

As part of this section, portions of several local roadways will be improved. These local improvements include Improvements to the existing US 219 roadway (Mason-Dixon Highway), Hunsrick Road Extension, Mountain Road, and Clark Road. These improvements are intended to ensure that local traffic has continued access. These improvements are included with all alternatives being considered, other than the No Build Alternative. The scope of these proposed improvements is outlined below and depicted in **Figure 2-2**.



### **2.3.1 Mason-Dixon Highway**

The Mason-Dixon Highway (T-355) would be improved between Hunsrick Road and the US 219 Meyersdale Interchange in accordance with PennDOT's Resurfacing, Restoration, and Rehabilitation (3R) design criteria, using a design speed transition from 55 MPH to 35 MPH. The upgrades are roughly 1.3-miles in length, starting near Hunsrick Road and ending at the US 219 Meyersdale Interchange.

Prior to the opening of the Meyersdale Bypass, Mason-Dixon Highway carried US 219. After the Meyersdale Bypass opened, PennDOT transferred ownership and maintenance of Mason-Dixon Highway to Summit Township. Following completion of a new US 219 alternative proposed under this study, ownership of Mason-Dixon Highway is to be transferred back to PennDOT as part of re-routed traffic patterns in the area.

### **2.3.2 Hunsrick Road Extension**

Improvements made to tie a new US 219 alternative proposed under this study into existing US 219 necessitate the removal of the existing Hunsrick Road Bridge (SR 2102). Due to geometric and intersection sight distance constraints at the intersection of Hunsrick Road (T -355) and Mason-Dixon Highway (T-355), it was determined that the Hunsrick Road Bridge would not be replaced and Hunsrick Road would terminate on the east side of US 219.

As a result of the Hunsrick Road Bridge removal, a new roadway would be constructed: the Hunsrick Road Extension. This new roadway would connect existing Hunsrick Road with Fike Hollow Road (T-363) and would run parallel to a new US 219 alternative along the eastern side proposed under this study. This new connector roadway would provide access from Hunsrick Road to US Business Route 219 (SR 2047) near the Meyersdale Interchange. The proposed typical section for the Hunsrick Road Extension includes two 10-foot travel lanes and with 4-foot outside shoulders. The design speed is anticipated to be 25 miles per hour.

### **2.3.3 Mountain Road**

Mountain Road (T-824) currently extends north from the intersection with Hunsrick Road to a cul-de-sac adjacent to existing US 219. With the associated improvements of the Hunsrick Road Extension, the northern end of Mountain Road would be connected to Hunsrick Road Extension and the existing cul-de-sac would be removed. The existing intersection of Mountain Road with Hunsrick Road would be maintained.

To avoid the steep grade (14%) on existing Mountain Road, a portion of Mountain Road is to be closed to traffic. Access to property along Mountain Road would be maintained and cul-de-sacs would be placed where the road would be closed. As noted above, the northern segment of Mountain Road would be accessible from the Hunsrick Road Extension while the southern segment of Mountain Road would be accessible from the existing intersection with Hunsrick Road.

### **2.3.4 Clark Road**

Clark Road (T-353) extends west from Mountain Road (T-824) to existing US 219. Due to topographical and geometric constraints, providing a grade separated crossing of a

new US 219 alternative proposed under this study was not practical. It was determined Clark Road should be bisected where it crosses a new alternative of US 219 proposed under this study. A cul-de-sac would be placed at each end of the roadway where it intersects the US 219 right-of-way. The eastern side of Clark Road would maintain access to US Business 219 near the Meyersdale Interchange via Mountain Road, Hunsrick Road Extension, and Fike Hollow Road.

## **2.4 Alternative DU**

The Alternative DU alignment was developed by combining suggestions from the US Fish and Wildlife Service (USFWS) with an alternative identified during former 2001 NEPA efforts. USFWS suggested an alternative to avoid the mountain slope/ridge in Pennsylvania and reduce potential impacts to terrestrial wildlife.

## **2.5 Alternative DU-Shift**

Alternative DU-Shift resulted from combining Alternative DU with Alternative E-Shift to move the alternative further away from residences along Old Salisbury Road. Alternative DU-Shift mimics the alternative of Alternative DU from Meyersdale until south of the Mason-Dixon Line, where the alternative is shifted eastward and away from Old Salisbury Road.

## **2.6 Alternative E**

The Alternative E alignment was suggested during former 2001 NEPA efforts to avoid farmland in Pennsylvania and avoid residential areas along existing US 219. Alternative E starts at the southern end of the Meyersdale Bypass and proceeds in a southerly direction along the face of Meadow Mountain. At the Pennsylvania/Maryland border, Alternative E would extend in a southwesterly direction, east of the existing US 219.

## **2.7 Alternative E-Shift**

The alignment for Alternative E-Shift was suggested by residents along Old Salisbury Road during former 2001 NEPA efforts and involves moving Alternative E further away from the residences on Old Salisbury Road. Alternative E-Shift follows Alternative E, with the exception of a small shift in Maryland, slightly eastward, away from the homes along Old Salisbury Road. Alternative E does not directly impact the homes along Old Salisbury Road; however, residents requested an evaluation of a slightly eastward shift to move the alternative further from their homes. The trade-off is that Alternative E-Shift bisects a farm field that is only slightly impacted by Alternative E. This shifted section is the same as the shifted section Alternative DU-Shift.

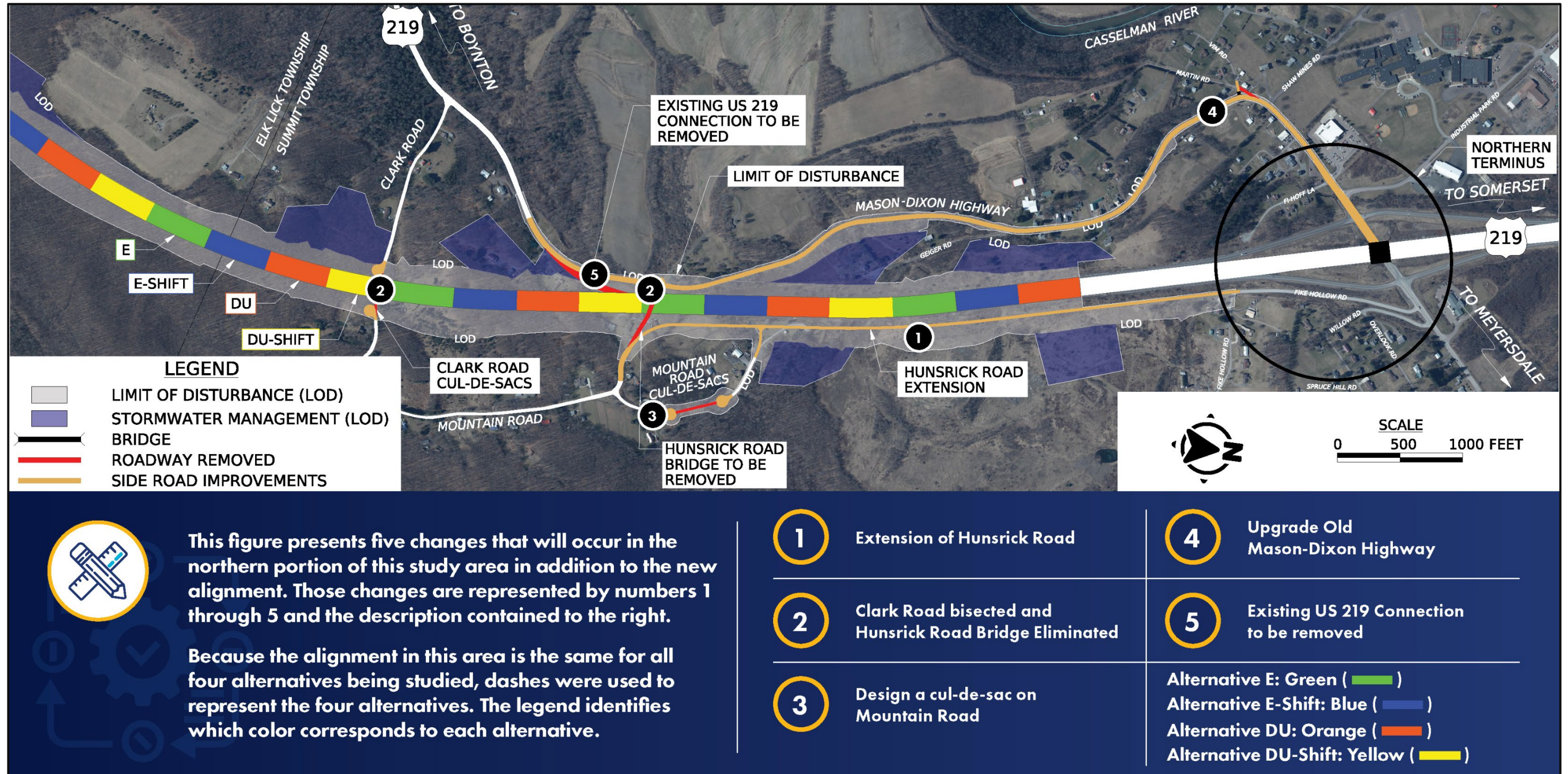


Figure 2-1: Additional Improvements in Northern Portion of Study Area

## 2.8 Section 4(f) and Section 106 Minimization Alternatives

Each Build Alternative has been modified to incorporate measures to minimize harm to the Section 4(f) and Section 106 resources listed below. The four modified alternatives will be advanced in the DEIS. These alternatives include DU Modified, DU-Shift Modified, E Modified, and E-Shift Modified. Detailed descriptions of these alternatives are included in the DEIS. Minimization of impacts is described below.

### State Game Lands 231 (Section 4(f) and Section 2002 avoidance)

- A 300-foot-long varying 3.5-foot-high retaining wall was added on the east side of US 219 to avoid cut slope impacts to State Game Lands 231
- The Limit of Disturbance (LOD) in this area was additionally reduced from 100 feet to 45 feet beyond the top of cut
- No impacts will be incurred from any alternative

### Deal Farm (Section 4(f) avoidance and Section 106 minimization):

- The LOD along the west side of the Piney Run Bridge was reduced to avoid physical impact to the Deal Farm
- The LOD now falls 100 feet from the western edge of the bridge versus its original location 100 feet beyond the assumed fill line
- Alternatives DU Modified and DU-Shift Modified would reduce physical impact from 16.4 acres to 16.2 acres
- Alternatives E Modified and E-Shift Modified have no physical impact
- Alternatives DU Modified and DU-Shift Modified both result in an Adverse Effect determination
- Alternatives E Modified and E-Shift Modified result in a determination of No Effect

### Mason Dixon Marker (Section 4(f) avoidance and Section 106 minimization)

- The Maryland Historical Trust requested a 25-foot radius buffer around the marker
- The alignment was generally shifted westward between ten and 60 feet away from the Marker
- A 55-mph speed limit and a 60-mph design speed were incorporated in the design of the Maryland portion of US 219 consistent with the recently completed 1.4-mile SHA improvement of US 219
- North from the Maryland line, through the first curve in Pennsylvania, the design includes a transition to a 65-mph posted speed limit and 70-mph design speed north of the Meadow Run Bridge
- The median width is a minimum 44 feet near the Marker

- North of the Meadow Run Bridge the median width transitions to 60 feet
- At the state line, the LOD transitions from 50 feet beyond the cut/fill lines in Maryland to 100 feet beyond the cut/fill lines in Pennsylvania
- No physical impacts will be incurred from any alternative
- Alternatives DU Modified and DU-Shift result in a No Adverse Effect determination
- Alternatives E Modified and E-Shift Modified result in a No Effect determination

**Little Meadows (Section 4(f) avoidance and Section 106 minimization):**

- The US 219 tie-in location was adjusted north to avoid impacts to Tomlinson Inn and Little Meadows historical boundary.
- The horizontal alignment was also shifted 60' to the west
- The median width was reduced to 44' and 36' in tangent sections where practical
- The LOD was generally reduced to 50' beyond the cut/fill lines in this area
- In a few places, the LOD was reduced to approximately 20' beyond the cut/fill lines
- No physical impact would be incurred by any of the alternatives
- The determination of effect for all build alternatives is No Adverse Effect

**Miller Farm**

- All build alternatives physically impact 0.6 acre of the Miller Farm
- All build alternatives result in a No Adverse Effect determination
- A determination of Section 4(f) de minimis use was made in consultation with FHWA

**Lowry Farm (Section 4(f) and Section 106 minimization)**

- Alternative DU Modified and Alternative DU-Shift Modified each physically impact 23.4 acres, resulting in an Adverse Effect determination for both alternatives
- Alternatives E Modified and E-Shift Modified each have no physical impact and result in a No Effect determination for both alternatives

### 3 METHODOLOGY

This analysis was conducted in accordance with PennDOT, Publication 640 Indirect and Cumulative Effects (ICE) Desk Reference. Assessment of indirect and cumulative effects is a requirement under NEPA and under the Council on Environmental Quality (CEQ) regulations implementing the Procedural Provisions of NEPA (40 CFR §§1500-1508). The CEQ regulations define the impacts and effects that must be addressed and considered during the project planning process to satisfy the requirements of NEPA. These impacts include direct, indirect, and cumulative.

Indirect effects result from the agency action and are later in time or farther removed in distance but are still reasonably foreseeable. Indirect effects differ from direct effects, which are caused by the action and occur at the same time and place. **Figure 3-1** illustrates the difference between direct and indirect effects. Indirect effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. Indirect effects are related actions that would or could not occur without the implementation of the agency action.

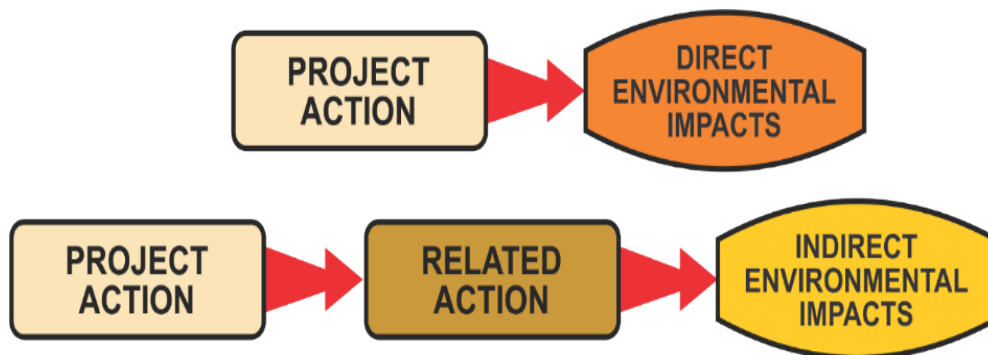


Figure 3-1 Direct vs. Indirect Environmental Impact  
 Source: FHWA (2019)

A cumulative effect is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (CEQ, 1997). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Cumulative impacts include the total of all impacts, direct and indirect, experienced by a particular resource that have occurred, are occurring, and would likely occur as a result of any action or influence, including effects of a federal activity (USEPA, 1999), as illustrated in **Figure 3-2**.

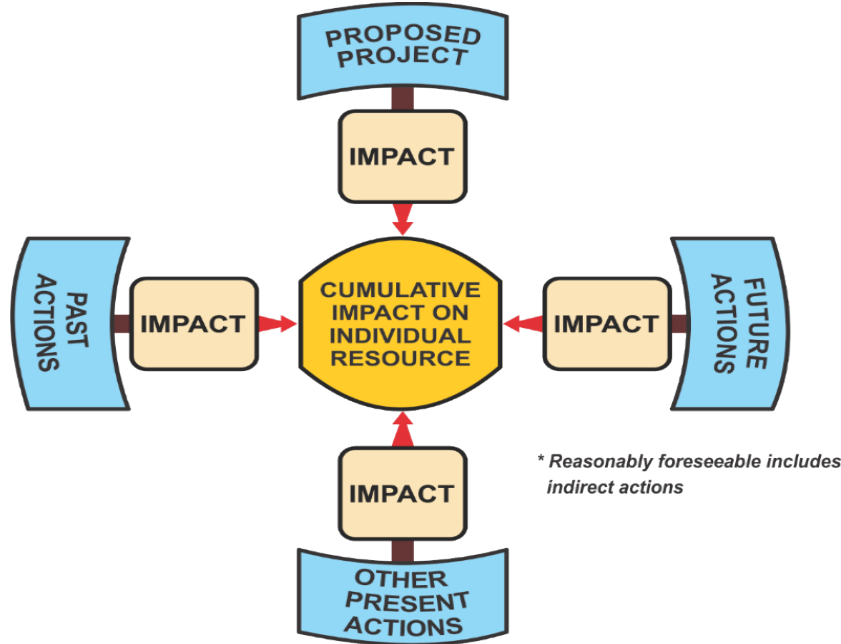


Figure 3-2 Cumulative Impacts Source: FHWA (2019)

**Table 3-1** further describes the characteristics that define and differentiate the types of effects that are assessed in the NEPA environmental review process. **Table 3-1** is from PennDOT’s Indirect & Cumulative Effects Desk Reference (PUB 640, March 2008).

According to Federal Highway Administration (FHWA) guidance, the determination or estimation of future impacts is essential to both indirect and cumulative impacts analyses. However, the focus must be on reasonably foreseeable actions, those that are likely to occur or probable, rather than those that are merely possible.

**Table 3-1 Summary of Direct, Indirect, and Cumulative Effects**

Type of Effect	Direct	Indirect	Cumulative
Nature of Effect	Typical/Inevitable/Predictable	Reasonably foreseeable/Probable	Reasonably foreseeable/Probable
Cause of Effect	Project	Project’s direct and indirect effects	Project’s direct and indirect effects and the effects of other activities
Timing of Effect	Project Construction and Implementation	At some future time after direct effects	At time of project’s construction or in the future
Location of Effect	Within project impact area	Within boundaries of systems affected by project	Within boundaries of systems affected by project

## 4 INDIRECT EFFECTS ANALYSIS

### 4.1 Project's Potential for Indirect Effects

As part of the US 6219 Section 050 Project understanding, it is necessary to determine whether the project would have the potential to cause indirect effects and whether an analysis is even necessary. As outlined in the PennDOT Publication 640, Indirect and Cumulative Effects (ICE) Desk Reference guide, one of the most likely causes of indirect effects is related growth. The determination of potential indirect effects is based on combined analysis of project type, project location, and growth pressure. Even if the project does not appear to have a high potential for growth-related indirect effects, the possibility of other non-growth-related indirect effects, the possibility of other non-growth-related indirect effects will still be considered.

#### Project Type:

- The project proposes a new transportation facility on new alignment providing increased capacity to better accommodate regional through traffic. However, the Build Alternatives are designated as “Limited Access” roadways, allowing no direct access to any project area parcels except at the existing access points (Meyersdale Interchange in Pennsylvania and I-68 Interchange in Maryland).

#### Project Location:

- The surrounding land is predominantly rural with primarily low density residential.

#### Growth Pressure:

- Based on review of the municipalities’ comprehensive plans, development within the municipalities is moderate with the presence and location of land conservation easements that restrict land development activities and preserve agricultural and natural land resources. Completion of the US 219 from I-68 to the Meyersdale Interchange project has the potential to induce and facilitate regional growth by improving system linkage and providing a transportation infrastructure that supports economic development within the region.

It is anticipated that the potential for the four Build Alternatives to induce growth or substantial land use changes in the surrounding area is moderate based on review of the comprehensive plans from the Southern Alleghenies Region, Grantsville, Maryland and Garrett County, Maryland. There is also moderate potential for the Build Alternatives to result in indirect effects from encroachment alterations. These are defined as alteration of the behavior and functioning of the affected environment caused by study encroachment (physical, biological, socioeconomics) on the environment. The resources to be considered in the ICE are those that would be directly impacted by the Build Alternatives in addition to indirectly impacted natural, cultural, and socioeconomic resources. **Table 4-1** summarizes the currently proposed direct impacts of the Build Alternatives retained for detailed study on environmental resources.



Table 4-1: Summary of Direct Impacts

Resource	No Build	DU Mod.	DU-Shift Mod.	E Mod.	E-Shift Mod.
<b>Socio-economic Resource Impacts</b>					
Parcels Intersected by LOD (#)	0	117	114	106	103
Residential Displacements (#)	0	9	9	8	8
Commercial Displacements (#)	0	2	2	2	2
State Game Land (acres)	0	0	0	0	0
Impacted Noise Receptors	4	9	5	9	5
<b>Cultural Resource Impacts</b>					
Above Ground Historic Resources (#/acres)	0/0	3/40.2	3/40.2	1/0.6	1/0.6
Archaeology (acres)	0	620.8	620.7	443.8	446.1
<b>Natural Resource Impacts</b>					
Forestland	0	431.4	430.0	389.8	388.8
Active Farmland (acres)	0	76.6	76.8	37.9	38.1
Productive Farms (#)	0	9	9	6	6
Prime Farmland Soils (acres)	0	32.9	32.9	19.9	19.9
Soils of Statewide Importance (acres)	0	102.9	102.9	82.0	81.9
Preferential Tax Assessment (acres)	0	74.9	75.2	36.1	36.4
FEMA 100-Year Flood Zone (acres)	0	12.3	12.3	4.7	4.7
Potential Bat Hibernacula (#)	0	3	3	0	0
Wetland (acres)	0	12.28	12.14	10.65	10.51
Streams (linear feet)	0	26,485	26,845	24,726	24,726
<b>Mining &amp; Potential Hazardous Waste</b>					
Surface Mining Boundaries (acres)	0	319.7	319.6	212.7	212.7
Deep Mine Boundaries (acres)	0	22.9	22.9	23.0	23.0
Area Of Concern Sites (#)	0	3	3	3	3
<b>Engineering</b>					
Length of Alternative (miles)	0	8.3	8.3	7.9	7.9
Limit of Disturbance Acreage	0	628.7	626.2	560.9	558.7
Preliminary Cost Estimate (Year 2030 Dollars)	\$0	\$483.0 M	\$486.3 M	\$307.0 M	\$310.4 M

Note: 1) Green shading represents the lowest impact per category by alternative. 2) Preliminary construction cost estimates are exclusive of Right of Way Acquisition, Utility Relocation, Mineral Rights, Wildlife Crossings, Intelligent Transportation Systems and Maintenance Facility Final Amenities.

## 4.2 Study Area Boundaries for Indirect Effects

The geographical boundaries for indirect and cumulative effects on natural environmental resources, cultural resources, and socioeconomic resources are described below. These boundaries accommodate all the Build Alternatives and complement community land use goals that could interact with transportation facilities. The boundaries also include reasonably foreseeable actions in the vicinity. The ICE analysis boundaries are based on U.S. Census block groups, subwatershed boundaries, and transportation boundaries. **Table 4-2 summaries** the resources analyzed and their corresponding sub-boundaries.

**Table 4-2: ICE Analysis Resource Effects**

Resource	Incorporation into ICE	Rationale	Representative Sub-Boundary
<b>Socioeconomic Resources</b>			
Community Facilities and Services (cohesion, access, services)	Yes	Direct and/or indirect effects	U.S. Census Block Groups
Parks and Recreational Facilities	Yes	Direct and/or indirect effects	U.S. Census Block Groups
Land Use, Property, and Right-of-Way	Yes	Direct and/or indirect effects	U.S. Census Block Groups
Population and Housing	Yes	Direct and/or indirect effects	U.S. Census Block Groups
Noise	Yes	Direct and/or indirect effects	U.S. Census Block Groups
Air Quality	Yes	Direct and/or indirect effects	U.S. Census Block Groups
Economic Resources	Yes	Direct and/or indirect effects	U.S. Census Block Groups
Visual and Aesthetic	Yes	Direct and/or indirect effects	U.S. Census Block Groups
<b>Cultural Resources</b>			
Historic Sites and Districts	Yes	Direct and/or indirect effects	Area of Potential Effects
Archaeology	Yes	Direct and/or indirect effects	Area of Potential Effects
<b>Natural Environmental Resources</b>			
Wetlands	Yes	Direct and/or indirect effects	HUC 12 Watershed
Streams	Yes	Direct and/or indirect effects	HUC 12 Watershed
Groundwater	Yes	Direct and/or indirect effects	HUC 12 Watershed
Floodplains	Yes	Direct and/or indirect effects	HUC 12 Watershed
Threatened and Endangered Species	Yes	Direct and/or indirect effects	HUC 12 Watershed
Forestland	Yes	Direct and/or indirect effects	HUC 12 Watershed
Prime and Statewide Important Farmland Soils	Yes	Direct and/or indirect effects	HUC 12 Watershed
Productive Agricultural Land	Yes	Direct and/or indirect effects	HUC 12 Watershed

### **Socioeconomic Resources ICE Study Area:**

U.S. Census block group (BG) boundaries were used to develop the socioeconomic resources ICE Study Area boundary to represent the socioeconomic resources potentially indirectly and cumulatively affected by the project. As shown on **Figure 4-1**, there are 10 BGs that comprise the Socioeconomic Resources ICE Study Area. Eight of the BGs are located in Somerset County, Pennsylvania and two are located in Garrett County, Maryland.

### **Natural Resources ICE Study Area:**

Hydrologic unit boundaries were used for assessing the scope of indirect and cumulative effects to natural environmental resources based on the watershed boundary dataset at the hydrologic unit code (HUC) 12 level provided by the U.S. Geological Survey (USGS). As shown in **Figure 4-2**, The Natural Resources ICE Study Area is comprised of the following six HUC 12 watersheds:

- Flag Run-Casselman River
- Tub Mill Run-Casselman River
- Red Run-Piney Creek
- Little Piney Creek-Piney Creek
- Miller Run-Casselman River
- Flaughtery Creek

The Natural Resources ICE Study Area is sized to capture potential direct effects of those transportation improvements evaluated with the study, and the indirect, downstream effects which may occur.

### **Cultural Resources ICE Study Area:**

The Cultural Resources ICE Study Area, as shown on **Figure 4-3**, includes the area of potential effects (APE) within which indirect and cumulative effects to cultural resources could occur from visual, audible, and atmospheric elements that could diminish the integrity of cultural resources. Section 106 of the National Historic Preservation Act compliance considers indirect and cumulative effects as well as direct effects to historic properties.

### **Area of Traffic Influence:**

The Area of Traffic Influence (ATI) defines the geographic extent within which roadway traffic volumes are anticipated to undergo substantial alterations due to the implementation of the Build Alternatives. Based on the need of the project and considering the regional type of traffic supported by US 219, the ATI was not considered when establishing the geographic boundary. An initial review of the ATI revealed a large area considered too expansive for the analysis of indirect and cumulative impacts associated with this project. In addition, the ATI encompasses the other resource boundaries used in the ICE analysis.

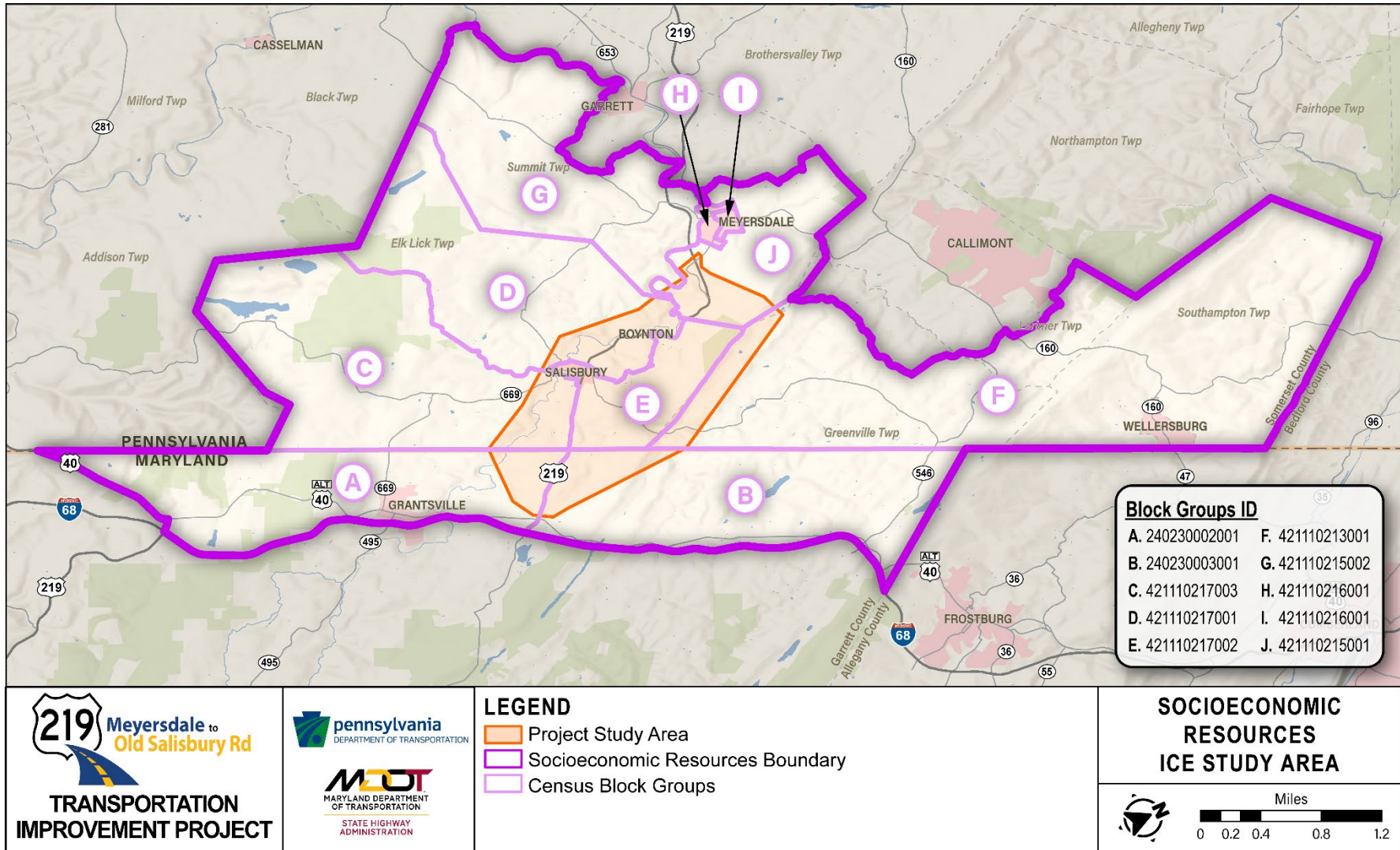


Figure 4-1: Socioeconomic Resources ICE Study Area

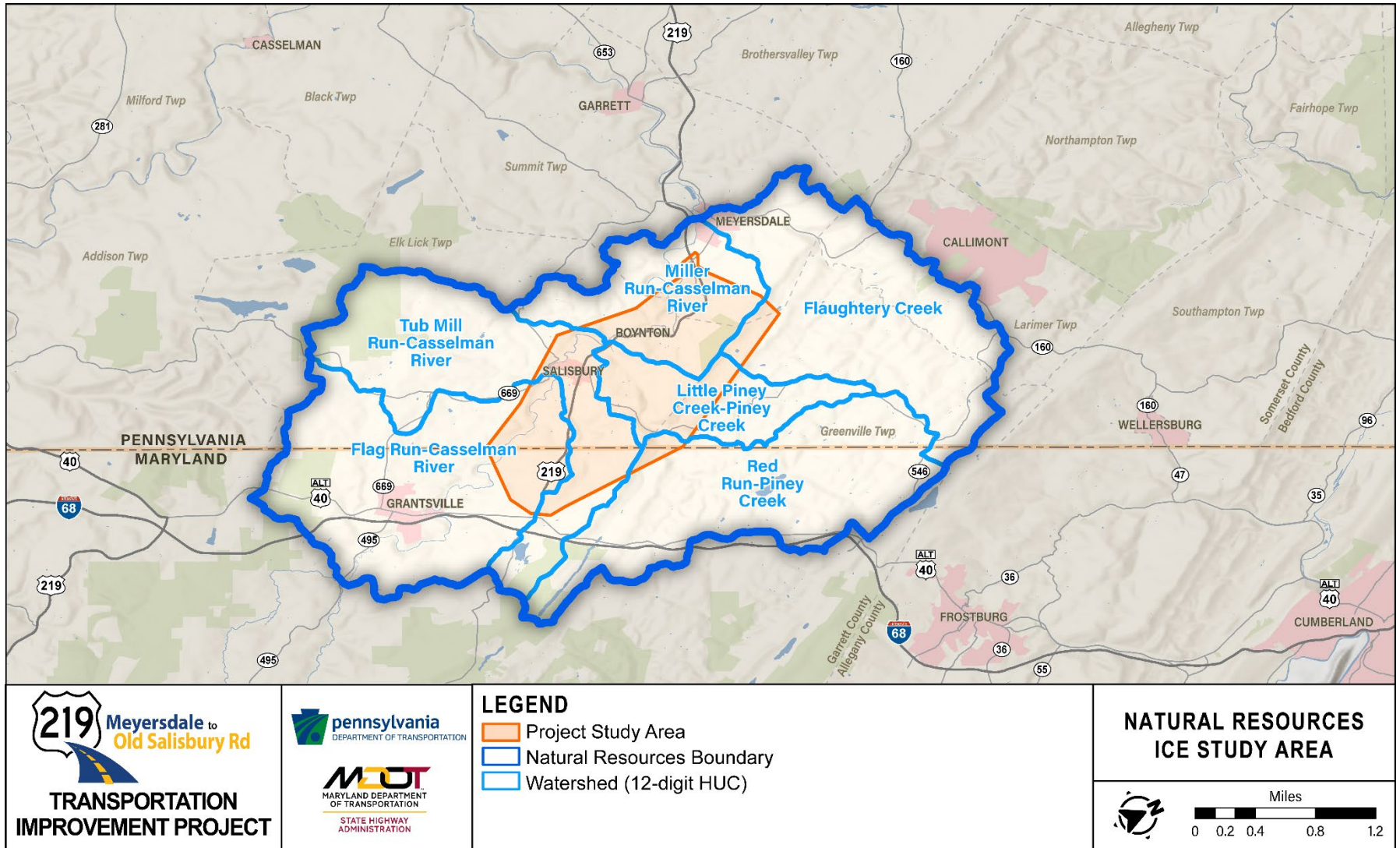


Figure 4-2: Natural Resources ICE Study Area

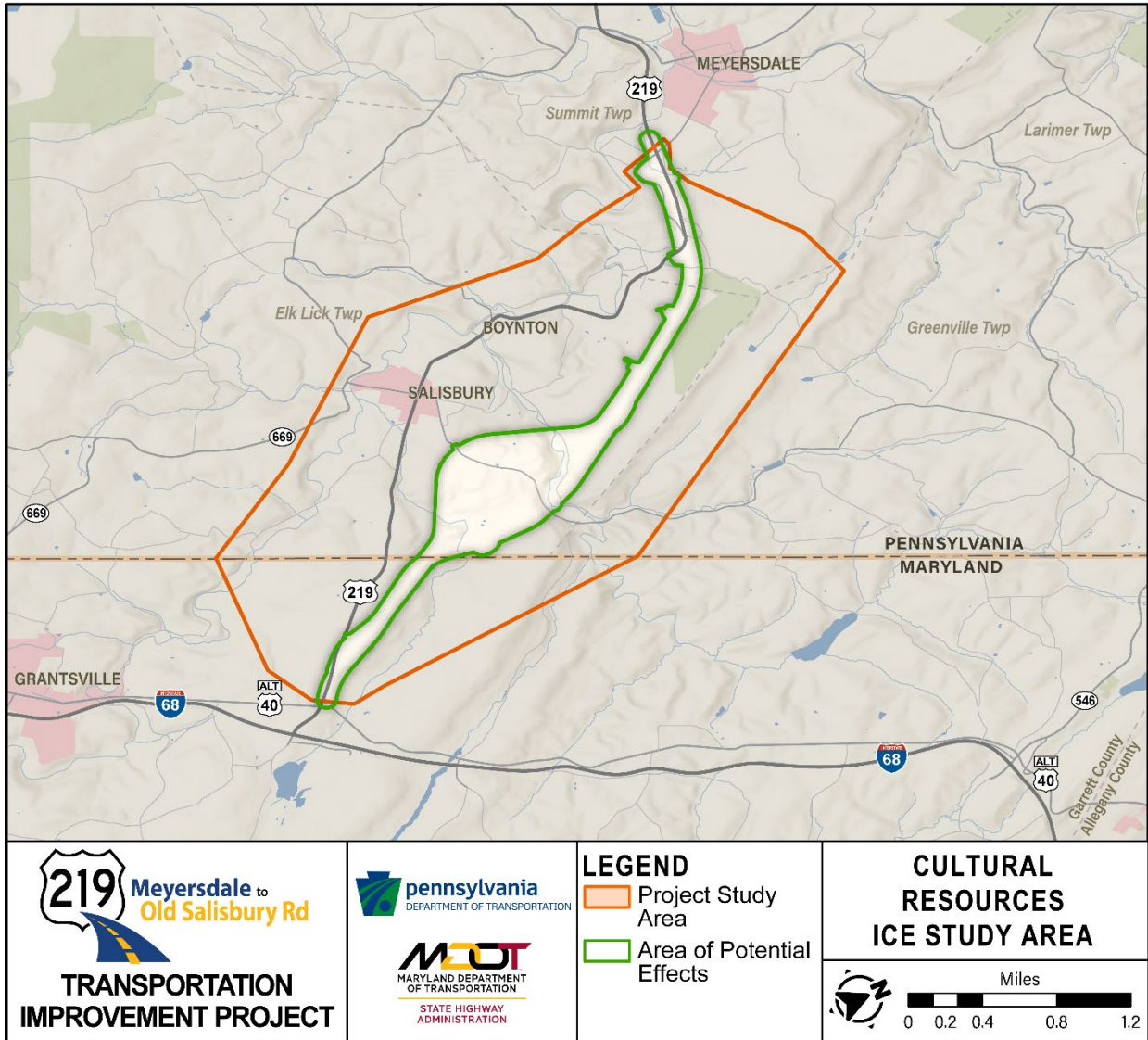


Figure 4-3: Cultural Resources ICE Study Area

## 4.3 Baseline Conditions

Baseline conditions tell the story of the resources by describing the current health, condition, or status of the resources within each ICE study area and describe the changes and trends that have occurred over time. This step includes identifying county and local planning initiatives, local development activity, natural, cultural, and socioeconomic resources, and other issues.

### 4.3.1 Land Use

#### 4.3.1.1 Past and Present Land Use

**Past:** Early historical records show the region was inhabited by Native Americans when Euro-Americans settled in the area in the second half of the eighteenth century. Native

American trails in the area contributed to the expansion of the Euro-American settlement in the area (Means 1998).

In 1806 Congress authorized the building of the National Road, the first federally funded internal improvement in the United States. Construction began in 1811 out of Cumberland, Maryland, and the road followed Braddock's Road, a rough wagon track established by pioneers and traders and traveled by General Braddock in 1754. By 1818, the National Road reached the Ohio River at Wheeling, which at that time was in Virginia (now in West Virginia). Eventually, the road pushed through central Ohio, Indiana, and reached Vandalia, Illinois, in the 1830s. The roadway opened the Ohio River Valley and the Midwest for settlement and commerce. The Town of Grantsville was developed in response to the large volume of through-traffic on the National Road.

Somerset County was established in the late eighteenth century and at this time was characterized by hilly, wooded terrain with productive farmland, with a wealth of natural resources including timber, coal, iron ore, and limestone. Elk Lick Township was organized around 1785 then followed by the town of Salisbury in 1794. Salisbury soon became an important early regional social and commercial hub.

Summit Township was established in 1842 and contained excellent agricultural land and an abundance of minerals and timber. It was not until the second half of the nineteenth century when railroads arrived that the mineral resources would be mined. In 1844 the town that would become known as Meyersdale was planned.

Salisbury was incorporated as a borough in 1862, but its growth was slow until the arrival of the railroads in the 1870s. The presence of the freight-hauling railroad and its advantages for shipping materials to markets spurred the extraction of coal, iron ore, and limestone locally, and soon, there was a network of rail spurs serving coal mines, kilns, and coke ovens in the area. Meyersdale was incorporated in 1872 and grew rapidly.

Garrett County was established in the mid to late nineteenth century, formed from portions of Allegany County. Garrett County was, similar to Somerset County, characterized by hilly, wooded terrain with productive farmland, as well as natural resources, such as timber, coal, and iron. The western expansion of the railroads in the mid- to late nineteenth century brought workers to Garrett County for coal mining and timbering. Timber, coal, and iron companies were prominent in the area. This also enabled the growth of the tourism and summer mountain resorts in the region.

Underground coal mining which was once a major industry in the region ended during World War II due to resources being exhausted. This resulted in strip mining in the area, which can be seen on topographic maps from the mid-1940s and early 1970s. Agriculture remains a key livelihood in the region although mining is no longer prevalent in the area.

As road improvement projects determined settlement patterns during the eighteenth century, they also influenced mid-twentieth-century development. Increases in both traffic and funding for road work led to more development along major roadways in the twentieth century.

Between 1946 and 1982, many commercial buildings and residences were constructed to serve the needs of motorists near the junction of Chestnut Ridge Road and the National Road. Interstate 68 was built during the 1960s and 1970s (full completion of I-68 was in 1991) south of the existing junction of Chestnut Ridge Road (US 219) and the National Road (US 40), making the area an even more important meeting point.

The construction of the Meyersdale Bypass in 1998 changed the landscape in the project area. Local road patterns were changed, and part of the Mason Dixon Highway (now Old 219) was rerouted. New development, like the Food Lion grocery store from ca. 2000, was also encouraged.

**Present:** Concentrated areas of development within the Somerset County portion of the study area include the area outside Meyersdale Borough, which contains residential neighborhoods of medium density and multiple commercial properties. The area between Meyersdale and the unincorporated community of Boynton includes low density residential development.

Salisbury is fully within the ICE study areas, and the municipality includes medium density neighborhoods and a population of approximately 605 residents. There are various businesses within Salisbury. A low-density residential area is between Salisbury and the Pennsylvania-Maryland border.

In Garrett County, the area surrounding US 219 includes low to medium density residential development. The density of development increases as US 219 travels south and approaches the I-68 interchange and the south end of the study area. Additionally, the south end of the study area includes commercial development, gas stations, convenience stores, restaurants, and a hotel.

Agricultural land is prevalent throughout the study area and is essential to the economy of both counties. Somerset County contains approximately 1,150 farms totaling over 200,000 acres. These farms account for over one-quarter of the land within Somerset County. The average farm size is roughly 190 acres. In Garrett County, there are about 700 farms totaling approximately 90,000 acres. This represents about one-fifth of the county's land. The average farm size in Garrett County is about 128 acres.

The purpose of this project involves encouraging economic development in the Appalachian Region which includes Garrett and Somerset Counties. Local, state, and federal governments have existing initiatives in place to encourage this economic growth, especially in Maryland. The Chestnut Ridge area in the southwest end of the study area was designated as a Potential Employment Area by Garrett County. The northernmost mile of US 219 in Maryland traverses a part of Garrett County that is not identified as a Priority Funding Area as pertains to Maryland's Smart Growth Law. Therefore, in order to promote orderly growth, this area may not receive state funds for certain projects.

**Historic Population Changes:** Table 4-3 shows population changes between 1920 and 2022 for Somerset County, Pennsylvania and Garrett County, Maryland. Both counties experienced the largest growth between 1970 and 1980. This surge in population could



be the result of the Appalachian Development Act (passed 1965) authorizing the establishment of the Appalachian Development Highway System and the construction of I-68 in Maryland beginning in 1965. Between 2010 and 2022, both counties have steadily been losing population with a growth rate of -3.0 percent for Somerset County and Garrett County.

**Table 4-3: Historic Population Size**

Location	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010	2020	2022
Somerset County, PA	82,112	80,764	84,957	81,813	77,450	76,037	81,243	78,218	80,023	77,742	74,129	73,407
Growth %	--	-2%	5%	-4%	-5%	-2%	7%	-4%	2%	-3%	-5%	-1%
Garrett County, MD	19,678	19,908	21,981	21,259	20,420	21,476	26,498	28,138	29,838	30,097	28,806	28,548
Growth %	--	1%	10%	-3%	-4%	5%	23%	6%	6%	1%	-4%	-1%

Sources: 1) Maryland Department of Planning. 2023. "Population by Age and Sex for Maryland's Jurisdictions, 1790-2010." [planning.maryland.gov](https://planning.maryland.gov) 2) Somerset County Government. 2016 "Somerset County Demographics Profile 2016"

#### 4.3.1.2 Land Use Plans and Policies

Garrett County has a county-wide comprehensive plan that was adopted in November 2022. This comprehensive plan places an emphasis on conserving farmland and natural resources. However, it also balances this with County’s desire to develop infrastructure that meets the future needs of residents and businesses, create employment opportunities, and encourage tourism. Consequently, the plan encourages growth in designated growth locations, while maintaining forested and agricultural land in more sensitive locations. The plan also states that the extension of US 219 to Pennsylvania is a top transportation priority for the County, necessary to improve access, reduce travel time, and promote economic development in the area. Furthermore, the plan proposes future land uses for the study area within Maryland, including agricultural resource, suburban residential, town residential, and general commercial uses.

The Garrett County Comprehensive Plan considers areas that incorporated towns, including Grantsville, have identified for future annexation. These GFAs for Grantsville are primarily within the boundaries of Priority Funding Areas. The Town of Grantsville has its own comprehensive plan which was adopted in 2009 and its own zoning districts. Grantsville is located west of the US 219 Improvement Project and is within the Socioeconomic and Natural Resources ICE Study Areas. The comprehensive plan of Grantsville still aligns with the Garrett County Comprehensive Plan as it seeks to encourage growth within appropriate areas while minimizing sprawl and natural resource impacts.

In 1997 Maryland “Smart Growth” policy was enacted into law prioritizing existing communities over sprawl and directing development to designated areas while revitalizing older neighborhoods. By focusing on these Priority Funding Areas (PFA), (locations approved for growth and redevelopment with state investment) Maryland aims to preserve farmland, open spaces, and natural resources. The Garrett County PFA is within the ICE

Study Area mainly west of US 219. Within this PFA is the Chestnut Ridge Development Corridor (CRDC) which is located east of Grantsville and runs mainly along US 40 (between New Germany Road and US 219) and US 219 (between Old Salisbury Road and I-68). According to Garrett County’s Comprehensive Plan, the vision for the corridor is to house a vibrant community merging residential, commercial, and industrial interests in a balanced environment that encourages economic development.

The Garrett County Water and Sewer Master Plan (revised 2014 and amended in 2023) was prepared to support the continued development of water supply and sewage systems in Garrett County where designated growth areas and areas supporting economic development exists. According to the plan the Chestnut Ridge Development Corridor (CRDC) and surrounding areas are designated for water service in the next ten years, meaning an amendment to the Plan would be required to extend service to the area. The CRDC does have existing sewage infrastructure, constructed in 1995. Areas east of US 219 between Old Salisbury Road and the I-68 interchange are scheduled for service within ten years, thus requiring an amendment to construct sewer service. The 2014 Plan also states that public water and sewer service would not be available in certain land classifications including Agricultural Resource, Rural Resource, or Rural. These areas are permitted for shared septic systems supporting cluster development. With much of the land surrounding the CRDC classified as Agricultural Resource, Rural Resource, or Rural, development outside of the CRDC would most likely not be designated.

Somerset County does not have a county-wide comprehensive plan. However, the Comprehensive Plan for the Southern Alleghenies Region was adopted by Somerset County in 2018. Within this plan, county priorities include business and workforce development. The completion of US 219 between Meyersdale and Maryland is noted with the goal of encouraging new development along a future new alignment.

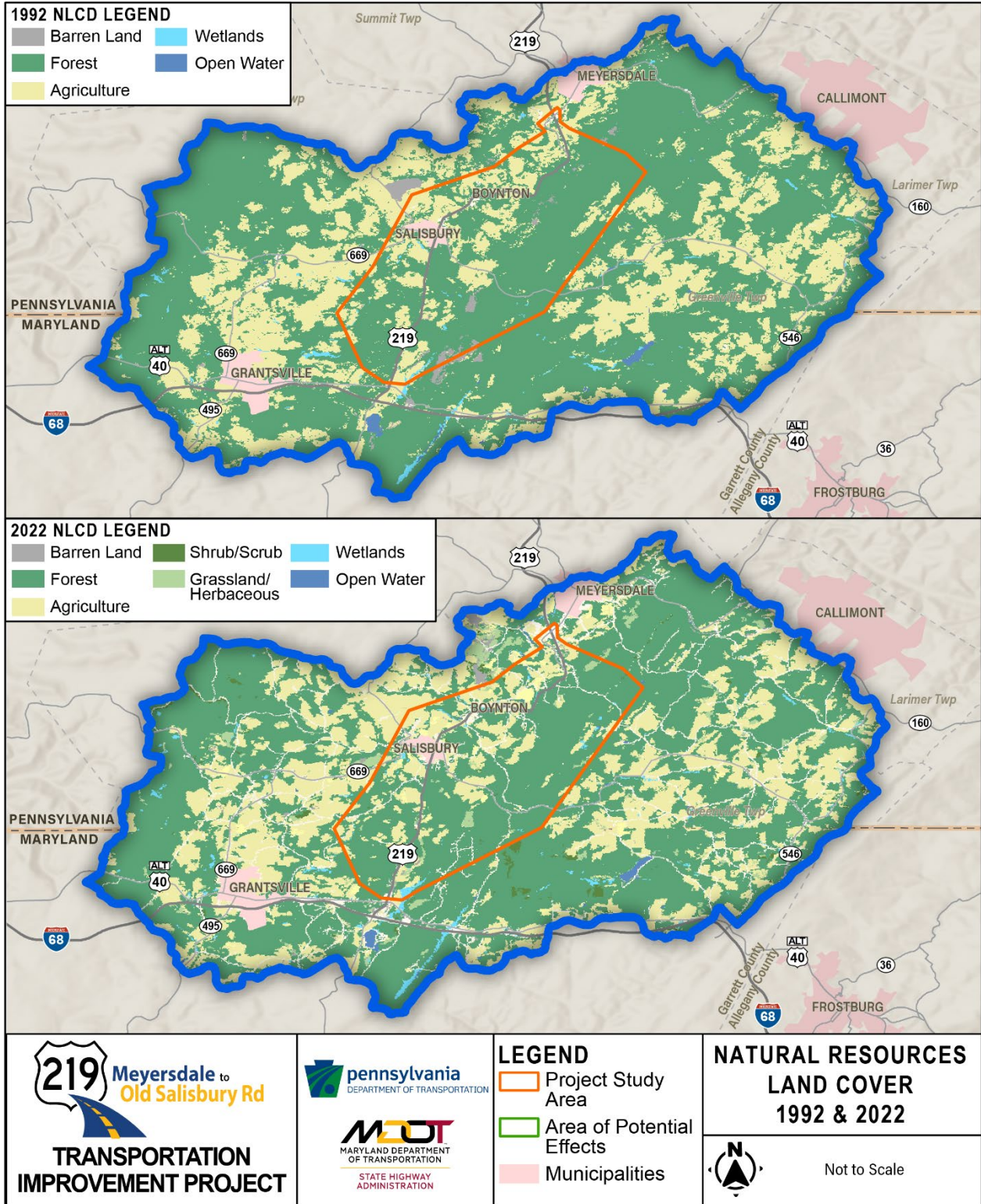
### 4.3.2 Natural Resources Trends

This section describes the natural resources trends within the Natural Resources ICE Study Area based on available data. These trends provide an overview of the natural resource conditions within the Natural Resources ICE Study. Below are **Table 4-4** and **Figure 4-4** showing the natural resources land cover trends within the Natural Resources ICE Study Area from 1992 to 2022.

**Table 4-4: Natural Resources Land Cover Trends within the Natural Resources ICE Study Area**

Land Cover Type	1992 (acres)	2002 (acres)	2012 (acres)	2022 (acres)	1992-2022 Change (acres)	1992-2022 % Change
Barren Land	706.3	856.7	818.9	462.1	-244.2	-35%
Forest	52,364.4	48,180.3	48,049.5	48,104.2	-4,260.2	-8%
Shrub/Scrub	N/A	335.4	581.8	493.9	N/A	N/A
Grassland/Herbaceous	N/A	1,124.4	1,071.1	1,438.9	N/A	N/A
Agriculture	24,606.4	21,792.9	21,604.8	21,479.1	-3,127.3	-13%
Wetlands	418.5	525.1	538.2	612.9	194.4	46%
Open Water	258.2	307.6	270.4	246.4	-11.8	-5%

Source: Multi-Resolution Land Characteristics Consortium National Land Cover Database



**Figure 4-4: Natural Resources Land Cover (1992 and 2022) within the Natural Resources ICE Study Area**

#### **4.3.2.1 Water Resources**

The Casselman River Watershed encompasses the Natural Resources ICE Study Area and extends into both Somerset County and Garrett County. The Pennsylvania Department of Environmental Protection (DEP) identifies the Casselman River Watershed as a restoration priority watershed meaning this watershed has a high number of impaired waterbodies. The impairment is to aquatic life with the source of impairment coming from abandoned mine drainage and the cause of impairment from metals and pH (DEP, 2020). The Garrett County portion of the Casselman River Watershed is experiencing the same pH impairment issues. The pH impairments are associated with acid mine drainage from abandoned mine lands or episodic atmospheric deposition (MDE, 2011).

In Maryland during the period from 1995-1997, Garrett County had the greatest percentage of stream miles rated good by both the fish and benthic Index of Biotic Integrity (IBI). Over 82% of the stream miles in Garrett County were rated Optimal for trash as noted by the Maryland Biological Stream Survey (MBSS). Using the fish and benthic IBI, the MBSS rated the overall condition of Garrett County streams as fair during 2000-2004.

Within the Natural Resources ICE Study Area there was 258.2 acres of open water in 1992 (approximately 0.3 percent of the Natural Resources ICE Study Area) and in 2022 open water area decreased to 246.4 acres (approximately 0.3 percent of the Natural Resources ICE Study Area). Between 1992 and 2022 open water area within the Natural Resources ICE Study Area decreased approximately five percent.

According to the Multi-Resolution Land Characteristics Consortium (MRLC) National Land Cover Database (NLCD), within the Natural Resources ICE Study Area there was 418.5 acres of wetlands in 1992 (approximately 0.5 percent of the Natural Resources ICE Study Area) and in 2022 wetland areas increased to 612.9 acres (approximately 0.8 percent of the Natural Resources ICE Study Area). Between 1992 and 2022 wetland areas within the Natural Resources ICE Study Area increased approximately 46 percent. This increase in wetlands can be attributable to the 1972 Clean Water Act, and specifically Section 404. By requiring the restoration, creation, or enhancement of other wetlands as compensation for unavoidable wetland loss from transportation or development projects, the Clean Water Act and Section 104 have resulted in significant reduction and regulation of wetlands impacts.

In the early 1980s, Pennsylvania net wetland acreage began increasing, as awareness of wetland benefits increased. The 1980 enactment and enforcement of a new Chapter 105 in Pennsylvania was also instrumental. The Maryland Nontidal Wetlands Act of 1989 ensures no net loss by requiring wetland mitigation. The expanding private mitigation banking industry has assisted in increasing wetland totals in both states.

#### **4.3.2.2 Terrestrial Habitat**

The Natural Resources ICE Study Area land cover largely consists of forested land. Historically, growth in both Somerset County and Garrett County has been slow with primary effects to terrestrial habitat being the clearing of forested land for farming, strip mining and low-density residential development and commercial development along US 219 and other major roadways in the US 6219 Section 050 Project area. According to the

MRLC NLCD, in 1992 land cover in the Natural Resources ICE Study Area consisted of 52,364.4 acres of forested land (approximately 66 percent of the Natural Resources ICE Study Area). In 2002 forested land in the Natural Resources ICE Study Area decreased to 48,180 acres and by 2022 forested land was 48,104 acres (approximately 60 percent of the Natural Resources ICE Study Area). Between 1992 and 2022 forested land in the Natural Resources ICE Study Area decreased approximately 8 percent. This decrease can be attributable to an increase in developed land.

The Casselman River watershed is classified as a Tier 1 watershed, serving as a stronghold for one or more state listed aquatic species. “Stronghold Watersheds” are defined by the Maryland Department of Natural Resources as “the places where Greatest Conservation Need species of stream-dwelling fish, amphibians, reptiles, or mussels have the highest abundance or diversity.” The Casselman River watershed is among the top five in Maryland in terms of stream and river biodiversity. The Casselman River itself is recognized by the Maryland Department of the Environment as “a high-quality mountain stream noted for its populations of endangered species such as brook trout, stonecats, and hellbenders in its healthier reaches.”

**4.3.2.3 Farmland and Prime and Statewide Important Farmland Soils**

Shown in **Table 4-5** is an overview of farmland from 1992 to 2017 for Somerset County and Garrett County. Back in 1992, Somerset County had a total of 973 farms and 219,933 acres of farmland and Garrett County in 1992, had 634 farms and 110,699 acres of farmland (U.S. Department of Agriculture [USDA], 1992). In 2017, there were 1,152 farms and 219,046 acres of farmland in Somerset County (USDA, 2017a). In 2017, Garrett County had 707 farms and 90,357 acres of farmland. Although both Counties have more farms in 2017 than in 1992, the acres of farmland decreased, and this can be associated with the increase in smaller farms in 2017. In addition, Pennsylvania has strict farmland laws that afford protection to various types of farmlands which could explain the change in farmland from 1992 to 2017 is less in Somerset County than Garrett County.

**Table 4-5: County Farmland Trends from 1992 to 2017**

Item	1992	2002	2012	2017	1992-2017 Change	1992-2017 % Change
<b>Somerset County</b>						
Number of farms	973	1,194	1,140	1,152	+179	+18%
Land in farms (acres)	219,933	223,323	214,581	219,046	-887	-0.4%
Average size of farm (acres)	226	187	188	190	-36	-16
<b>Garrett County</b>						
Number of farms	634	634	667	707	+73	+12%
Land in farms (acres)	110,699	101,444	95,197	90,375	-20,324	-18%
Average size of farm (acres)	175	160	112	128	-47	-27%

Source: U.S. Department of Agriculture

According to the MRLC NLCD, in 1992 there were 24,606 acres of farmland (approximately 31 percent of the Natural Resources ICE Study Area) within the Natural Resources ICE Study Area and in 2022 farmland decreased to 21,479 acres (approximately 27 percent of the Natural Resources ICE Study Area). Between 1992 and 2022 farmland within the Natural Resources ICE Study Area decreased approximately 13 percent. This decrease in farmland can be attributable to an increase in developed land.

Important farmland includes prime and unique farmland and farmlands of statewide and local importance. Under the Farmland Protection Policy Act (FPPA), Federal agencies are required to evaluate the impacts of federally funded projects that may involve permanently converting prime and important farmlands to nonagricultural uses. When proposed by Federal agencies such conversions are reviewed by the US Department of Agriculture Natural Resources Conservation Service (NRCS). In 2022, the NRCS reported that 125,068 acres of were proposed for conversion to nonagricultural uses. Of the acres reviewed, about 39 percent (48,610 acres) were identified as important farmland. Of that important farmland, 24,683 acres were prime or unique farmland, and 23,904 acres were State or locally important farmland. Although not Federal agency conversions, as shown above, the trend of converting agricultural land to non-agricultural use is likely occurring in both Garrett and Somerset Counties.

### **4.3.3 Socioeconomic Trends**

This section describes the socioeconomic trends within the Natural Resources ICE Study based on available data. These trends provide an overview of the socioeconomic conditions within the Socioeconomic Resources ICE Study Area in addition to identifying the potential influence on growth and land use.

#### **4.3.3.1 Population**

Somerset County and Garrett County both have demographic and economic concerns related to decreasing and aging populations. **Table 4-6** shows the projected population for Somerset County and Garrett County through 2045. Somerset County is projected to experience a decline in population from 2020 to 2045 with a growth rate of -2.7 percent. Garrett County is projected to experience a slight increase in population from 2020 to 2045 with a growth rate of 1.5 percent. These low to negative population projections shown in **Table 4-6** could be a result of the aging population Somerset County and Garrett County are experiencing. According to the U.S Census Bureau 2016-2020 5-Year American Community Survey (ACS) data, the median age in Garrett County is 8 years older than the median age in Maryland, and the median age in Somerset County is 5 years older than the median age in Pennsylvania (see **Table 4-7**). The median age of the population in each county has outpaced increases in the median age of each state since 2000. The median age of the population in Maryland has increased by 0.2 year and the median age in Pennsylvania has increased by 2.9 years since 2000. Comparatively, the median age in Garrett County has increased by 8 years and the median age in Somerset County has increased by 6 years since 2000. This trend can also be seen in the share of the population over the age of 65 in each county, which is significantly greater than the statewide population. Approximately 22 percent of the population in Garrett County is age 65 and over, compared to 15 percent in Maryland, and 22 percent of the population in Somerset County is age 65 or older, compared to 18 percent in Pennsylvania.

**Table 4-6: Population Projection (2010 to 2045)**

Location	2010	2015	2020	2025	2030	2035	2040	2045
Somerset County, PA	77,742	75,937	77,020	72,772	71,573	70,187	68,632	67,079
Growth %	--	-2.32%	1.43%	-5.52%	-1.65%	-1.94%	-2.22%	-2.26%
Garrett County, MD	30,097	29,600	28,806	29,700	30,250	30,510	30,760	31,000
Growth %	--	-1.65%	-2.68%	3.10%	1.85%	0.86%	0.82%	0.78%

Sources: 1) Maryland Department of Planning, Projections and State Data Center, December 2020 2) Pennsylvania State Data Center for the Center for Rural Pennsylvania

**Table 4-7: Age of Population**

Age	Socioeconomic Resources Boundary	Somerset County, PA	Garrett County, MD	Pennsylvania	Maryland
Under 18	22%	18%	19%	21%	22%
18-64	58%	60%	59%	61%	62%
65 and over	20%	22%	22%	18%	15%
Median Age	43	46	47	41	39

Source: U.S. Census Bureau American Community Survey (ACS) 2016-2020 Tables B01001 and B01002 (U.S. Census Bureau, 2020a)

### 4.3.3.2 Housing

Potential indirect effects to population could occur from transportation projects that induce growth, involve many residential acquisitions, or make an area less desirable for residential land use. According to the U.S. Census Bureau’s (2022) American Community Survey (ACS) 2016-2020 5-Year Estimates Table, the population of the Census BGs in the Socioeconomic Resources ICE Study Area is approximately 11,532. The amount of available housing within the Socioeconomic Resources ICE Study Area Census BGs could indicate whether residents undergoing acquisitions could find replacement housing in the same area, and thus reduce indirect impacts to population. Housing in the Socioeconomic Resources ICE Study Area Census BGs consist mainly of single-family homes. Housing in the Socioeconomic Resources Indirect and Cumulative Effects Study Area BGs ranges from single-family homes and townhouses to apartments and condominiums. An estimated 5,518 housing units are in the Socioeconomic Resources ICE Study Area Census BGs. Of those, 4,568 (approximately 83 percent) are occupied. Shown in **Table 4-8** below is a breakdown of occupied and vacant housing units within the Socioeconomic Resources ICE Study Area in addition to Garrett County, Somerset County, and their respective states.

**Table 4-8: Occupied and Vacant Housing Units**

Housing Characteristics	Socioeconomic Resources Boundary	Somerset County, PA	Garrett County, MD	Pennsylvania	Maryland
Total Housing Units	5,518	38,523	19,428	5,713,345	2,459,650
<b>Tenure Status</b>					
Occupied Housing Units	4,568	29,518	12,745	5,106,601	2,230,527
Owner Occupied	77%	80%	79%	69%	67%
Rented	23%	20%	21%	31%	33%
<b>Vacancy Status</b>					
Percent of Units Vacant	17%	23%	34%	11%	9%
Percent of Vacant Units Seasonal	31%	61%	69%	28%	25%

Source: U.S. Census Bureau American Community Survey (ACS) 2016-2020 Tables B25001, B25003 and B25004 (U.S. Census Bureau, 2020b)

### 4.3.3.3 Employment

**Table 4-9** presents unemployment rates in Somerset County and Garrett County compared to statewide rates from 1990 to 2022. Unemployment rates within each county between 1990 and 2022 have been higher than their respective states. Between 2008 and 2015, the unemployment rates grew due to the period of economic downturn during the late 2000s and early 2010s, known as the “Great Recession”. Then in 2020 unemployment rates grew again to the loss of jobs experienced during the COVID-19 pandemic. In 2022 unemployment rates dropped between 3 and 6 percent for both counties and their respective states, which is considered a “healthy” economy. According to the Maryland Department of Planning (MDP) total employment in Garrett County between 2020 and 2030 is expected to increase 6.2 percent. Somerset County is in the Southern Alleghenies Workforce Development Area (WDA) and according to the Pennsylvania Department of Labor and Industry, a 2.8 percent growth in employment within Southern Alleghenies WDA is projected.

**Table 4-9: Unemployment Rates (Annual Average)**

Location	1990	2000	2010	2020	2022
Somerset County, PA	7.2%	5.3%	9.3%	9.3%	5.4%
Garrett County, MD	9.4%	5.2%	8.9%	6.4%	3.5%
Pennsylvania	5.5%	4.2%	8.2%	8.9%	4.4%
Maryland	4.5%	3.6%	7.7%	6.5%	3.2%

Source: Bureau of Labor Statistics, U.S. Department of Labor



The three largest industries in both counties and within the Socioeconomic Resources ICE Study Area are educational services, health care, and social assistance (see **Table 4-10**). The next largest industries are construction in Garrett County and manufacturing in Somerset County. Employment in agriculture, forestry, fishing, hunting, and mining is also significant to the region, with a percentage multiple times larger in each county and the Socioeconomic Resources ICE Boundary than the respective percentages in Maryland or Pennsylvania.

**Table 4-10: Industry Type for the Employed Population**

Industry Type	Socioeconomic Resources ICE Boundary	Garrett County, MD	Somerset County, PA	Maryland	Pennsylvania
Agriculture, Forestry, Fishing, Hunting, Mining	7.1%	3.7%	4.1%	0.5%	1.3%
Construction	8.8%	13.1%	7.7%	7.1%	6.0%
Manufacturing	18.1%	7.5%	14.5%	4.5%	11.6%
Wholesale Trade	1.2%	1.5%	2.1%	1.7%	2.6%
Retail Trade	8.1%	9.7%	10.5%	9.3%	11.0%
Transportation & Warehousing, Utilities	4.4%	6.0%	6.2%	4.8%	5.8%
Information	0.4%	1.8%	0.9%	1.9%	1.6%
Finance & Insurance, Real Estate & Rental & Leasing	4.0%	5.8%	4.9%	6.1%	6.6%
Professional, Scientific, Mgmt., Administrative, Waste Mgmt. Services	5.1%	8.5%	7.9%	15.8%	10.6%
Educational Services, Health Care, Social Assistance	22.0%	21.1%	21.3%	23.7%	26.2%
Arts, Entertainment, Recreation, Accommodation, Food Services	10.6%	8.9%	8.4%	8.1%	8.1%
Other Services, except Public Administration	5.4%	6.2%	5.9%	5.4%	4.7%
Public Administration	4.7%	6.0%	5.6%	10.9%	4.0%

Source: U.S. Census Bureau American Community Survey (ACS) 2016-2020 Table C24030 (U.S. Census Bureau, 2020c)

### 4.3.4 Environmental Justice

Executive Orders 12898 and 14096 and the USDOT/FHWA EJ Orders address the identification and evaluation of potential impacts to minority and low-income populations. USDOT Order 5610.2(c) defines Environmental Justice as the fair treatment and meaningful involvement of all people, regardless of race, ethnicity, income, national origin, or educational level, with respect to the development, implementation and

enforcement of environmental laws, regulations, and policies. The guiding principles followed by the USDOT regarding Environmental Justice are:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The U.S. Environmental Protection Agency’s (EPA) EJ Screening and Mapping Tool (EJScreen) Version 2.2 was used to analyze the demographic characteristics of the Socioeconomic Resources ICE Study Area, including percentages of low-income individuals and ethnic minorities within the total population. EJScreen is a prescreening tool based on nationally consistent data that takes into consideration environmental and demographic indicators. The EPA EJScreen technical memorandum states it should not be used for decision-making or to identify EJ communities based only on the tool.

#### **4.3.4.1 Minority Populations**

Minority populations are any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed USDOT/FHWA program, policy, or activity (USDOT and FHWA EJ Orders). The appropriate geographic area for this study is the Census BG based on the size and scope of the proposed action.

The EJScreen states that the presence of potential EJ populations is based on percentages that exceed the national average, which was 31 percent for “People of Color”, using data from U.S. Census Bureau’s American Community Survey (ACS) 2016-2020 5-Year Estimates. According to the EJScreen technical memorandum people of color are individuals who identify with a race other than white, or who identify as Hispanic or Latino. This includes individuals who are not of mixed race.

Based on the EJScreen tool, minority populations within the Socioeconomic Resources ICE Study Area Census BGs (excluding BG 421110217003 with 22 percent) are lower than the percentage of minority populations within each county and state and are relatively consistent across the Socioeconomic Resources ICE Study Area, as identified in **Table 4-11**. According to the EJScreen tool, the minority population of the Socioeconomic Resources ICE Study Area Census BGs within Pennsylvania totals 5 percent, compared to 6 percent in Somerset County or 24 percent in Pennsylvania, and the minority population of the Socioeconomic Resources ICE Study Area Census BGs within Maryland totals 1 percent, compared to 4 percent in Garrett County or 49 percent in Maryland. This data indicates the BGs within the Socioeconomic Resources ICE Study Area are predominantly white.

**Table 4-11: Minority Percentage within the Socioeconomic Resources ICE Study Area Census Block Groups**

Block Group	EJSCREEN Estimates	
	Total Population	Minority
Maryland	6,177,224	49%
Garrett County, MD	28,955	4%
Block Group 240230002001	1,359	1%
Block Group 240230003001	1,359	1%
<b>Block Groups Average</b>	<b>2,718</b>	<b>1%</b>
Pennsylvania	13,002,700	24%
Somerset County, PA	74,331	6%
Block Group 421110213001	1,175	4%
Block Group 421110215001	772	1%
Block Group 421110215002	904	0%
Block Group 421110216001	1,126	4%
Block Group 421110216002	1,126	4%
Block Group 421110217001	1,175	4%
Block Group 421110217002	746	2%
Block Group 421110217003	1,155	22%
<b>Block Groups Average</b>	<b>8,179</b>	<b>5%</b>

Source: USEPA (2022) EJScreen: Environmental Justice Screening and Mapping Tool (Version 2.2)

#### 4.3.4.2 Low-Income Populations

Low-income populations are any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed U.S. DOT/FHWA program, policy, or activity (U.S. DOT/FHWA EJ Orders). The EJScreen tool was reviewed for the presence of low-income populations.

According to the EJScreen tool, percent low-income is individuals whose household income is less than or equal to twice the federally defined poverty level threshold. Twice the poverty level is used to capture low-income households especially in high-cost areas. The presence of low-income populations is based on percentages that exceed the national average, in this case 27 percent.

The EJScreen tool, indicates that the percentage of low-income households within the Socioeconomic Resources ICE Study Area is 36 percent, which exceeds the percentage in Somerset and Garrett Counties and exceeds the percentage in Pennsylvania and

Maryland. Breaking down the EJScreen Socioeconomic Resources ICE Study Area Census Block Groups data by state, the BGs within Pennsylvania have a low-income population percentage of 37 percent, surpassing the percentage within Somerset County, 33 percent, and percentage within Pennsylvania, 28 percent (see **Table 4-12**). Additionally, EJScreen data indicated that Socioeconomic Resources ICE Study Area Census Block Groups within Maryland have a low-income population percentage of 38 percent, which is greater than the low-income population percentage within Garrett County, 33 percent, and the low-income percentage within Maryland, 22 percent (see **Table 4-12**). This EJScreen data shows that the percentage of low-income residents within the study area block groups is meaningfully greater than percentage in Somerset and Garrett Counties, as well as the percentages in Pennsylvania and Maryland.

**Table 4-12: Low-Income Percentage within the Socioeconomic Resources ICE Study Area Census Block Groups**

Block Group	EJSCREEN Estimates	
	Total Population	Low-Income
Maryland	6,177,224	22%
Garrett County, MD	28,955	33%
Block Group 240230002001	1,359	29%
Block Group 240230003001	1,359	29%
<b>Block Groups Average</b>	<b>2,718</b>	<b>29%</b>
Pennsylvania	13,002,700	28%
Somerset County, PA	74,331	33%
Block Group 421110213001	1,175	27%
Block Group 421110215001	772	34%
Block Group 421110215002	904	64%
Block Group 421110216001	1,126	46%
Block Group 421110216002	1,126	46%
Block Group 421110217001	1,175	27%
Block Group 421110217002	746	21%
Block Group 421110217003	1,155	33%
<b>Block Groups Average</b>	<b>8,179</b>	<b>37%</b>

Source: USEPA (2022) EJScreen: Environmental Justice Screening and Mapping Tool (Version 2.2)

## 4.4 Potential Beneficial and Adverse Indirect Effects

As discussed in Section 3, indirect effects occur as induced growth effects or encroachment alternation effects. Herein the analysis identifies and analyzes the potential for project-influenced development and project encroachment impacts.

### 4.4.1 Potential for Project Related Growth Effects

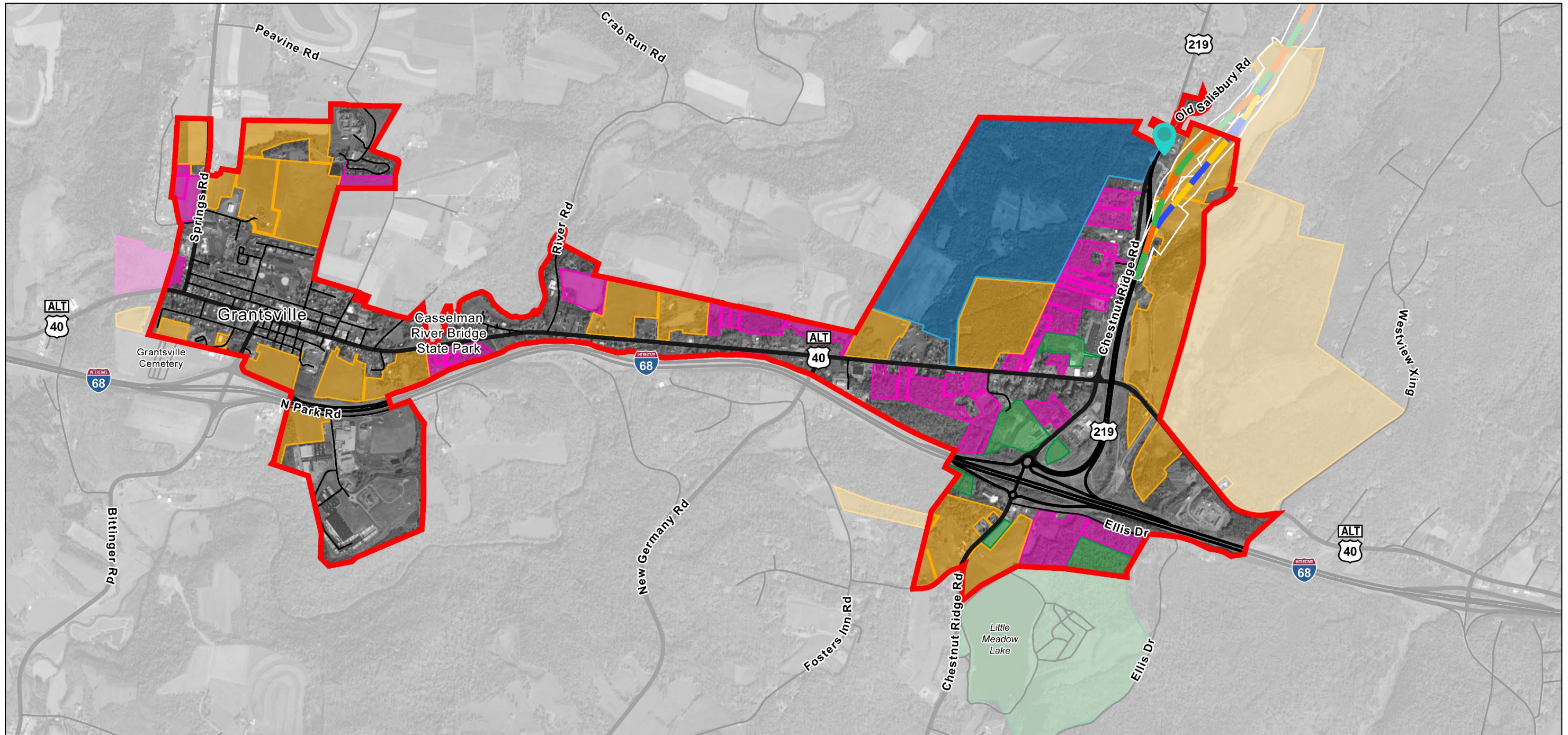
Indirect impacts include project related induced growth impacts. According to PennDOT Publication 640, transportation alternatives may have the potential for changing or creating new land development patterns. For example, project related development could be the construction of a planned distribution warehouse in the vicinity of a new interstate highway interchange. Warehouse construction requires the ease of access that would be provided by an interstate interchange.

The purpose of the US 6219 Section 050 project is to complete Corridor N of the Appalachian Development Highway System (ADHS), to improve regional system linkage, provide safe and efficient access for motorists, and to provide a transportation infrastructure that supports economic development within the Appalachian region.

As described in Southern Alleghenies Planning and Development Commission Corridor N Completion Analysis and Impact Study Report (2020), completion of Corridor N has the potential to induce and facilitate regional growth. The following describes the potential local development that may occur subsequent to the completion of improved US 219 from I-68 to the Meyersdale interchange.

The Maryland Smart Growth Act directs state infrastructure investment to within locally designated Priority Funding Areas (PFA). Garrett County has included both Grantsville and the Chestnut Ridge Development Corridor (CRDC) within a PFA (see **Figure 4-5**). Both areas are highlighted in the Town of Grantsville 2009 Comprehensive Plan. Although not completed or approved, Grantsville is currently updating its Comprehensive Plan and has explored the feasibility of extending water service from Grantsville eastward toward the CRDC. Sewer service is already included in these areas.

Within the PFA and the Chestnut Ridge Development Corridor is the proposed Casselman Farm development which could bring an eight lot, 160-acre industrial park, accessed from US 219, and a 33-lot residential development. (see **Figure 4-5**). Although planned, construction is not currently scheduled. Related to this development is the evaluation of a potential connection from DU Modified, DU-Shift Modified, E Modified, and E-Shift Modified. This potential future connection is not being included as part of this project's direct impact analysis due its uncertainty at the time of this document's publishing. The current need for a connection is based on coordination with Garrett County and on input received from formal public outreach.



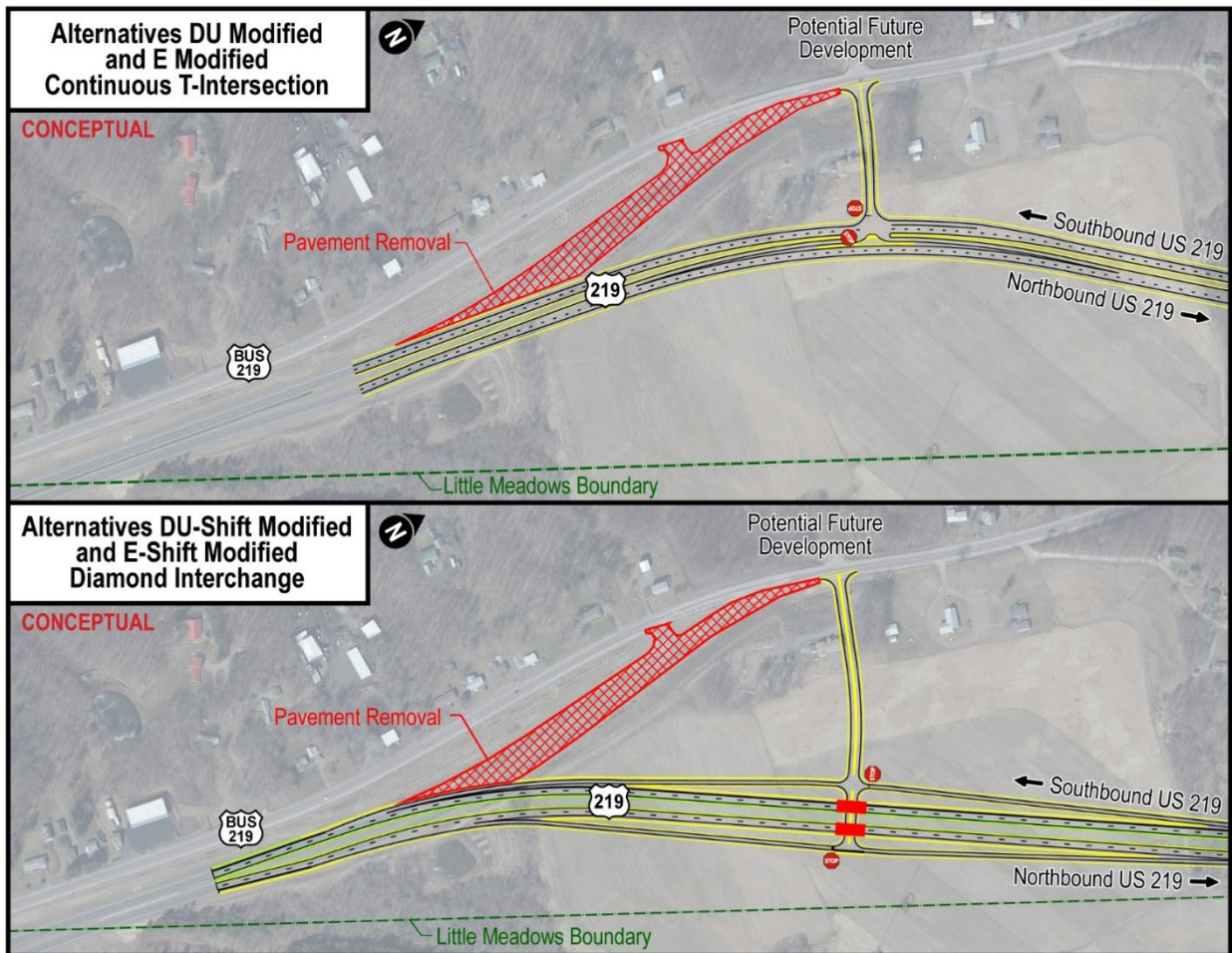
<p><b>TRANSPORTATION IMPROVEMENT PROJECT</b></p>		<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li>Maryland Priority Funding Area</li> <li>Casselman Farm Development</li> <li>Commercial Parcels</li> <li>Agricultural Parcels</li> <li>Residential Parcels</li> </ul>	<ul style="list-style-type: none"> <li>Alternatives DU-Shift Modified &amp; E-Shift Modified</li> <li>Alternatives DU Modified &amp; E Modified</li> </ul> <p>Note: Alternatives shown on this map are the modified alternatives</p>	<ul style="list-style-type: none"> <li>Potential Future Direct Connection Location</li> </ul>	
--	--	--	--	---	--

Figure 4-5: Map of Maryland PFA in Relation to Casselman Farm and the CRDC

This connection is however being evaluated as a potential future indirect impact that could possibly occur following the construction of improved US 219. Based on its proximity to existing US 219, Alternative DU Modified or E Modified construction would preclude future consideration of an interchange connection with existing US 219 based on residential impacts. As a result, a conceptual at-grade intersection with existing US 219 would likely be considered for Alternatives DU Modified and E Modified.

Alternatives DU-Shift Modified and E-Shift Modified would be further away from existing US 219 and could provide opportunity for an interchange. An urban-type or compressed interchange has been recommended by FHWA to minimize future impacts. Any future interchange should consider impact avoidance and minimization measures to both the Tomlinson Inn and Little Meadows historic property and the residences along existing US 219.

Shown on **Figure 4-6** is an illustrative concept of what a future Alternative E Modified and DU Modified at-grade intersection could potentially look like. Also shown on **Figure 4-6** is a conceptual Alternative E-Shift Modified and DU-Shift Modified urban type/compressed interchange that could be considered should future development traffic warrant. Although only concepts are depicted, all four potential connections avoid Tomlinson Inn and Little Meadows, but may impact a place of worship.



**Figure 4-6: Conceptual Direct Connections in Maryland**

As mentioned, completion of Corridor N has the potential to facilitate/induce development in the Study Area supported by improved travel times for potential employees working within the US 219 Corridor. Construction of improved US 219 between I-68 and the Meyersdale Interchange would provide both improved access and increased capacity to the CRDC. The following section addresses the potential for new development in this area and identifies the environmental resources located within currently undeveloped parcels that could potentially be developed in the future. It should be noted that development within these parcels is not imminent.

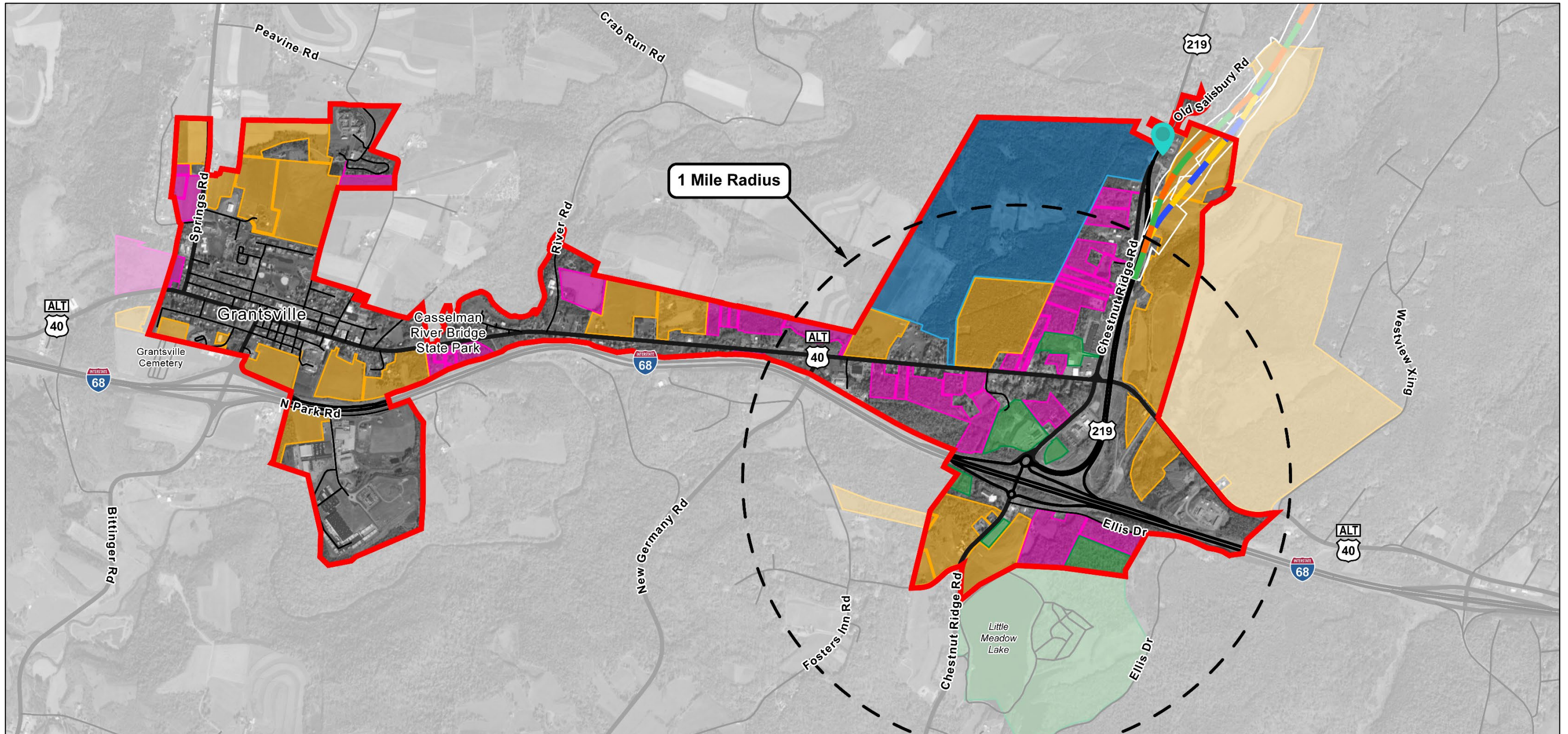
#### **4.4.1.1 Impacts Related to Project Related Growth**

The Grantsville CRDC and Garrett County identification of a PFA enveloping the development corridor indicates the desire to stimulate economic growth area in this area. Areas currently undeveloped have been highlighted as potential areas where future development has the possibility to be considered by property owners. These areas have been highlighted in attempt to identify potentially affected environmental resources within these parcels. For study purposes, a one-mile radius was drawn around the I-68 interchange as an indicator of land parcels most likely having the greatest development attraction. This one-mile radius is shown **Figure 4-7** in relation to:

- The Garrett County PFA
- Casselman Farm Development
- Current undeveloped land tracts within the one-mile radius surrounding the I-68 interchange
- Location of a potential future at-grade intersection connection to existing US 219 with Alternatives DU Modified and E Modified
- Location of a potential future at-grade intersection or grade separated interchange to existing US 219 associated with Alternatives DU-Shift Modified and E-Shift Modified

The historic Tomlinson Inn and Little Meadows property and the Savage River State Forest are also contained within the 1-mile potential development radius around the I-68 interchange and have protections preventing or limiting future development.





<p><b>TRANSPORTATION IMPROVEMENT PROJECT</b></p>	<p><b>MDOT</b> MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION</p>	<p><b>LEGEND</b></p> <ul style="list-style-type: none"> <li><span style="border: 1px solid red; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Maryland Priority Funding Area</li> <li><span style="background-color: blue; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Casselman Farm Development</li> <li><span style="background-color: yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Agricultural Parcels</li> <li><span style="background-color: pink; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Residential Parcels</li> <li><span style="background-color: green; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Commercial Parcels</li> </ul>	<ul style="list-style-type: none"> <li><span style="background-color: blue; border: 1px solid yellow; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Alternatives DU-Shift Modified &amp; E-Shift Modified</li> <li><span style="background-color: green; border: 1px solid orange; display: inline-block; width: 15px; height: 10px; margin-right: 5px;"></span> Alternatives DU Modified &amp; E Modified</li> </ul> <p><small>Note: Alternatives shown on this map are the modified alternatives</small></p>	<ul style="list-style-type: none"> <li><span style="color: teal;">●</span> Potential Future Direct Connection Location</li> </ul>	<p>Miles 0 0.5 1</p>
--	---	---	--	---	--------------------------

Figure 4-7: Parcels Around the I-68 Interchange with the Greatest Development Attraction

## 4.4.2 Potential for Encroachment Alteration Effects

Encroachment alteration effects are physical, chemical, or biological changes in the environment that occur as a result of the project but are removed in time or distance from the direct effects. The potential for the US 219, Section 050 project to result in encroachment effects is discussed in the following sections. The resources considered for potential encroachment impacts are based on the direct impacts described in **Table 4-1** under **Section 4.1** and include:

- Socioeconomic Impacts
  - Community Facilities and Services
  - Parks and Recreational Facilities
  - Land Use, Property, and Right-of-Way
  - Population and Housing
  - Noise
  - Air Quality
  - Economic Resources
  - Visual and Aesthetic
- Natural Environmental Impacts
  - Water Resources
  - Floodplains
  - Terrestrial Habitat
  - Threatened and Endangered Species
  - Prime and Statewide Important Farmland Soils
  - Productive Agricultural Land
- Cultural Resources Impacts
  - Historic Sites and Districts
  - Archaeological Resources

### 4.4.2.1 Impacts Related to Potential Encroachment Alternative Effects

As mentioned previously, encroachment alteration effects are physical, chemical, or biological changes in the environment that occur as a result of the project but are removed in time or distance from the direct effects. The potential for the US 6219 Section 050 Project to result in encroachment effects is discussed below.

#### **Socioeconomic Resources**

With the No-Build Alternative, no new US 219 connection from Meyersdale, Pennsylvania to Garrett County, Maryland would be constructed, and the existing two-lane alignment of US 219 would remain. The No-Build Alternative would experience lower levels of service in the design year (2050) along the existing roadway compared to the four Build Alternatives. This increased congestion could result in more noise and air impacts. The lack of a new connection between Meyersdale, Pennsylvania and Garrett County, Maryland could have an adverse indirect effect on the socioeconomic resources throughout the Socioeconomic Resources ICE study area by not improving the system linkage in the region. These indirect effects could include individuals and or businesses leaving the area to reduce transportation-related costs.

### Community Facilities and Services

While there may be temporary disruptions to travel patterns during construction, there would be no long-term disruption to access as most of the community facilities and services within the Socioeconomic Resources ICE Study Area are located in the towns of Grantsville, Salisbury and Meyersdale which are far removed from the four Build Alternatives. Indirect impacts to community facilities and services are not expected.

### Parks and Recreational Facilities

None of the modified Build Alternatives would impact Pennsylvania State Game Lands Number 321. The four modified Build Alternatives are not likely to change the use of the State Game Land and would therefore not cause indirect effects.

### Land Use, Property, and Right-of-Way

Each Build Alternative would convert land used for residential and commercial uses to transportation right-of-way. It is anticipated that DU Modified and DU-Shift Modified would affect 9 residential and 2 commercial displacements and E Modified and E-Shift Modified would cause 8 residential and 2 commercial displacements. Alternative DU Modified would impact 117 parcels and Alternative DU-Shift Modified would impact 114. Alternative E Modified impacts 106 parcels and Alternative E-Shift Modified impacts 103. Proposed temporary and permanent right-of-way acquisition would not change overall land use in the area; therefore, direct impacts to socioeconomic resources would be limited, minimizing the potential for substantial indirect effects. Each Build Alternative would also not divide any communities and while there may be temporary disruptions to travel patterns during construction, there would be no long-term disruption to access. The project is not anticipated to result in any encroachment alteration effects to the existing residential and commercial land uses.

### Population and Housing

Each Build Alternative would result in residential relocations with DU Modified and DU-Shift Modified involving 9 residential displacements and E Modified and E-Shift Modified causing 8 residential displacements. The indirect impact to these residential displacements would likely be short-term as a great deal of vacant land is available for the use of potential relocation.

The US 6219 Section 050 Project would result in increased economic opportunity and connectivity for all residents by providing improved access to labor markets in the region. The proposed new US 219 highway would not be tolled, and all populations would have free and equal access along the roadway. Therefore, a disproportionately high or adverse indirect impact is not anticipated on EJ communities.

In the Socioeconomic Resources ICE Study Area there appears to be a high percentage of low-income populations and a low percentage of minority populations. There would not be a disproportionately high and adverse effect to EJ populations from any of the Build Alternatives. This is reflected in the low number of potential residential relocations located in Census Block Groups with low-income populations.

Each Build Alternative would result in slight splitting of existing residential areas. The Socioeconomic Resources ICE Study Area largely consists of forested and agricultural

land, with concentrated areas of low to medium density development outside Meyersdale, within Salisbury, within the unincorporated community of Boynton, and in northern Garrett County along the existing US 219. The indirect impact to community cohesion would be minimal because of the lack of fragmentation proposed as a direct effect of this project.

### Noise

Each Build Alternative may impact noise levels for sensitive receptors to varying degrees depending on where the receptors are located. Indirect impacts of traffic noise would be assessed as part of future traffic noise modeling. Noise analysis uses traffic volumes that include the future users attracted to the proposed action. Receptors would be identified for undeveloped land and undeveloped land permitted for development. Therefore, the noise levels predicted by traffic modeling already incorporate anticipated indirect traffic noise impacts and would be analyzed and mitigated for as a direct impact. The indirect effects of noise will be addressed in the US 6219 Section 050 Draft Environmental Impact Statement.

### Air Quality

A conformity analysis demonstrates that the emissions projections in the Transportation Improvement Plan from on-road sources (cars, trucks, etc.) are within the emission limits established by the federal regulations as identified in the statewide transportation improvement program. Somerset County and Garrett County are in attainment for all transportation-related pollutants, regional and project-level conformity determination under the Clean Air Act is not required. Future air quality analyses would include anticipated future users of Alternatives DU Modified, DU-Shift Modified, E Modified, and E-Shift Modified. Therefore, the indirect effects of air quality are addressed in the US 6219 Section 050 Project Air Quality Memorandum (PennDOT, 2023a).

### Economic Resources

Each Build Alternative may potentially have a positive impact on local and regional business in the Socioeconomic Resources ICE Study Area. The system linkage in the region will be improved, providing safe and efficient access for motorists, and a transportation infrastructure to support economic development within the Appalachian region. This benefit is anticipated to induce additional development within designated growth areas which could therefore cause indirect effects.

Short-term construction effects to businesses from temporary detours could occur, causing some customer losses and making deliveries more difficult. Such effects would be temporary and minimized by advanced notice of closures and directional signing. However, this direct effect is not likely to induce development or lead to indirect effects. Additionally, increases in job opportunities could be expected due to short-term construction hiring and long-term maintenance of the new road.

### Visual and Aesthetic

Each Build Alternative will likely result in visual and aesthetic impacts. The existing rural character of the landscape would be transformed by the proposed US 219 alignment which includes a four-lane divided highway with 12' wide travel lanes, 8' wide inside shoulders, and 10' wide outside shoulders. Potential changes in vegetation patterns over

time in areas cleared for road construction and areas of cut and fill slopes which could result in minimal to moderate impacts to the visual landscape.

### **Natural Environmental Resources**

No construction or changes to the natural environment would occur with implementation of the No-Build Alternative. Therefore, no project-related encroachment impacts to natural resources in the Natural Resources ICE Study Area would occur.

#### Water Resources

Each of the four Build Alternatives may potentially result in short and long term minor adverse degradation of water resources. Each Build Alternative would potentially directly affect wetlands and streams. Alternatives DU Modified and DU-Shift Modified impact approximately 12.3 acres of wetlands and Alternatives E Modified and E-Shift Modified impact approximately 4.7 acres of wetlands. Alternative DU Modified and Alternative DU-Shift Modified impact 26,846 linear feet of streams. Alternatives E Modified and E-Shift Modified would have 24,726 linear feet of stream impacts.

Construction of the four Build Alternatives could result in runoff of pollutants from vehicle exhaust, brake pads, fuel spills, and hydraulic spills into streams located in and downstream of the direct impacts area, indirectly impacting water quality and aquatic habits. Roadway runoff can facilitate the degradation of nearby terrestrial and aquatic habitat through deposition of sediments or contamination from chemical pollutants. This can change the macrobenthic community structure and composition, which in turn may affect the fish and amphibian populations that rely on them as a food source, as well as the birds and aquatic mammals that prey on the fish and amphibians. Runoff could also pick up more sediment from disturbed soils during construction that could be deposited downstream, temporarily reducing water quality.

Potential indirect effects that may occur to wetlands in the Natural Resources ICE Study Area include influx of surface water and sediments, fragmentation of a wetland from a contiguous wetland complex, loss of recharge area, or changes in local drainage patterns. These indirect effects can alter wetland functions such as habitat, plant community, and carbon cycling. Direct impacts from filling, grading, removal of vegetation roadway construction, and changes in water levels and drainage patterns would result in loss of all wetland functions within the immediate footprint of the impact and indirectly contribute to habitat fragmentation effects described below. Indirect impacts are not anticipated to be substantial and wetland impacts are subject to federal and state mitigation requirements.

Culvert extensions would be designed to connect the waters located within the Natural Resources ICE Study Area to those running parallel to the outside of the roadway. All four Build Alternatives could alter upstream and downstream hydrologic flow, which sometimes subsequently may cause erosion and ecosystem-level disruptions. Reduced flow, clogged streams, and weakened habitat could indirectly affect aquatic life movement, breeding and nursery, and feeding. Indirect impacts are not anticipated to be substantial if restoration efforts and proper-designed crossings are implemented.

Less shade from trees due to a reduction in riparian canopy cover could indirectly raise water temperature, oxygen levels, and plant growth, affecting nutrients and aquatic life in and around the improvements potentially indirectly impacting sensitive species and

habitat.

Construction activities could potentially lead to erosion, sedimentation, and accidental spills of hazardous materials from equipment likely impacting streams and wetlands outside the right-of-way limits and result in encroachment alteration effects. However, adhering to established spill prevention and Erosion and Sediment Control protocols would mitigate these risks and minimize potential impacts on natural resources.

### Floodplains

Each Build Alternative would potentially directly affect Federal Emergency Management (FEMA) designated 100-year floodplains for Meadow Run and Piney Run. Alternatives DU Modified and DU-Shift Modified impact approximately 12.3 acres of 100-year floodplains and Alternatives E Modified and E-Shift Modified impact approximately 4.7 acres of 100-year floodplains. Construction of the US 6219 Section 050 Project could result in an encroachment alteration effect if it alters existing drainage patterns and flood flows.

### Terrestrial Habitat

Forested land makes up the majority of the land use within the Socioeconomic Resources ICE Study Area. Each Build Alternative would directly impact forested habitat which could lead to some forest fragmentation. Alternative DU Modified and DU-Shift Modified would impact approximately 431 acres of forest. Alternative E Modified would have 389.8 acres of forest impacts and Alternative E-Shift Modified would have the least forest impacts with 388.8 acres. Fragmentation creates more edge habitat and has the potential to create barriers to wildlife movement which could result in disruption of foraging, breeding/nesting, and migration, increased mortality due to roadway construction and operation, changes in wildlife behavior and reduced biological diversity. In addition, the inadvertent introduction of invasive species via construction machinery could lead to permanent vegetation, habitat, or wildlife composition changes. Project encroachment impacts to terrestrial habitat could result from US 6219 Section 050 Project but are not anticipated to be substantial.

### Threatened and Endangered Species

Threatened and Endangered species face similar potential impacts as described for terrestrial habitat, but their unique life history traits make them less resilient to habitat changes and invasive competition. According to the US 6219 Section 050 Project Rare, Threatened and Endangered Species Technical Memorandum (PennDOT, 2023b) there are six federal and state endangered bat species. The Indiana Bat and Northern Long-Eared Bat are both federally listed species under the jurisdiction of the U.S. Fish and Wildlife Service (USFWS). The US 6219 Section 050 Project Rare, Threatened and Endangered Species Technical Memorandum states that USFWS indicated that federally listed, and proposed-listed bat species are known to occur in the project area, and based on their review of the proposed project, these bat species are likely to be adversely affected. Habitat loss could indirectly impact these protected species through the fragmentation of suitable forage and summer roost habitat, and general habitat, respectively.

According to the US 6219 Section 050 Project Rare, Threatened and Endangered

Species Technical Memorandum there are no Maryland state listed threatened and endangered species in the vicinity of the project area. In Pennsylvania, there are two state listed threatened and endangered species in the vicinity of the project area: Timber Rattlesnake and Long Nosed Sucker. Although the Timber Rattlesnake is threatened by habitat loss/alternation, wanton killing, and poaching, the Pennsylvania Fish and Boat Commission (PFBC) indicated there are no direct adverse impacts anticipated from the US 6219 Section 050 Project. The PFBC did not indicate if the Long-Nosed Sucker would be adversely affected by the US 6219 Section 050 Project but did provide avoidance measures. The water quality indirect effects resulting from construction of impervious surface in the potential LOD of the four Build Alternatives could negatively affect the aquatic habitat present in the Natural Resources ICE Study Area. Increased runoff, carrying pollutants and sediment, can indirectly harm aquatic habitat through increased sedimentation and reduced water quality. Project encroachment impacts could result from habitat disturbances and losses that occur in wetlands, uplands, or waterways, but they are not anticipated to be substantial.

#### Productive Agricultural Land

According to the US 6219 Section 050 Project Agricultural Resources Existing Conditions Memorandum (PennDOT, 2023c) there are thirteen active farmland and farm operations within or abutting the LOD of all four Build Alternatives. These active farmlands include lamb farming, maple trees used for maple syrup production, dairy farming, beef cattle, and crop production. Each Build Alternative would potentially directly affect productive agricultural land (any land used for production, for commercial purposes of livestock, and livestock products) by converting the farmland to transportation right-of-way. This conversion would involve the potential split of several active farmlands.

Alternatives DU Modified and DU-Shift Modified would each impact approximately 53.7 acres of productive cropland and pasture. Alternative E Modified would impact 38 acres and Alternative E-Shift Modified would impact 39.9 acres of productive cropland and pasture. For maple sugar production, Alternatives DU Modified and DU Shift Modified would each impact 23.1 acres and Alternatives E Modified and E-Shift Modified would each impact 0.1 acre. Alternatives DU Modified and DU-Shift Modified would each impact 9 of the 13 productive farms while Alternatives E Modified and E-Shift Modified would impact 6 of the 13 productive farms.

Although the conversion of productive agricultural land to transportation right-of-way is a one-time occurrence, encroachment impacts to productive agricultural land could include the way farmers need to farm the land later in time. For example, fragmentation from US 6219 Section 050 Project could result in remnant sections outside the construction footprint that are no longer suitable for some agricultural uses. Typically, these remnant fields are difficult for farm equipment to access resulting in additional expenses. In addition, short-term dust and emissions from construction could temporarily hinder crop growth and livestock well-being.

#### Prime and Statewide Important Farmland Soils

Prime and statewide important farmland soils face similar impacts as described for

productive agricultural land, but farmland soils are not required to be in active agricultural use to be protected under the Federal Farmland Protection Policy Act (FPPA) which was enacted to minimize the extent to which federal programs contribute to the conversion of agricultural land to nonagricultural uses. According to the US 6219 Section 050 Project Agricultural Resources Existing Conditions Memorandum (PennDOT, 2023c) there are a total of 237.9 acres of FPPA soils in the LOD for all four Build Alternatives.

In the Study Area, there are 54.3 acres of prime farmland soils in Pennsylvania and 0 acres in Maryland. Alternatives DU Modified and DU -Shift Modified would impact 32.9 acres of prime farmland soils and Alternatives E Modified and E-Shift Modified would impact 19.9 acres.

Within the Study Area, 101.8 acres of soils of statewide importance are in Pennsylvania and 75.5 acres in Maryland. Alternatives DU Modified DU-Shift Modified would impact 102.9 acres of soils of statewide importance, Alternatives E Modified and E-Shift Modified would each impact approximately 82 acres of soils of statewide importance.

Similar to productive agricultural lands the conversion of prime and statewide important farmland soils to transportation right-of-way is a one-time occurrence. In addition, short-term dust and emissions from construction could temporarily diminish soil quality.

## **Cultural Resources**

The No-Build Alternative would have no direct physical impact on archaeological resources or historic sites and districts as no construction would occur for the US 6219 Section 050 Project. No indirect effects would occur to cultural resources.

### Historic Sites and Districts

All effects, including indirect effects, of each Build Alternative to historic sites and districts will be considered under Section 106 of the National Historic Preservation Act (NHPA). Indirect effects considered in the Section 106 consultation include visual, audible, and atmospheric elements that could diminish the integrity of historic properties. There are eight aboveground historic resources identified for the US 6219 Section 050 Project which include the National Register Listed (NRL) Tomlinson Inn and Little Meadows in Maryland, the NRL National Road, which is a linear resource in MD, one (NRL) Mason Dixon line marker at the PA/MD state border, and five potentially eligible historic resources in Pennsylvania.

The Build Alternatives would have no physical impact to Tomlinson Inn and Little Meadows, National Road, and the Mason Dixon Marker. Alternatives DU Modified and DU-Shift Modified would reduce physical impact to the Deal Farm from 16.4 acres to 16.2 acres and would reduce physical impact to the Lowry from 23.7 acres to 23.4. Alternative E Modified and E-Shift Modified will not incur any physical impact to the Deal Farm or Lowry Farm. The respective State Historic Preservation Officers have not yet made Determinations of Effect. However, it is likely that DU Modified and DU-Shift Modified would have an adverse effect on historic architectural resources in Pennsylvania because of the acquisition of land and visual impacts which may diminish the integrity of setting, feeling, and association related to the historic sites and districts. Alternatives E Modified and E-Shift Modified would have No Adverse Effect on historic architectural resources.



## Archaeological Resources

All effects, including indirect effects, of each Build Alternative to archaeological resources, will be considered under Section 106 of the NHPA. Indirect effects considered in the Section 106 consultation include visual, audible, and atmospheric elements that could diminish the integrity of historic properties. A Phase IA Archaeological Reconnaissance and Predictive Modeling has been conducted for US 6219 Section 050 Project Area of Potential Effects (APE). The total preliminary archaeological APE for both Pennsylvania and Maryland totals 464.47 ha (1,147.73 ac) in size and these areas were then broken up into prehistoric and historic probability (PennDOT, 2023d). Build Alternatives DU Modified and DU-Shift Modified have the greatest impact to archaeology and E Modified and E-Shift Modified have the lowest. Additional archeology testing will be completed once a preferred alternative has been identified.

### **4.5 Step 5 and 6: Determine Significance of Potential Indirect Effects and Identify Solutions or Mitigation**

The No-Build Alternative would not result in indirect impacts to any resource. Therefore, the assessment for indirect effects significance and mitigation is not required for the No-Build Alternative. The following sections assess the significance of the indirect impacts from the four Build Alternatives. It also identifies potential solutions or mitigation measures PennDOT, SHA, and other agencies could consider to minimize the direct impacts.

The discussion of significance will address how any potential effects would impede or help advance the local, county, regional, or state goals. The assessment will identify if the potential effect would be substantial enough to further impair or deteriorate the resource to irretrievable levels or to the point that mitigation is required.

#### **4.5.1 Impacts Related to Project Related Growths**

Each Build Alternative would complete ADHS Corridor N. This will potentially facilitate or induce development in the US 6219 Section 050 Project Study Area by improving travel times for potential new employees working within the US 219 Corridor. The construction of any of the Alternatives between I-68 and the Meyersdale Interchange would provide both improved access and increased capacity to the CRDC. Potential for new development in this area could impact environmental resources located within currently undeveloped parcels that could potentially be developed in the future. It should be noted that development within these parcels is not imminent.

Communities within the ICE Study Areas have agencies/staff and comprehensive planning documents in place to direct the amount, type, and density of development. No mitigation is recommended.

## **4.5.2 Impacts Related to Potential Encroachment Alternative Effects**

### **4.5.2.1 Socioeconomic Resources**

#### Community Facilities and Services

The four Build Alternatives would likely increase accessibility to community facilities and services and indirectly provide opportunity for additional services to be established.

#### Parks and Recreational Facilities

The Build Alternatives would likely not have any indirect effects to parks and recreational facilities, or to Pennsylvania State Game Lands Number 321, other than potentially providing improved access. Section 4(f) of the Department of Transportation Act dictates that there must be no feasible and prudent alternative that avoids public parks and recreational facilities and that the project includes all possible planning to minimize harm to these properties.

#### Land Use, Property, and Right-of-Way

Each Build Alternative would convert land currently in residential and commercial use to transportation right-of-way. Proposed temporary and permanent right-of-way acquisition would not change overall land use in the area; therefore, direct impacts to socioeconomic resources would be limited, minimizing the potential for substantial indirect effects. Minimization efforts to residential and commercial uses could include use of retaining walls to minimize the LOD, shifting the new alignment, and other modifications to the preliminary design. Right-of-way impacts may be further reduced during later design phases when more detailed information is available.

#### Population and Housing

Each Build Alternative would result in residential relocations with DU Modified and DU-Shift Modified prompting 9 residential displacements and E Modified and E-Shift Modified requiring 8 residential displacements. The indirect impact to residences would likely be short-term as a great deal of vacant land is available for the use of potential relocation. Relocations would be completed in accordance with the rules, policies, and procedures set forth in the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Fair market value would be provided to all property owners as compensation for land acquisition.

#### Noise

The Build Alternatives may impact noise levels for sensitive receptors to varying degrees depending on where they are located. Noise levels predicted by traffic modeling already incorporate anticipated indirect traffic noise impacts which would be analyzed and mitigated for as a direct impact. Noise is also regulated by local jurisdictions and local law enforcement agencies.

#### Air Quality

Indirect effects to air quality are not anticipated by the Build Alternatives. Any indirect effects to air quality would be regulated by Pennsylvania and Maryland State Implementation Plans (SIPs), inventories, and other reports which document how the

states will attain and maintain the National Ambient Air Quality Standards and prevent significant deterioration of air quality in areas cleaner than the standards.

### Economic Resources

Short-term construction effects from the four Build Alternatives to businesses from temporary detours could occur that may cause some customer losses and make deliveries more difficult. Temporary indirect economic impacts associated with road closures and detours during construction would be minimized through advance notice to affected communities and business, flexible schedules, and alternative access routes. These measures aim to minimize economic inconveniences and ensure a smooth transition throughout the construction period.

### Visual and Aesthetic

Each Build Alternative would likely result in visual and aesthetic impacts. Potential changes in vegetation patterns over time in areas cleared for road construction and areas of cut and fill slopes could result in impacts to the visual landscape. To omit, minimize or balance the effect of the natural and built features of the four Build Alternatives some mitigation efforts could include adding context sensitive design elements that make disturbances to the landscape less noticeable and replacing or providing alternative resources to make up for any disturbances to nature.

#### **4.5.2.2 Natural Environmental Resources**

### Water Resources

Construction of the four Build Alternatives may potentially result in short and long term minor adverse degradation of water resources due roadway runoff of pollutants flowing into water bodies in the Natural Resources ICE Study Area. Water resources in the Natural Resources ICE study area are regulated by the Maryland Department of the Environment, Pennsylvania Department of Environmental Protection, and the US Army Corps of Engineers. Indirect impacts would be regulated by these agencies which would also incorporate mitigation into the permit process. Mitigation for impacts to water resources generally consists of three components: avoidance, minimization, and compensation. Avoiding and minimizing direct effects would also serve to reduce indirect effects.

To minimize potential degradation of water quality the following mitigation efforts could be implemented:

- Temporary and permanent stormwater management, erosion, and sediment controls and best management practices (BMPs) during construction;
- Appropriate design of roadway and culverts to avoid or minimize impacts to flow regimes; and
- Compensatory mitigation for unavoidable stream and wetland impacts

### Floodplains

Each Build Alternative would potentially directly affect Federal Emergency Management (FEMA) designated 100-year floodplains. Construction of the US 6219 Section 050 Project could result in in an encroachment alteration effect if it alters existing drainage

patterns and flood flows. To minimize potential indirect impacts to floodplains, a hydrologic and hydraulic analysis could be conducted during final design to ensure adequate design of the hydraulic openings of culverts and bridges. Development near floodplains is subject to local floodplain management policies, such as zoning ordinances, subdivision and land development regulations, building and health codes, and special purpose ordinances.

### Terrestrial Habitat

Each Build Alternative would potentially affect forested habitat which could lead to forest fragmentation indirectly resulting in disruption of foraging, breeding/nesting, and migration, increased mortality due to roadway construction and operation, changes in wildlife behavior, and reduced biological diversity. All efforts will be made to first avoid these potential impacts, followed by minimization and compensation, in accordance with state and federal regulations. In addition, temporary impacts would be reduced through proper location and minimization of construction staging areas and access roads in sensitive habitats.

In addition, the inadvertent introduction of invasive species via construction machinery could lead to permanent vegetation, habitat, or wildlife composition changes. To prevent the spread of invasive species during construction, contractors would adhere to PennDOT and SHA specifications and any applicable regulations.

### Threatened and Endangered Species

Direct loss of threatened or endangered species is not expected as a result of the four Build Alternatives. However, threatened, and endangered species face similar potential impacts as described for terrestrial habitat, but their unique life history traits make them less resilient to habitat changes and invasive competition. Any potential indirect effect to habitat by the four Build Alternatives would be reviewed and regulated by the Federal or State resource agency with jurisdiction over the species. Indiana bat and Northern Long-Eared Bat habitat, for example, would be regulated by the US Fish and Wildlife Service, which would also impose specific conservation and avoidance measures as mitigation such seasonal restrictions on construction or tree clearing. Additional coordination with Pennsylvania Game Commission, Pennsylvania Fish and Boat Commission, Maryland Department of Natural Resources and US Fish and Wildlife prior to permit decisions for the four Build Alternatives.

### Productive Agricultural Land

Although the conversion of productive agricultural land to transportation right-of-way is a one-time occurrence, encroachment impacts to productive agricultural land could include the way farmers need to farm the land later in time. For example, fragmentation from the US 6219 Section 050 Project could result in remnant sections outside the construction footprint that are no longer suitable for some agricultural uses. Coordination with owners of farmland during design can potentially help minimize impacts through the development of design solutions that allow the land to continue to be farmed effectively.

In addition, while there are no preserved farms in the US 6219 Section 050 Project Study Area, each of the agricultural operations in both Pennsylvania and Maryland within the LOD have parcels enrolled in preferential tax assessment programs (type of tax protection) such as Act 319 or 515 in PA or Ag transfer tax program. Those parcels are taxed based on use, rather than prevailing market value.

### Prime and Statewide Important Farmland Soils

Prime farmland soils and soils of statewide importance face similar impacts as described for productive agricultural land, but farmland soils are not required to be in active agricultural use to be protected under the Federal Farmland Protection Policy Act (FPPA) which was enacted to minimize the extent to which federal programs contribute to the conversion of agricultural land to nonagricultural uses. Although the conversion of prime and statewide important farmland soils to transportation right-of-way is a one-time occurrence, encroachment impacts to productive these soils could include the way farmers need to farm the land later in time. The Farmland Conversion Impact Rating Form is required when converting convert important farmland (does not have to be currently used for cropland) to non-farm use and would be completed and coordinated with the local office of Natural Resources Conservation Service (NRCS) or USDA Service Center. NRCS uses a land evaluation and site assessment (LESA) system to establish a farmland conversion impact rating score to be used as an indicator to consider alternative sites if the potential adverse impacts on the farmland exceed the recommended allowable level.

#### **4.5.2.3 Cultural Resources**

Indirect impacts to archaeological sites are not anticipated. Indirect impacts to the potentially National Register-eligible aboveground historic resources could include new visual, atmospheric, or audible elements that may diminish the integrity of a National Register of Historic Places resource, if eligible. Section 106 of the National Historic Preservation Act describes that the federal agency (in this case, FHWA) determines how historic properties might be affected by the project and whether any of those effects would be considered adverse. The agency does so in consultation with other participants in the review. These effects include indirect and cumulative effects. Indirect effects to historic properties not directly impacted by the four Build Alternatives would be regulated by state historic preservation offices, local planning agencies, and local historic preservation agencies.

## 5 CUMULATIVE EFFECTS ANALYSIS

As mentioned in **Section 3**, a cumulative effect is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions (CEQ, 1997). Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

### 5.1 Step 1: Resources to Consider

The first step in performing the cumulative effect analysis is to identify which resources to consider in the cumulative effects analysis. These resources include significantly impacted resources by the US 6219 Section 050 Project and resources currently in poor or declining health or at risk even if US 6219 Section 050 Project impacts are relatively small. The affected resources considered for the cumulative effects analysis are the same as those resources identified in **Section 4** and analyzed in **Section 4.4.2.1** of the indirect effects analysis.

### 5.2 Step 2: Study Area Boundary

The second step in performing the cumulative effect analysis is to define geographic boundaries for resources included in the cumulative effects analysis. The boundaries are the same boundaries discussed in **Section 4.2** which are the following:

- Socioeconomic Resources ICE Study Area consisting of U.S. Census block group boundaries
- Natural Resources ICE Study Area consisting of hydrologic unit boundaries
- Cultural Resources ICE Study Area includes the area of potential effects (APE)

### 5.3 Step 3: Temporal Boundary

The analysis of cumulative effects must consider past, present, and reasonably foreseeable future actions. Establishment of the past temporal boundary examined many events dating back to the 1925 creation of Deep Creek Lake and including the 1940 opening of the Pennsylvania Turnpike and the 1965 establishment of the Appalachian Development Highway System. (See **Figure 5-1**). The past timeframe of 1991 was selected based on the completion date of I-68 in Maryland and the resulting increased accessibility to and from the US 219 corridor and subsequently to and/from I-68 and the Pennsylvania Turnpike via US 219.

The future timeframe was selected because it encompasses the 2050 design year for the US 6219 Section 050 Project. Therefore, the temporal boundary established for the US 6219 Section 050 Project cumulative effects analysis begins in 1991 and extends to the 2050 design year. This timeframe is long enough for cumulative impacts to unfold, but not so far into the future that the impacts become too difficult to reasonably anticipate.

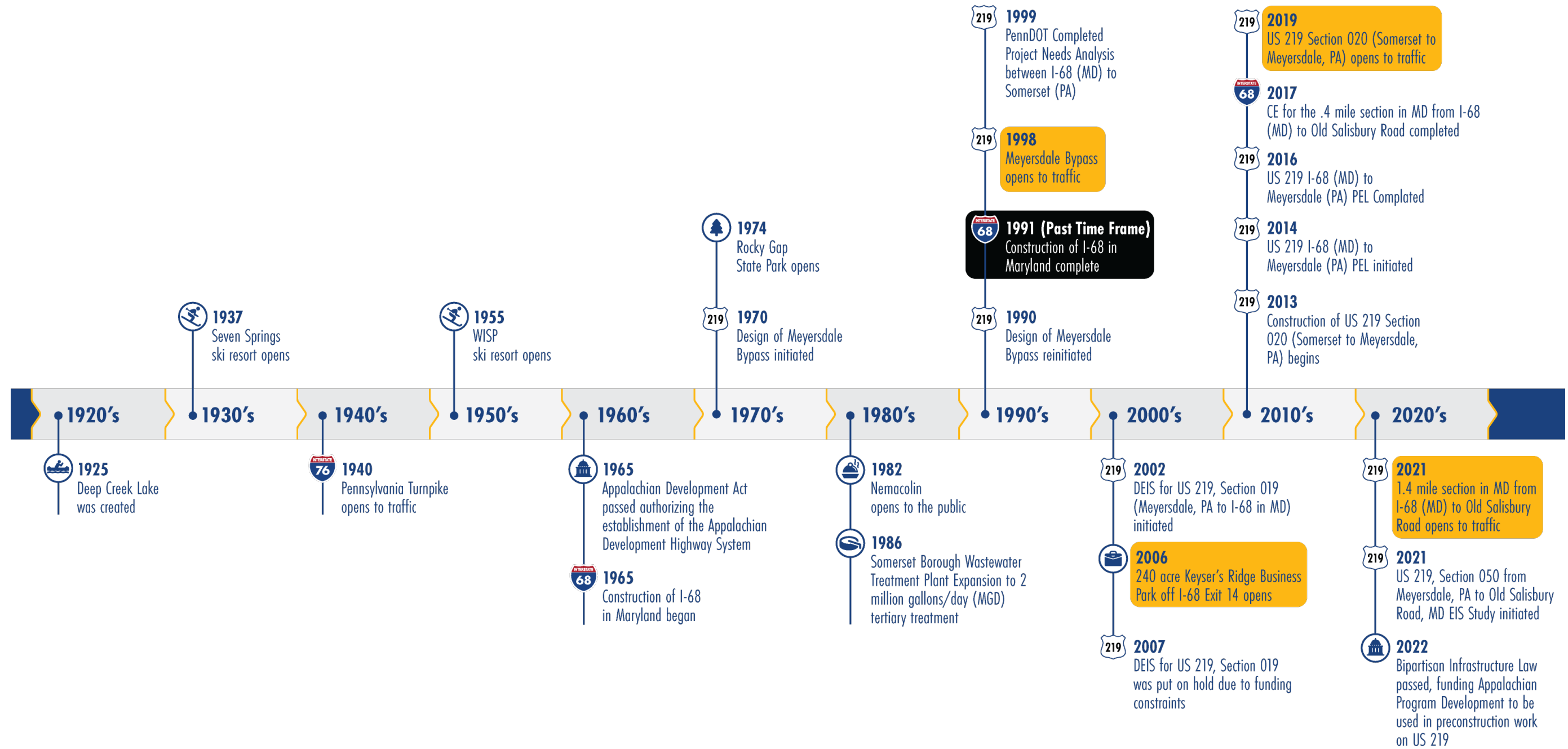


Figure 5-1: Timeline of Past Events Considered to Establish Past Temporal Boundary

## 5.4 Step 4: Other Past, Present, and Reasonably Foreseeable Future Actions That Have Impacted or May Impact the Affected Resources

### 5.4.1 Past Actions

Many of the past actions that have contributed to the baseline for this analysis occurred as part of historical development initiating in the 17th century. As road improvement projects determined settlement patterns during the eighteenth century, they also influenced mid-twentieth-century development. Increases in both traffic and funding for road work led to more development along major roadways in the twentieth century. Interstate 68 was built during the 1960s and 1970s south of the existing junction of Chestnut Ridge Road (US 219) and the National Road (US 40). Between 1946 and 1982, many commercial and low-density residential buildings were constructed to serve the needs of motorists near the junction of Chestnut Ridge Road and the National Road. Since 1991, when the construction of I-68 was completed the conversion of land to low density residential and commercial uses has made minor changes to the amount of agricultural and forested land in the area.

Past actions since 1991 considered for this analysis are:

- Transportation Projects
  - Meyersdale Bypass: Construction of the US 219 Meyersdale Bypass was completed in 1998, changing the landscape in the project area. Local road patterns were changed, and part of the Mason Dixon Highway (now Old 219) was rerouted.
  - US 6219 Section 020: This project was completed in 2019 and is approximately 11 miles of new, limited-access, four lane highway for US 219 in Somerset County from the northern terminus of the four-lane Meyersdale Bypass to the southern end of the existing US 219 four-lane in Somerset, PA.
  - US 219 from I-68 to Old Salisbury Road: This project was completed in 2021 and consisted of a new four-lane divided highway east of existing US 219 (now Chestnut Ridge Road) as well as modification of the existing I-68 interchange.
- Development Projects
  - Keyser's Ridge Business Park: 240-acre industrial park located in Garrett County just off the I-68 corridor along US 40. Construction of the park was completed in 2006.
  - Northern Garrett Industrial Park: 110 acres industrial park located in Garrett County located along I-68 near Exit 19.
  - Food Lion Grocery Store: Aerial Imager shows this was constructed in 2013 along Mason Dixon Highway and off of US 219 Exit 1.



### 5.4.2 Present and Reasonably Foreseeable Future Actions

For cumulative effects analyses, PennDOT Publication 640 defines reasonably foreseeable future actions (RFFA) as probable, not merely possible. Currently there are no transportation or development actions occurring or approved development plans that would likely contribute to cumulative effects on resources directly affected by the project. A concept plan for the Casselman Farm development has been submitted to the Town of Grantsville (as discussed in **Section 4.4.1**). If officially approved, this development would have the potential to contribute to cumulative effects on resources affected by the project. Additionally per the Garrett County Water and Sewer Master Plan (amended 2023), the Chestnut Ridge Development Corridor (CRDC) and surrounding areas are designated for water service in the next ten years.

## 5.5 Step 5: Potential Cumulative Impacts From Past, Present, and Reasonably Foreseeable Future Actions

For Step 5, past, present, and reasonably foreseeable future actions described in **Section 5.4** are analyzed using planning judgement to determine potential cumulative impacts. Where readily available data exist, potential effect is quantified. The potential for cumulative impacts is rated as minor, moderate or high based on the criteria shown in **Table 5-1**. The No-Build Alternative does not impact resources, so is not considered in this analysis of cumulative effects.

**Table 5-1 General Effects Determination Matrix**

Severity	Extent	Duration	Likelihood
Major	Large	Long	Probable
Moderate	Medium	Medium	Possible
Minor	Small	Short	Unlikely

### 5.5.1 Socioeconomic Resources

Much of the land use within the Socioeconomic Resources ICE Study Area has not changed substantially over time. Much of the growth that has occurred consists of low-density residential development and commercial/industrial development along US 219 and other major roadways within the Socioeconomic Resources ICE Study Area. According to the Multi-Resolution Land Characteristics Consortium National Land Cover Database, low intensity development within the Socioeconomic Resources ICE Study Area increased approximately six percent (1,531 acres in 2022) from 2002 to 2022. High intensity development (commercial/industrial) increased approximately 75 percent (132 acres in 2022). The Build Alternatives would increase accessibility to community facilities and services and indirectly provide opportunity for establishment of additional services.

While a plan for the Casselman Farms Development has not been formalized, the vision is to create a mixed-use development center which would create jobs and provide additional housing. This would have a beneficial economic impact on residents within the Socioeconomic Resources ICE Study Area. The potential minimal increase in population from the Casselman Farms Development would create additional demands on community facilities, services, parks, schools, health and emergency services, and utilities. A minimal increase in traffic volumes would occur; however, the US 6219 Section 050 Project would improve local access and safety by re-routing truck traffic and consolidating left turns. In sum, the four Build Alternatives, in combination with reasonably foreseeable development, may result in minor cumulative effects to socio-economic resources.

## **5.5.2 Natural Environmental Resources**

### Water Resources

Cumulative effects on streams and wetlands were assessed within the Natural Resources ICE Study Area. Past growth and development within the Natural Resources ICE Study Area has resulted in the degradation and loss of natural resources over time. However, current federal, state, and local regulations and non-governmental conservation efforts minimize the effects of such development. Cumulative effects on streams and wetlands within the Natural Resources ICE Study Area could result from the four Build Alternatives in combination with reasonably foreseeable future actions. Currently, the only reasonably foreseeable future action is the Casselman Farms Development.

Cumulative impacts to wetlands may result from the US 6219 Section 050 Project in combination with the Casselman Farms Development; however, the anticipated impact would likely be minor. Cumulative impacts to wetlands are likely to be minimized given the numerous current federal and state, regulations that require impacts to be minimized and off-set through compensatory mitigation which may be achieved utilizing a mitigation bank or an in-lieu fee program. Cumulative effects on wetlands are anticipated to be minor due to required permits and adherence to protective measures.

Cumulative impacts to surface water may result from the US 6219 Section 050 Project in combination with planned development; however, the anticipated impact would likely be negligible to minor since the coverage of impervious surface in Natural Resources ICE Study Area is minimal. Cumulative adverse effects on stream and water quality would be related to the continued conversion of existing forest and agricultural lands to residential or urban land uses. The Casselman Farms Development could increase impervious surfaces potentially resulting in increased stormwater flows, flooding, land surface and stream channel erosion, and sediment deposition during and/or following construction.

The implementation of comprehensive regulations, including erosion and sediment control plans, best management practices, and water quality monitoring permits, effectively minimizes potential impacts on streams from the US 6219 Section 050 Project and planned development. Consequently, overall cumulative effects on streams would be minor.

## Floodplains

Other disturbances to the impacted 100-year floodplains could result from the potential Casselman Farms Development. Both Somerset County and Garrett County participate in the National Flood Insurance Program (NFIP) and all development must comply with floodplain regulations.

Pennsylvania Code Title 12, Chapter 113 Floodplain Management became effective in 1980. Its purpose was, and remains, to encourage planning and development in floodplains which are consistent with sound land use practices, protect people and property, and to authorize a comprehensive and coordinated program of floodplain management, based upon the program, designed to preserve and restore the efficiency and carrying capacity of streams and floodplains. Similarly, COMAR 26.17.04.03, enacted in 1987, requires a permit from the Maryland Department of Environment prior to the change in any manner the course, current, or cross section of a stream or body of water within the State including any changes to the 100-year frequency floodplain of free-flowing streams. The implementation of these regulations in 1980 and 1987 respectively and the fact that each remains in place in 2024, is integral in the stability of floodplains throughout the study area.

Cumulative impacts to floodplains are expected be minor due to existing federal, state, and local regulations, participation in the NFIP, and stormwater management controls.

## Terrestrial Habitat

Historically, growth in both Somerset County and Garrett County has been slow. Primary effects to terrestrial habitat have been the clearing of forested land for farming, strip mining, low-density residential development, and commercial development along US 219 and other major roadways. The proposed Casselman Farms Development would convert agricultural and forested land into developed land, resulting in additional loss of habitat for terrestrial species, potential forest fragmentation and creation of edge habitat.

Cumulative effects to terrestrial habitat areas may occur; however, state, and local regulations aimed at minimizing forest loss reduce the potential for significant cumulative impacts. In Garrett County, the Maryland Reforestation Law 5-103 requires an acre-for-acre replacement of forest removed during road construction. In Pennsylvania, the Department of Conservation and Natural Resources Bureau of Forestry mission is to ensure the long-term health, viability, and productivity of forests and conservation of native plants. Overall cumulative effects on terrestrial resources would be minor.

## Threatened and Endangered Species

Other clearing of terrestrial habitat in combination with the direct terrestrial habitat impacts associated with the four Build Alternatives would have the potential to cause cumulative impacts to threatened or endangered species. At the federal level, the U.S. Fish and Wildlife Service (USFWS) regulates effects to listed threatened or endangered species or critical habitat listed for any species under Section 7 of the Endangered Species Act (ESA) of 1973 (16 U.S.C. 35). Since protective measures outlined in federal and state regulations would minimize any cumulative impacts to habitats and protected species, cumulative effects on threatened and endangered species such as Indiana Bat and Northern Long-Eared Bat are anticipated to be minor.

## Farmland and Prime and Statewide Important Farmland Soils

Cumulative impacts to farmland would include those general direct impacts to farmland discussed in **Section 4.4.2.1**. Mitigation to address the farmland impacts is directly related to environmental regulations and land use policies at both the state and local levels. The development of more stringent local policies to stem conversion of farmland will play an important role in avoiding, minimizing, and compensating the cumulative impacts to agriculture. Overall cumulative effects on farmland resources would be minor.

### **5.5.3 Cultural Resources**

There could be minor cumulative effects to archaeological and aboveground historic resources when combined with incremental impacts of the US 6219 Section 050 Project. However, cumulative contributions from this project, and from other past, present, and future actions, such as the Casselman Farms Development, to cultural resources would be minimized based on regulations requiring undertakings to consider effects to these resources. Section 106 of the National Historic Preservation Act and Section 4(f) of the 1966 Department of Transportation Act are in place to protect significant historic properties, minimize impacts, and/or mitigate for any unavoidable impacts associated with projects that require a federal transportation action.

### **5.5.4 Summary of Cumulative Effects**

Based on the information presented in the above sections, there would be no significant cumulative effects on resources that are impacted by this project when those impacts are considered in combination with the impacts from other past, present, and reasonably foreseeable future actions.

The Casselman Farms Development is the only reasonably foreseeable future action identified within the ICE Study Area. Although the development has been discussed for decades, no approved plans exist, and no let date is anticipated.

**Table 5-2** summarizes the cumulative effects on the directly and indirectly impacted resources.

**Table 5-2 Summary of Cumulative Effects**

Resource	1992-2022 Trends in ICE Study Area	Summary
Streams	Increased pH; Open Water area decreased 5%	Erosion and sediment control plans, best management practices, and water quality monitoring permits, effectively minimize potential cumulative effect on streams.
Wetlands	Wetlands area increased 46%	Enforcement of the 1980 Chapter 105 in Pennsylvania and the 1989 Maryland Nontidal Wetlands Act ensure no net loss by requiring wetland mitigation.  Private mitigation banking industry is increasing wetlands, resulting in no expected cumulative wetland effects.
Forest	Forest decreased 8%	Development decreased forested land;  However over 48,000 acres of forest remain in the Natural Resources ICE Study Area and minor cumulative effects from fragmentation are anticipated.
Floodplain	FEMA-designated 100-year floodplains are stabilized.  Implementation of regulations in 1980 (PA) and 1987 (MD) is integral in the stability of floodplains.	Other disturbances to the impacted 100-year floodplains could result from the potential Casselman Farms Development.  Cumulative impacts to floodplains are expected be minor due to existing federal, state, and local regulations, participation in NFIP, and stormwater management controls.
Farmland, Prime and Statewide Important Farmland Spoils	Farmland decreased 13%	Primarily residential development has decreased farmland and farmland soils.  Mitigation for farmland impacts is regulated by land use policies at both the state and local levels. Minor cumulative effects to farmland are likely.
Terrestrial Habitat	Forest habitat decreased 8%	Each state has reforestation programs ensuring long term forest viability. Overall cumulative effects on terrestrial resources would be minor.
Threatened/ Endangered Species	Clearing of habitat has been slow but steady.	Since protective measures in federal and state regulations would minimize any cumulative impacts to habitats and protected species, cumulative effects on threatened and endangered species such as Indiana Bat and Northern Long-Eared Bat are anticipated to be minor
Residential/Commercial Displacements	Housing and Commercial developments have increased.	Casselman Farms will likely be mixed use offering both residential and commercial opportunities. Therefore cumulative effects would be minor.

## 6 CONCLUSION

Past and present actions have shaped the current state of land use and socioeconomic, natural, and cultural resources within the respective ICE Study Areas. These actions have been both beneficial and adverse to land use, socioeconomic, natural, and cultural resources within the ICE Study Areas.

As documented in **Section 4.1**, the four Build Alternatives DU Modified, DU-Shift Modified, E Modified, and E-Shift Modified will have various levels of direct impact on land use, and on socioeconomic, natural, and cultural resources within the ICE Study Areas.

There are no planned developments completely dependent on the completion of improved US 219 from I-68 to Meyersdale; however, the improvements to system linkage and reduced travel times would support potential future development in the US 6219 Section 050 project Study Area. The proposed improvements are not anticipated to immediately induce new unplanned development that would affect changes in the current or planned land use, or population growth rate. However, the construction of any of the four Build Alternatives could cause minor indirect impacts to identified resources. These potential indirect impacts include adding new elements that affect the visual quality of the natural and cultural environments, right-of-way acquisitions of community resources and agricultural resources, commercial and residential displacements, increasing roadway runoff and sedimentation, altering hydrology and potential introduction of non-native plant species, among others (Displacements due to highway construction are direct effects.)

The minor direct and indirect impacts of the US 6219 Section 050 Project in combination with impacts from past, present, and reasonably foreseeable future projects (e.g., Casselman Farms) would result in minor cumulative effects. Although the four Build Alternatives would have minor impacts to socioeconomic resources, coupled with past, present, and future projects, the overall cumulative effects should be beneficial to socioeconomic resources. There would be no significant cumulative effects on resources that are impacted by this project when those impacts are considered in combination with the impacts from other past, present, and reasonably foreseeable future actions.

Adherence to current regulatory requirements and planning practices would minimize or avoid the minor indirect and cumulative effects any of the four Build Alternatives, and the cumulative effects of other present and reasonably foreseeable projects, on natural and cultural resources in the US 6219 Section 050 Project Study Area.

In summary, although the No Build Alternative has the fewest indirect and cumulative effects to the resources, the design of any of the four Build Alternatives would minimize impacts to the extent possible.

## 7 REFERENCES

AASHTO Center for Environmental Excellence. 2016. Assessing Indirect Effects and Cumulative Impacts under NEPA. <https://environment.transportation.org/wp-content/uploads/2021/05/ph12-2.pdf>.

Center for Rural Pennsylvania. 2020. Population Projections by Gender and Age 2020 to 2050. [accessed 2023]. <https://www.rural.pa.gov/download.cfm?file=Resources/excel/Population%20Projections%20by%20Gender%20and%20Age%202020%20to%202050.xlsx>.

Chesapeake Bay and Watershed Programs. 1999. State of the Streams; 1995-1997 Maryland Biological Stream Survey Reports. <https://www.garrettcounty.org/resources/watershed/pdf/Publications/Maryland/State-of-the-Streams.pdf>.

Council on Environmental Quality (CEQ). 1997. Considering Cumulative Effects under the National Environmental Policy Act. [https://ceq.doe.gov/publications/cumulative\\_effects.html](https://ceq.doe.gov/publications/cumulative_effects.html).

Federal Highway Administration (FHWA). 1992. Position Paper on Secondary and Cumulative Impact Assessment in the Highway Project Development Process. [https://www.environment.fhwa.dot.gov/nepa/impact\\_assessment\\_highway\\_dev.aspx](https://www.environment.fhwa.dot.gov/nepa/impact_assessment_highway_dev.aspx).

FHWA. 2008. Economic Development History of Interstate 68 in Maryland. <https://planningtools.transportation.org/files/15.pdf>.

FHWA. 2019. Questions and Answers on Considering Indirect and Cumulative Impacts in the NEPA Process. <https://www.environment.fhwa.dot.gov/nepa/QAimpact.aspx>.

Garrett County Department of Planning & Land Management. 2022. Garrett County Comprehensive Plan 2022. [https://www.garrettcounty.org/resources/planning-land-development/pdf/Comprehensive%20Planning/Garrett\\_CompPlan2022\\_FinalDraft\\_8-8-22\\_reduced.pdf](https://www.garrettcounty.org/resources/planning-land-development/pdf/Comprehensive%20Planning/Garrett_CompPlan2022_FinalDraft_8-8-22_reduced.pdf).

Garrett County Department of Public Works/ Utilities Division. 2014. Garrett County Water and Sewerage Master Plan 2014 Revision. <https://www.garrettcounty.org/resources/public-utilities/pdf/master-plan/Garrett%20County%20Water%20%26%20Sewerage%20Plan%20December%20014.pdf>.

Maryland Department of Natural Resources. 2023. Maryland's Stronghold Watersheds. <https://dnr.maryland.gov/streams/Pages/streamhealth/Maryland-Stronghold-Watersheds.aspx>.

Maryland Department of Natural Resources Forest Service. 2019. Sustainable Forest Management Plan for Potomac – Garrett State Forest. <https://dnr.maryland.gov/forests/Documents/garrett/PGSF-SFMP-2019.pdf>.

Maryland Department of Planning (MDP). 2009. Town of Grantsville Comprehensive Plan. [https://planning.maryland.gov/Documents/OurWork/compplans/09\\_CMP\\_Grantsville.pdf](https://planning.maryland.gov/Documents/OurWork/compplans/09_CMP_Grantsville.pdf).

- MDP. 2023. Population by Age and Sex for Maryland's Jurisdictions, 1790-2010. [accessed 2023].  
<https://planning.maryland.gov/MSDC/Pages/census/censusHistorical.aspx>.
- Maryland Department of the Environment (MDE). 2011. Casselman River Watershed Plan for pH Remediation. [https://spcwater.org/wp-content/uploads/2020/06/Cassleman\\_pHplan\\_2011.pdf](https://spcwater.org/wp-content/uploads/2020/06/Cassleman_pHplan_2011.pdf).
- MDE. 2022. Combined Integrated Report of Surface Water Quality and Total Maximum Daily Load analysis. <https://mdewin64.mde.state.md.us/WSA/IR-TMDL/index.html>.
- Maryland State Highway Administration (SHA). 2007. Indirect and Cumulative Effects Analysis Guidelines. <http://www.sha.state.md.us/OPPEN/ICE-Introduction.pdf>.
- SHA. 2016. Economic Impact of US Route 219 Alignments on Chestnut Ridge Development.
- SHA. 2023. US 219 Study: Meyersdale to I-68. Analysis of Regional Travel Demand.
- Means B. 1998. Phase I and Phase II Archaeological Investigations for the US 219 Meyersdale Bypass Project, SR 6219, Section B08, Somerset County, Pennsylvania, Volume I. Prepared for the Pennsylvania Department of Transportation District 9-0 by Greenhorne & O'Mara, Inc On file, Pennsylvania State Historic Preservation Office, Harrisburg, PA.
- Multi-Resolution Land Characteristics Consortium (MRLC). 1992, 2002, 2012, 2022. National Land Cover Database (NLCD). [accessed 2023].  
<https://www.mrlc.gov/data/nlcd-land-cover-conus-all-years>.
- Pennsylvania Department of Transportation (PennDOT). 2008. Indirect And Cumulative Effects Desk Reference PUB 640 (03-08).  
<https://www.dot.state.pa.us/public/PubsForms/Publications/PUB%20640.pdf>.
- PennDOT. 2023a. US 6219 Section 050 Project Air Quality Memorandum.
- PennDOT. 2023b. US 6219 Section 050 Project Rare, Threatened and Endangered Species Technical Memorandum.
- PennDOT. 2023c. US 6219 Section 050 Project Agricultural Resources Existing Conditions Memorandum.
- PennDOT. 2023d. Phase IA Archaeological Reconnaissance and Predictive Modeling.
- PennState Extension. 1993. Pennsylvania Timber Market Report.  
<https://extension.psu.edu/timber-market-report-archives>.
- Pennsylvania Department of Conservation of Natural Resources. 2020. Pennsylvania Outdoor Recreation Plan.  
<https://www.dcnr.pa.gov/Recreation/PAOutdoorRecPlan/Documents/PA-Waterways-Wetlands-Update-Mar2020.pdf>.
- Pennsylvania Department of Environmental Protection. 2020. 2020 Pennsylvania Integrated Water Quality Monitoring and Assessment Report.  
<https://gis.dep.pa.gov/IRStorymap2020/>.



Somerset County Government. 2016. Somerset County Demographics Profile 2016.

Somerset County Planning Commission. 2006. Somerset County Natural Heritage Inventory.

[https://www.naturalheritage.state.pa.us/cnai\\_pdfs/somerset%20county%20nai%202006.pdf](https://www.naturalheritage.state.pa.us/cnai_pdfs/somerset%20county%20nai%202006.pdf).

Southern Alleghenies Planning and Development Commission (SAPDC). 2018.

Alleghenies Ahead Comprehensive Plan for the Southern Alleghenies Region.

[https://sapdc.org/wp-content/uploads/2023/11/Alleghenies\\_Ahead\\_Adopted.pdf](https://sapdc.org/wp-content/uploads/2023/11/Alleghenies_Ahead_Adopted.pdf).

SAPDC. 2020. Pennsylvania-Maryland Corridor N Completion Analysis and Impact Study.

SAPDC. 2022. 2023-2026 Transportation Improvement Program (TIP).

<https://sapdc.org/2023-2026-transportation-improvement-plan-tip/>.

U.S. Census Bureau. 2020a. American Community Survey (ACS) 2016-2020 Tables B01001 and B01002.

U.S. Census Bureau. 2020b. American Community Survey (ACS) 2016-2020 Tables B25001, B25003 and B25004.

U.S. Census Bureau. 2020c. Table C24030. [accessed 2023]. American Community Survey (ACS) 2016-2020.

U.S. Department of Agriculture (USDA). 1992. Somerset County and Garrett County Summary Highlights: 1992. [https://agcensus.library.cornell.edu/wp-content/uploads/1992-Pennsylvania-CHAPTER\\_2\\_County\\_Data-1570-Table-01.pdf](https://agcensus.library.cornell.edu/wp-content/uploads/1992-Pennsylvania-CHAPTER_2_County_Data-1570-Table-01.pdf)[https://agcensus.library.cornell.edu/wp-content/uploads/Maryland\\_countyData\\_1992\\_Garrett.txt](https://agcensus.library.cornell.edu/wp-content/uploads/Maryland_countyData_1992_Garrett.txt).

USDA. 2017a. Somerset County Pennsylvania 2017 Census of Agriculture County Profile. National Agricultural Statistics Service. [accessed 2023].

[https://www.nass.usda.gov/Publications/AgCensus/2017/Online\\_Resources/County\\_Profiles/Pennsylvania/cp42111.pdf](https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Pennsylvania/cp42111.pdf).

USDA. Department of Agriculture. 2017b. Garrett County Maryland 2017 Census of Agriculture County Profile. National Agricultural Statistics Service. [accessed 2023].

[https://www.nass.usda.gov/Publications/AgCensus/2017/Online\\_Resources/County\\_Profiles/Pennsylvania/cp42111.pdf](https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Pennsylvania/cp42111.pdf).

U.S. Department of Transportation (USDOT). 2016. U.S. Department of Transportation Environmental Justice Strategy. <https://www.transportation.gov/transportation-policy/environmental-justice/environmental-justice-strategy>.

U.S. Environmental Protection Agency (USEPA). 1999. Consideration of Cumulative Impacts in EPA Review of NEPA Documents. EPA 315-R-99-002.

<https://www.epa.gov/sites/default/files/2014-08/documents/cumulative.pdf>.

USEPA. 2022. EJSscreen: Environmental Justice Screening and Mapping Tool (Version 2.2). <https://ejsscreen.epa.gov/mapper/>.

U.S. Fish and Wildlife Service. 1990. National Wetlands Inventory, Pennsylvania's Wetlands: Current Status and Recent Trends.

<https://www.fws.gov/wetlands/Documents%5CPennsylvanias-Wetlands-Current-Status-and-Recent-Trends.pdf>.

US Department of Agriculture, Natural Resources Conservation Service. 2023. Farmland Protection Policy Act Annual Report for Fiscal Year 2022.

[https://www.nrcs.usda.gov/sites/default/files/2023-08/FPPA%20Annual%20Report%202022-June14v2\\_0.pdf](https://www.nrcs.usda.gov/sites/default/files/2023-08/FPPA%20Annual%20Report%202022-June14v2_0.pdf).