

## Appendix B: Planning & Environmental Linkages

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# PEL Questionnaire

## 1. Background:

### a. Who is the sponsor of the PEL study? (state DOT, Local Agency, Other)

The Wilmington Area Planning Council (WILMAPCO) was responsible for the administration of this study in collaboration with the Project Management Committee which included:

- Wilmington Area Planning Council (WILMAPCO)
- Delaware Department of Transportation (DelDOT)
- Delaware Transit Corporation (DTC)
- New Castle County

### b. What is the name of the PEL study document and other identifying project information (e.g. sub-account or STIP numbers, long-range plan, or transportation improvement program years)?

The name of this PEL study document is the *Augustine Cut Off Multimodal Improvements Study, Phase 2*. The study was programmed in the WILMAPCO FY 2025 Unified Planning Work Program (UPWP) using the name *Augustine Cut-Off Corridor Bicycle & Pedestrian Network Improvements, Phase 2*. It was then listed again in the FY 2026 UPWP. There is currently no STIP number associated with this project.

### c. Who was included on the study team (Name and title of agency representatives, consultants, etc.)?

The project management team consisted of the following members:

- Tigist Zegeye – Executive Director, Wilmington Area Planning Council (WILMAPCO)
- Dave Gula – Principal Planner, Wilmington Area Planning Council (WILMAPCO)
- Paul Moser, PE – Program Manager 1, Delaware Department of Transportation (DelDOT)
- Jared Kauffman – Fixed-Route Planner, Delaware Transit Corporation (DTC)
- Cooper Bowers – Transportation Planner, New Castle County
- Marco Boyce – Park Development Planner, New Castle County
- Mike Campbell, RLA – Project Manager/Landscape Architect, Whitman, Requardt and Associates, LLP
- Leah Kacanda, AICP – Deputy Project Manager/Transportation Planner, Whitman, Requardt and Associates, LLP
- Kevin Konzelman, PE, PTOE – Traffic Engineer, Whitman, Requardt and Associates, LLP
- Jeanne Sinclair, PE – Highway Engineer, Whitman, Requardt and Associates, LLP

The project advisory committee consisted of the following members:

- Samantha Bulkilvish, Office of State Planning
- Steve Weber, City of Wilmington
- Pat Thompson, DNREC
- Nathan Attard, DNREC
- Mark Borselo, Commercial Property Owner
- ShaQuan Buffaloe, Wilmington Friends School
- Gary Camp, Alapocas Homeowners Association
- Patricia Conrad, Alapocas Homeowners Association

- Kevin Davis, Incyte
  - Katie Godfrey, Salesianum
  - Lanny Golden, Augustine Hills
  - Denison Hatch, Highlands Community Association
  - Lisa Johnson, Delaware Avenue Civic Association
  - Mark Lipman, Augustine Ridge
  - Ceci McCormic, Local Cyclist and Advocate
  - John McCormic, Local Cyclist and Advocate
  - Kevin McIntyre, Forty Acres Civic Association
  - Matt Page, Homeowner
  - Mike Porro, Augustine Ridge
  - Viraf Ranji, Alapocas II
  - Mary Roth, Delaware Greenways
  - Harold Schneikert, 8<sup>th</sup> District Neighborhood Planning Council
  - Phil Socorso, Triangle Neighborhood Association
  - Robert Tattersall, Rock Manor
  - Lt. Mike Butkus, Concord Pike Monitoring Committee (CPMC)/Delaware State Police
  - Bill Dunn, CPMC/Civic League for New Castle County
  - Capt. Dan Deflaviis, CMPC/Delaware State Police
  - Doug Eitelman, CPMC/Committee of 100
  - R.J. Miles, CPMC/Council of Civic Organizations of Brandywine Hundred
  - Emma Odren, CPMC/ New Castle County Chamber of Commerce
  - Tracy Surles, CPMC/Woodlawn Trustees
  - James Wilson, CPMC/Bike Delaware
  - Senator Dan Cruce, District 1
  - Representative Nnamdi Chukwuocha, District 1
  - Representative Debra Heffernan, District 6
  - Representative Krista Griffith, District 12
  - New Castle County Council, Dee Durham, 2<sup>nd</sup> District
  - New Castle County Council, Penrose Hollins, 4<sup>th</sup> District
  - New Castle County Council, John Cartier, 8<sup>th</sup> District
  - Wilmington City Council, Nathan Field, 8<sup>th</sup> District
  - Wilmington City Council, Latisha Bracy, At-Large
  - Wilmington City Council, Maria Cabrera, At-Large
  - Wilmington City Council, Alexander Hackett, At-Large
  - Wilmington City Council, James Spadola, At-Large
- d. **Provide a description of the existing transportation facility within the corridor, including project limits, modes, functional classification, number of lanes, shoulder width, access control and type of surrounding environment (urban vs. rural, residential vs. commercial, etc.)**
- See Existing Conditions section of the report starting on page 7.
- e. **Provide a brief chronology of the planning activities (PEL study) including the year(s) the studies were completed.**

The [New Castle County Bicycle Plan](#) (2020) and [City of Wilmington Bike Plan](#) (2019) identified improved bicycle facilities on Augustine Cut Off as a priority. In 2020, Wilmington Area Planning Council (WILMAPCO) submitted an Augustine Cut Off Bicycle/Pedestrian Improvements project to DelDOT to be prioritized for funding under DelDOT's Statewide Bicycle and Pedestrian Program (Bike/Ped Pool). Of the seven New Castle County bicycle/pedestrian projects [prioritized for the Bike/Ped Pool in 2020](#), Augustine Cut Off ranked the highest in terms of the results of DelDOT's Bicycle Mobility Modeling analysis. DelDOT selected the project to move forward to the study phase, which began in 2021.

**f. Are there recent, current, or near future planning studies or projects in the vicinity? What is the relationship of this project to those studies/projects?**

The Phase 1 Study, completed in 2023, explored options for bicycle and pedestrian improvements along Augustine Cut Off between Lovering Avenue and Edgewood Road. Due to resident feedback, DelDOT elected to advance the design of bicycle and pedestrian safety improvements between Lovering Avenue and Cantera Road. Phase 1 improvements that are advancing to design and construction are included in Appendix A of this study. This Phase 2 Study is moving forward due to significant resident concerns about the impact of potential improvements along the corridor north of Cantera Road. This Phase 2 effort will build on the transportation-related planning priorities and goals identified through previous public outreach along the corridor.

## **2. Methodology used:**

**a. What was the scope of the PEL study and the reason for completing it?**

The scope of the PEL study included:

- Community outreach including community visioning, workshops, and meetings. There was also stakeholder outreach that included coordination with an advisory committee and other project stakeholders
- Preparation of alternatives based on the identified project needs
- Comparative analysis of alternatives to determine feasibility
- Identification of a recommended preferred alternative
- Feasibility level conceptual design plan
- Planning level cost estimates and an implementation plan including infrastructure needs, costs, and phasing to better position the project for future funding

**b. Did you use NEPA-like language? Why or why not?**

Yes, NEPA-like language was used to streamline the NEPA process for future transportation projects along Augustine Cut Off.

**c. What were the actual terms used and how did you define them? (Provide examples or list)**

- Purpose and Need Statement – describes the underlying need to be met and the other factors relevant to the assessment of a range of alternatives.
- Alternative – A reasonable range of solutions to address the identified problems and satisfy the stated project purpose and need.
- Preferred Alternatives - Based on the alternatives evaluation screening conducted in the PEL study, the recommended alternatives are the alternatives that was identified as a top preferred alternatives based on the public input surveying as well as the top

performing alternatives based on the measures of effectiveness ranking system to meet the purpose and need of this project.

**d. How do you see these terms being used in NEPA documents?**

These terms will be used in NEPA document in a similar fashion to how they were used in the PEL study

**e. What were the key steps and coordination points in the PEL decision-making process? Who were the decision-makers and who else participated in those key steps? For example, for the corridor vision, the decision was made by state DOT and the local agency, with buy-in from FHWA, the USACE, and USFWS and other resource/regulatory agencies.**

Members of the Advisory Committee are listed as under question 1.c. The study team met with the Advisory Committee to discuss the following topics:

- December 2, 2024 at the Salesianum DOS Suite at Abbessinio Stadium
  - Study overview, scope schedule and milestones
  - Existing conditions assessment
  - Issues and opportunities
  - Public outreach plan
- May 15, 2025 at the Salesianum DOS Suite at Abbessinio Stadium
  - Discuss feedback from Public Workshop #1/Survey #1: Vision for the Corridor
  - Review preliminary alternatives (Alternatives 1 and 2) and potential intersection improvements
- July 24, 2025 at the Salesianum DOS Suite at Abbessinio Stadium
  - Discuss feedback from Public Workshop #2/Survey #2: Preliminary Alternatives
  - Discuss potential new Alternative 3 and refined intersection improvements
- September 4, 2025 virtually via Microsoft Teams
  - Discuss feedback from Public Workshop #3/Survey #3: Refined Alternatives
  - Review final report format and next steps

The study team met with the project management committee which included representatives from DelDOT, DTC, and New Castle County bi-weekly throughout the study process.

**f. How should the PEL information be presented in NEPA?**

The term “preferred alternative” can be used to refer to the recommendations from the alternatives analysis conducted in the PEL study when identifying the Recommended Alternative in the Alternatives chapter of the NEPA document or when referencing PEL Study recommendations for the NEPA documentation of a project phase. The environmental overview can provide the basis for environmental scoping. The other terms in this PEL study will also be used in NEPA documents in the same way as they were used in the PEL study

**3. Agency coordination:**

**a. Provide a synopsis of coordination with Federal, tribal, state and local environmental, regulatory and resource agencies. Describe their level of participation and how you coordinated with them.**

Progress meetings with the project management committee, as summarized in Section 2.e of this PEL Questionnaire, were held ensuring coordination with various state and local

agencies. The role the project management committee was to provide input on a range of issues analyzed in this PEL study.

**b. What transportation agencies (e.g. for adjacent jurisdictions) did you coordinate with or were involved during the PEL study?**

There were several agency-specific coordination meetings and regular email communications throughout the study with DelDOT, DTC, and New Castle County to discuss various items including project goals, development of the purpose and need statement, and alternatives considered.

**c. What steps will need to be taken with each agency during NEPA scoping?**

Future NEPA phases should likely focus on final determination of study area and an advanced transportation analysis, public and agency engagement, and environmental concerns. During NEPA scoping, the coordination that was started during this PEL study should continue with the management committee and advisory group. Agencies should be invited to contribute to any modifications to the final purpose and need statement. This task includes identifying and describing the needs of the individual agencies now and in future scenarios, and how the project can contribute to meeting those needs. Following that, agencies should be invited to participate in contributing to further developing the recommended alternative identified in the PEL study and participate in validating the data analysis regarding transportation and environmental concerns in the area. Additional coordination with regulatory agencies as the project progresses should also include:

- US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) Database review to obtain an official species list and evaluate potential impacts on resources managed by USFWS.
- An Environmental Review of the project should be requested from Delaware Department of Natural Resources and Environmental Control (DNREC) Species Conservation and Research Program (SCRIP).

#### **4. Public coordination:**

**a. Provide a synopsis of your coordination efforts with the public and stakeholders.**

Public Workshops were held in person at Salesianum. All workshops were advertised via a public notice on WILMAPCO's website, an email distribution to members of the Advisory Committee, and email to those who signed up for study updates. All Workshop materials were posted on the project website along with a survey following the workshop to allow those who could not attend in person an opportunity to participate. Workshops were held at the following times:

- Monday March 3, 2025 at the Salesianum Library
  - Approximately 67 individuals were in attendance
  - Existing conditions boards were available at the beginning of the workshop for review and reference throughout the Workshop
  - An overview presentation was provided followed by a small group activity that consisted of the following steps:
    1. Draft a personal vision statement
    2. Small group discussion/improvement identification for the following user groups/categories:

- a. People who use a mobility device, walk, or take transit
  - b. People who bike or ride scooters, skateboards, or other faster wheeled devices
  - c. People who drive a motor vehicle
  - d. For all road users, e.g. traffic calming, beautification
- 3. Report out & prioritization
- 4. Revise your vision statement
  - A survey was distributed to solicit feedback on individual vision and needs
- June 10, 2025, at Centennial Hall in Salesianum
  - Approximately 50 individuals were in attendance
  - An overview presentation was provided that included the following information:
    - 1. Study background
    - 2. Review public feedback from Survey #1
    - 3. Existing conditions documentation and analysis that contributed to alternative development
    - 4. An overview of Alternatives 1 and 2, and intersection options for the Alapocas Drive intersection
  - Following the presentation, members of the public had the opportunity to review the roll maps showing the alternatives and discuss with the project team
  - A survey was distributed to solicit feedback on the preliminary alternatives
- Tuesday, August 12 at Centennial Hall in Salesianum.
  - There were approximately 34 individuals in attendance
  - An overview presentation was provided that included the following information:
    - 1. Study background
    - 2. Review public feedback from Survey #2
    - 3. Existing conditions documentation and analysis that contributed to alternative refinement, and development of Alternative #3
    - 4. An overview of Alternative 3, and intersection options for the W. 18<sup>th</sup> Street intersection
  - A survey was distributed to solicit feedback on the refined alternatives

The project website (<http://www.wilmapco.org/augustinecutoff/>) was created at the start of the project and updated throughout the project duration with project information as the project progressed. The website included presentation materials and announcements about upcoming engagement events and opportunities, ways to sign up for project information, and contact information for the project team. The webpage also housed online survey opportunities that were left open for a minimum of one month following each public meetings.

Additional coordination with project stakeholders on the advisory committee was also conducted as described above in Section 2.e.

## 5. Purpose and Need for the PEL study:

### a. What was the scope of the PEL study and the reason for completing it?

The scope of this study involved a thorough inventory of existing conditions along the corridor, development of a purpose and need statement, alternatives development and measures of effectiveness, alternatives analysis, selection and refinement of a recommended alternative based on public and stakeholder feedback, conceptual plans, planning level cost estimates, final report documentation, and stakeholder and public outreach efforts. A key goal of completing this PEL was to provide information that would support the funding of NEPA review, design, and construction

### b. Provide the purpose and need statement, or the corridor vision and transportation goals and objectives to realize that vision.

*Purpose:* The purpose of the project is to improve safety and mobility options for all road users along the Augustine Cut Off Corridor by implementing traffic calming measures and providing a low-stress pedestrian and bicycle connection between the state's two largest population centers, Wilmington and Brandywine Hundred, connecting the greater Blue Ball/US 202 pathway system to the Brandywine Park Trail network and Trolley Square.

*Need:* There is a documented speeding issue and vulnerable road user fatalities along Augustine Cut Off in Wilmington, Delaware. There are no designated bike or pedestrian facilities along the corridor between Cantera Road and Edgewood Road. Transportation improvements are needed to improve safety for all road users by calming traffic and separating vulnerable road users from motor vehicle traffic, thereby increasing multimodal mobility and connectivity.

*Background:* Speeding was voiced as an issue by residents, which was confirmed by an analysis of speeds using StreetLight, which showed 85<sup>th</sup> percentile speeds were 9 to 10 mph above the posted speed limit as shown in **Error! Reference source not found..** A crash analysis for the portion of the corridor north of W. 18<sup>th</sup> Street where residential speeding concerns were greatest revealed 19 reported crashes between November 1, 2019 through November 1, 2024 as shown in **Error! Reference source not found..** One of those crashes was a pedestrian fatality. Another pedestrian fatality occurred on April 4, 2025 on the edge of the road south of the Alapocas Drive traffic signal which is still under investigation.

Currently, the only low-stress bicycle/pedestrian connection between the City of Wilmington and the shared use path network in north Wilmington is along the East Coast Greenway via Brandywine Park and Alapocas Run State Park. This route requires traversing steep grades through a park that is inaccessible after dark when the park is closed. A low-stress bike/pedestrian facility along Augustine Cut Off between the existing shared use path along the Incyte frontage, shown in **Error! Reference source not found.,** and Edgewood Road, would provide a direct transportation and recreation facility between the City and north Wilmington.

### c. What steps will need to be taken during the NEPA process to make this a project-level purpose and need statement?



A scoping exercise should be used to determine if this PEL Study purpose and need statement remains valid as a project-level purpose and need statement during any future NEPA phases.

## **6. Range of alternatives:**

Planning teams need to be cautious during the alternative screen process; alternative screening should focus on purpose and need/corridor vision, fatal flaw analysis, and possibly mode selection. This may help minimize problems during discussions with resource agencies. Alternatives that have fatal flaws or do not meet the purpose and need/corridor vision will not be considered reasonable alternatives, even if they reduce impacts to a particular resource. Detail the range of alternatives considered, screening criteria, and screening process, including:

**a. What types of alternatives were looked at? (Provide a one or two sentence summary and reference document.)**

Three alternatives were developed for this study, all of which adequately address the purpose and need statement. An overview of the alternatives development process is provided in the Alternatives section starting on page 13.

**b. How did you select the screening criteria and screening process?**

The advisory committee, the project management committee, and the public informed the development of the analysis criteria. Each of the three alternatives were assessed utilizing a variety of performance measure criteria selected to reflect study purpose and need with a primary aim of improving safety for all road users.

**c. For alternative(s) that were screened out, briefly summarize the reasons for eliminating the alternative(s). (During the initial screenings, this generally will focus on fatal flaws.)**

Each alternative satisfies the purpose and need. Alternative 3 was selected as a preferred alternative based on public feedback and because it is the lowest impact of all three alternatives.

**d. Which alternatives should be brought forward into NEPA and why?**

It is the recommendation of this PEL Study to progress Alternative 3 forward as the preferred alternative due to public support.

**e. Did the public, stakeholders, and agencies have an opportunity to comment during this process?**

The public, stakeholders, and agencies provided feedback via virtual meetings, one-on-one interactions with the study team, online through the project webpage, online surveys, comment forms, via email, and over the phone. All feedback is documented in Appendix F of this study.

**f. Were there unresolved issues with the public, stakeholders, and/or agencies?**

There were no unresolved issues with the public, stakeholders, and/or agencies.

## **7. Planning assumptions and analytical methods:**

**a. What is the forecast year used in the PEL study?**

This study did not include travel forecasting as there is no growth anticipated or planned for the corridor. The study utilize 2024 traffic counts, historic DeIDOT counts, and StreetLight data.

**b. What method was used for forecasting traffic volumes?**

As stated above, this study did not include travel forecasting.

- c. **Are the planning assumptions and the corridor vision/purpose and need statement consistent with each other and with the long-range transportation plan? Are the assumptions still valid?**

Yes. The corridor vision and purpose and need statement are consistent with each other and the New Castle County Comprehensive Plan, the New Castle County Bike Plan, the City of Wilmington Comprehensive Plan, the City of Wilmington Bike Plan, and the Delaware Long Range Transportation Plan.

- d. **What were the future year policy and/or data assumptions used in the transportation planning process related to land use, economic development, transportation costs, and network expansion?**

Future uses, policies, and assumptions were based on New Castle County's Comprehensive Plan for land use and economic development.

## 8. **Environmental resources (wetlands, cultural, etc.) reviewed.**

For each resource or group of resources reviewed, provide the following

- a. **In the PEL study, at what level of detail was the resource reviewed and what was the method of review?**

Each resource, identified in Table 1 below, was reviewed at a planning level screening using available online information and GIS mapping. It is important to note that this planning-level screening does not examine the full range of environmental and social issues, which will be addressed during NEPA review.

Information was compiled and mapped using readily available data from Delaware FirstMap using GIS visualization. The GIS data was reviewed at multiple scales to see where each resource was present either in the study area or adjacent to it. The resources for which there was no publicly available GIS data were reviewed using agency-specific map viewers (such as the EPA's tool for viewing brownfields).

- b. **Is this resource present in the area and what is the existing environmental condition for this resource?**

Table 1: Resources Reviewed in PEL Study summarizes the resources that were reviewed as part of this PEL study. As illustrated in the table the resources with *potential* impacts are hazardous materials and forests.

Table 1: Resources Reviewed in PEL Study	
Hazardous Materials	<p><b>Affected Environment:</b> According to DNREC NavMap, there are multiple solid and/or hazardous waste sites in the study area.</p> <p>Sites in the Hazardous Waste Generator Program are at the following locations:</p> <ul style="list-style-type: none"><li>• Intersection of Lovering Ave. and Augustine Cut Off<ul style="list-style-type: none"><li>○ Site ID: DED984071555; Site Name: Exxon Co USA #20785</li></ul></li><li>• Proximate to intersection of W. 18<sup>th</sup> Street and Augustine Cut Off<ul style="list-style-type: none"><li>○ DER000002386; J&amp;M Litterelle Inc</li><li>○ DER000002790; Wilmington State Parks</li><li>○ DEN201400046; Incyte Corporation</li></ul></li></ul> <p>Leaky underground storage tanks at the following locations.</p>

	<ul style="list-style-type: none"> <li>• LUST Project Number N9108180; Exxon Lovering Avenue</li> <li>• LUST Project Number N0209075; GOODYEAR AUTO SVC, AUGUSTINE CUTOFF (B)</li> <li>• LUST Project Number N9301006; WANAMAKERS</li> </ul> <p>Underground storage tanks at the following locations:</p> <ul style="list-style-type: none"> <li>• ID 3-002010; Augustine Medical</li> <li>• Tax parcel number 0613600054</li> <li>• Tax parcel number 0612800108</li> </ul> <p><b>Next Steps/Mitigation Strategies:</b> Contamination from hazardous materials is most likely to be encountered during ground-disturbing activities in areas near properties with potential or recognized environmental conditions (hazardous materials). During the design process, the information concerning these properties can be used to identify avoidance options, if possible, and to assist with the development of materials management and worker health and safety plans.</p>
Water Resources	There are no surface water resources within or adjacent to the project area, per Delaware FirstMap data, although the Brandywine Creek is located underneath the Augustine Cut Off bridge.
Climate Vulnerability	No portion of the project is located in an area inundated by sea level rise from 1 to 7 feet, per Delaware FirstMap data.
Floodplains	Located in an area of minimal flood hazard and not located within 100-year or 500- year floodplain, per FEMA, although the area adjacent to the Brandywine Creek underneath the Augustine Cut Off bridge is in a flood hazard area.
Wetlands	According to Delaware FirstMap data, there are no wetlands within or adjacent to the project area, although there are wetlands shown underneath the Augustine Cut Off bridge.
Forests	According to Delaware FirstMap data, urban tree canopy is documented at the north end of the Incyte Parcel, between Augustine Cut Off and the Augustine Ridge neighborhood, at the northwest corner of Alapocas Drive and Augustine Road, and in a few locations between the Rock Manor neighborhood and Augustine Cut Off.
Brownfields	According to EPA's Cleanups In My Community Map, there are no brownfield sites within or adjacent to the project area.
Historic Resources	<p>According to Delaware FirstMap data, the following properties in the project area are considered historic:</p> <ul style="list-style-type: none"> <li>• Brandywine Park is in a National Register District</li> <li>• Augustine Cut Off bridge is considered a historic property documented in the Historic American Engineering Record</li> </ul>

	<ul style="list-style-type: none"> <li>The following residential addresses are considered historic properties, although per survey, none are eligible for the National Register: 100, 103, 104, 105, 108, 109 Augustine Cut Off.</li> </ul>
Properties Acquired for Right-of-Way and Displacements	The project is located within the existing right of way and no displacement will be necessary.
Archaeological sites	According to Delaware's Cultural and Historical Resources Information System (CHRIS), there are no archeological sites within or adjacent to the project area.
Population Demographics	<p>The Augustine Cut Off Study Area includes four census tracts: 12, 13, 4, and 117; however, only census tract 117 includes residents that live along the Augustine Cut Off Corridor, therefore the below values are for census tract 117. Census tract 117 is large, extending along the west side of 202 all the way north to the Delaware State line.</p> <p>Just over 30% of the population are aged 65+, and 19% are under 18. Only 1.5% (<math>\pm 1.5\%</math>) are below the Federal poverty line, and 0.5% (<math>\pm 0.7\%</math>) do not have access to a personal vehicle. Only 0.8% (<math>\pm 1.8\%</math>) are not high school graduates.</p>
Community Centers	<p><b>Schools</b> – There are no schools located along the Augustine Cut Off Corridor, although there are two in the study area. Wilmington Friends School is located on Alapocas Drive approximately 400 feet west of Augustine Cut off. Salesianum High School is located at the intersection of W 18<sup>th</sup> Street and Broom Street approximately 1,000 feet east of Augustine Cut Off</p> <p><b>Places of worship</b> – There are no places of workshop in the study area.</p>

**c. What are the issues that need to be considered during NEPA, including potential resource impacts and potential mitigation requirements (if known)?**

If changes are made to the project or study areas during future NEPA phases, a reassessment of climate vulnerability should be undertaken. Updated socio-economic data should also be collected and local communities engaged in future NEPA phases. With more detailed planning, potential impacts will be evaluated to identify whether the future project has the potential to cause adverse effects to these populations and households. Issues related to stormwater management are likely to shape the design of alternatives during future NEPA phases. Depending on the sensitivity of the water resources, minimizing adverse effects could require stormwater treatment measures beyond the raingarden proposed as part of the recommended alternative in this PEL study. Detention and treatment of stormwater runoff will be addressed in more detail during future NEPA phases. A modification to study area limits in future NEPA phases may require a reassessment of whether chronic environmental deficiencies are present.

**d. How will the planning data provided need to be supplemented during NEPA?**

The resource planning-level screening for this study was conducted by performing a desktop survey without field confirmation, referencing available agency electronic files, and utilizing existing GIS base mapping data. Therefore, most of the resources will require additional

assessment that will require a field verification of the existing conditions within the corridor as well as further agency coordination. Also, depending on the timeframe of any future NEPA process, some resources could require additional assessment due to new regulations, additional federally listed endangered/threatened species, etc. The concept plans for the preferred recommended alternative developed as part of the Augustine Cut Off Multimodal Corridor Study should be used as the starting point to advance this project into detailed design engineering.

**9. List environmental resources you are aware of that were not reviewed in the PEL study and why. Indicate whether or not they will need to be reviewed in NEPA and explain why.**

The following resources were not evaluated as part of this PEL Study as they were not included as part of the consultant scope of work:

- Air quality
- Water quality
- Noise
- Soils and geology
- Wildlife/Threatened and Endangered Species

Additional environmental analysis for these above-mentioned resources should be included as part of future NEPA analysis and documentation.

**10. Were cumulative impacts considered in the PEL study? If yes, provide the information or reference where the analysis can be found.**

No cumulative impacts were considered.

**11. Describe any mitigation strategies discussed at the planning level that should be analyzed during NEPA.**

See Table 1 above.

**12. What needs to be done during NEPA to make information from the PEL study available to the agencies and the public? Are there PEL study products which can be used or provided to agencies or the public during the NEPA scoping process?**

The final study report including this questionnaire will be available on the WILMAPCO project website for public viewing the conclusion of this study. The final report will be shared with all the agencies that participated in the project management committee upon conclusion of the study. The final report and supporting study documentation, which will be included as appendices to the report, can be used during the future NEPA scoping process.

**13. Are there any other issues a future project team should be aware of?**

Examples: Controversy, utility problems, access or ROW issues, encroachments into ROW, problematic land owners and/or groups, contact information for stakeholders, special or unique resources in the area, etc.

- **Stormwater Management** – The stormwater capacity and treatment system necessary along the project corridor should be further investigated to explore opportunities to improve stormwater runoff treatment during future design development phase.
- **Stakeholder Coordination** – The project management committee and advisory committee should continue in their respective roles to help guide future design development phases and ensure that the stakeholders and community members continue to guide and inform this project. The contact information for members of the project management committee and advisory committee will be available to the future project development team via a request to WILMAPCO.
- **Public Involvement** – Additional public involvement will be required as the project progresses in future design development phases, especially as it relates to potential impacts outside of the right-of-way and intersection improvements at Alapocas Drive and West 18<sup>th</sup> Street.