

Appendix VII: Planning and Environmental Linkage

September 2023

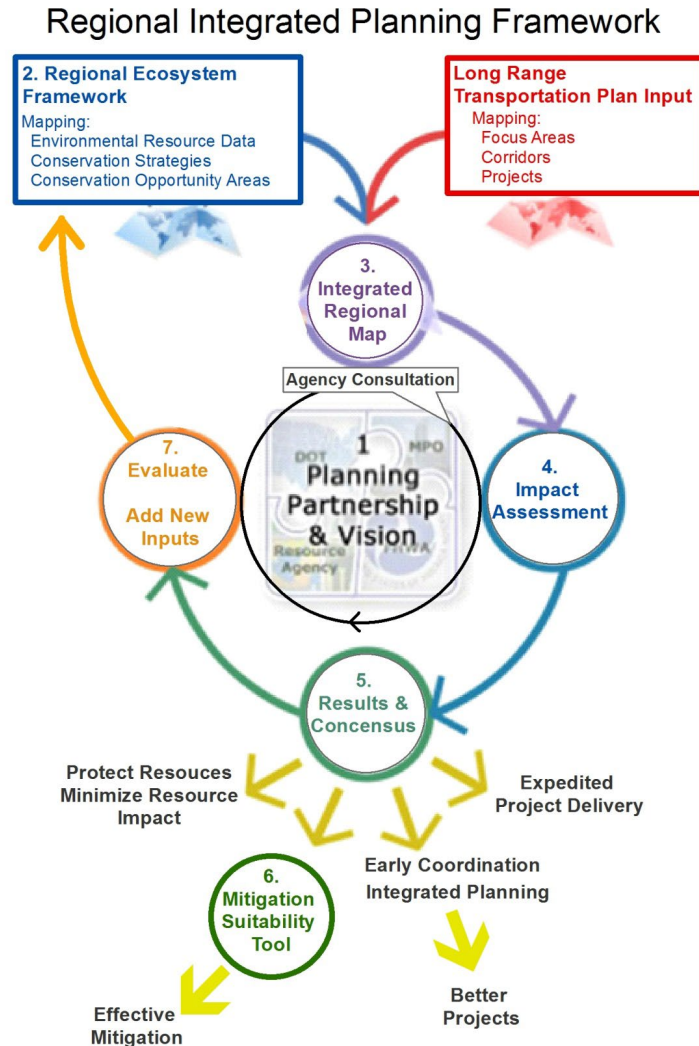
The Smart Moves regional strategies for resilient communities include strategies to conserve natural and cultural resources of the region as well as promoting environmentally sustainable practices. Keeping consistent with this overall strategy, SPC integrates environmental consideration into the transportation planning at an early stage and meets the federal requirements for long range transportation plans in this area.

Current federal regulation overseeing metropolitan transportation planning provides a focus on several key environmental requirements for the development of metropolitan long-range transportation plans:

- Requires the MPO to consult with the regulatory and resource agencies “responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan,” - Regulations for Long Range Transportation Plans (23 C.F.R. § 450.324(g))
- Consultations shall involve “comparison of transportation plans to inventories of natural or historic resources, if available.” - Regulations for Long Range Transportation Plans (23 C.F.R. § 450.324(g))
- Consultations shall involve “comparison of transportation plan with State conservation plans or maps, if available” - Regulations for Long Range Transportation Plans (23 C.F.R. § 450.324(g))
- Transportation plan regulations require “a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan. The discussion may focus on policies, programs, or strategies, rather than at the project level.” - Regulations for Long Range Transportation Plan Development (23 C.F.R. § 450.324(f)(10))

These provisions originate from a desire to extract benefits for overall transportation project development by considering environmental resources early in the transportation planning process. The early consideration of environmental resources during the transportation planning process can assist the subsequent environmental clearance process and compliance with the National Environmental Policy Act (NEPA) on individual transportation projects. This concept is referred to as “linking planning and NEPA” or, more generally, “planning and environmental linkage” in transportation planning circles. This concept can assist in program predictability, project decisions, project deliverability, and mitigation decisions while responding to the desire to improve both transportation and the environment.

The following figure details the process that SPC follows to integrate environmental considerations into the regional long-range transportation planning process and to comply with the PEL requirements for Long Range Transportation Plans.



For the 2050 Long-Range Transportation Plan, SPC has produced a detailed online mapping application. This application addresses the key PEL requirements that strengthen transportation planning and environmental linkages. The interactive version of this application is available at:

<https://spc.maps.arcgis.com/apps/MapJournal/index.html?appid=99a411de9ee240a699216968394e03f2>

The online mapping application and related maps and documents, in the following areas, address the planning and environmental linkage requirements:

Agency Consultation Process – SPC staff consulted with regulatory environmental resource and cultural resource agencies in development of the resource inventory and project screening

culminating in the presentation to the Pennsylvania Agency Coordination meeting in May of 2023. Table 1 summarizes the agency consultations that were conducted. Consultations with environmental agencies included a review of existing environmental inventory data, suggestions on additional datasets for the environmental inventory. This resulted in some key additional data-sets being added to the environmental inventory and the project screening. For example, consultations with USFWS resulted in addition of important bird areas, important mammal areas, and bald eagle nesting areas. Agencies also provided information on the locations of existing mitigation banking locations for streams and wetlands. Feedback at the ACM included a suggestion for looking into IJA programs on wildlife crossings.

Table VII- 1: Agency Consultation Summary

Consultation Activity	Date
Agency consultation approach review with FHWA and receipt of updated agency contact list	October 2022
Distribution of agency consultation invitation letters	November 16, 2022
Consultation meetings with agency representatives from within the SPC Region and outside of the SPC region.	November 2022 – January 2023
Coordination with specific agencies on project impact analysis on sensitive data (PA DCNR & PHMC).	March-April 2023
Environmental inventory maps and project screening results posted to the SPC ArcGIS Online web mapping application for review and comment by agencies.	April 21, 2023
Consultation coordination with PennDOT District Environmental Managers.	April 2023
Statewide Agency Coordination Meeting Presentation	May 24, 2023
Formal Public Comment Period. Address any comments from the public, and federal, state, or Tribal Agencies.	May 11, 2023 – June 8, 2023

- *Environmental Inventory and Resource mapping* – a detailed inventory of available planning level data for environmental and cultural resources in the region was assembled; including numerous interactive web maps of the natural and cultural resources of the region.
- *Existing “State Conservation Plans and Maps”* – Long-Range Transportation Planning regulations require a comparison of transportation plans with state conservation plans. This section presents a list of the state conservation plans and maps that were reviewed and provides links to the plans, maps, and associated resources. Where associated GIS data was available, it has been integrated into the development of the REF and the environmental screening.
- *Regional Ecosystem Framework (REF)* – This section of the application includes an interactive REF map and describes the development of the REF and its uses in displaying sensitive natural resources and special conservation areas of the region.

- Environmental Screening and integrated maps*– This section of the application highlights the analysis comparing a sample of LRTP projects to the environmental inventory. For this 2050 LRTP the projects selected to be included in the environmental screening were the 152 projects that are part of stage 2 of the fiscally constrained project list. The projects in this stage are most likely to be TIP candidate projects in the near future and the highest priority to compare to the inventory of environmental and cultural resources. The environmental screening includes over 50 GIS layers representing the key indicators of the environmental resources critical to National Environmental Policy Act clearance. This section includes a summary matrix (Table 2) and integrated maps that show the projects of the Long Range plan.
- Transportation Resiliency and Asset Vulnerability* – The application includes a series of integrated maps showing transportation asset vulnerability in the SPC region. The extreme weather events that pose the largest threat to the transportation assets in the region are flooding and landslides. Both of these phenomena impact the region’s surface transportation and will continue to pose potential issues in the future. Both flooding and landslides have the potential to cause major disruptions to the transportation network, requiring costly emergency repairs and additional funds to address. Additional analysis was conducted to identify where the transportation network may be vulnerable to natural hazards. The mapping in this section identifies vulnerabilities on several levels of criticality. The highway network with high landslide susceptibility is shown by hierarchy and by traffic volume. Vulnerable road segments for flooding and bridges with critical scour ratings have also been mapped. For Allegheny County advanced analysis has been conducted to show road segments with future high risk for flooding, based on the work done by PennDOT for its Extreme Weather Vulnerability Study. There are several LRTP projects identified in the second stage that are in or near identified vulnerabilities. The passage of the Bipartisan Infrastructure Law (BIL), enacted as the Infrastructure Investment and Jobs Act (IIJA), created the Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Formula Program. The PROTECT program funds may be used on these projects in adaptive ways to reduce asset vulnerabilities and help improve the resiliency of surface transportation in the region.
- Potential Environmental Mitigation Activities* – discusses the potential options and strategies for environmental mitigation activities for resources with the greatest potential to restore and maintain environmental functions. In identifying the “types of potential environmental mitigation activities,” general examples of mitigation approaches for the most commonly encountered resource categories are presented and discussed in a detail in Table 3. This table also discusses potential areas to carry out these mitigation options.

This section includes the interactive SPC wetland mitigation suitability tool. In the case of one of the most commonly impacted natural resources (wetlands), the output from the SPC wetland mitigation suitability tool shows, geographically where this mitigation is most appropriate and has the greatest probability of resulting in a sustainable and successful mitigation wetland. This

tool can serve as an important starting point to evaluating wetland suitability for mitigation projects or mitigation banks. The potential mitigation sites would still need to be field verified to make a real determination if the site is feasible.

**Table VII-2 Environmental Screening Results
Fiscally Constrained Project List
Stage 2 Highway/Bridge and Transit Projects**

Project Title	ID or MPMS Number	District	Water Resources											Wetlands			Threatened and Endangered Species Indicators								Farmlands				Protected Lands											Hazardous Waste			Cultural Resources					Resiliency												
			Surface Water	Wilderness Trout Stream	Class A Trout Stream	Natural Trout Reproduction	Exceptional Quality Stream	High Quality Stream	Stocked Stream	CWF/TSF	TMDL Stream	Navigable River	Floodplain	Wetlands	Hydic Soil	Natural Heritage Area	Mussel Management Area	Forest Land Cover	**T & E Indicators	Rivers Conservation Plan	Conservation Easement	Watershed Conservation Priority	Biodiversity Opportunity Areas	Important Bird Areas	Important Mammal Areas	Bald Eagle Nesting Area	Agricultural Land Cover	Agricultural Security Area	Agricultural Easement	Soils of Statewide Importance	Prime Agricultural Soils	National Wildlife Refuge	Wild and Natural Areas	State Park	State Forest	State Game Lands	Local Park	Recreation and Open Space Land Cover	Land and Water Conservation Fund	Cemetery	Trail	Water Trail	Public River Access	Protected Land Inventory	Hazardous Waste Indicators	Mining Operations	Industrial Land Cover	National Historic Landmark	NRHP Listed Site	NRHP Eligible Site	Historic District	Historic Railroad	Potential Archaeological Sites	Landslide Vulnerability	Road Closure (flooding/landslide)	Future High Risk Area (Allegheny County Projects Only)	Environmental Justice Area	***Environmental Model Score		
Pkwy East Active Traffic Management	94651	11	X								X	X	X	X	X	X	X	X	X		X				X	X	X	X		X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	133					
LVTIP: Norvelt to Pleasant Unity	108010	12	X							X							X	L	X							X	X	X	X										X	X				X									X	76						
LVTIP: Pleasant Unity to Airport	108140	12	X							X							X	L	X							X	X	X	X																			X	X	X					33					
I-70 Interstate Detour Improvement Plan Implementation	119641	12	X											X	X	X				X					X	X	X	X											X	X	X				X	X							X	101						
I-79 Interstate Detour Improvement Plan Implementation	119639	12	X											X	X	X	H	X		X					X	X	X	X												X	X					X	X	X					X	81						
I-79 at PA 910	104328	11	X											X	X	X	L	X							X	X	X	X																								X	41							
Electric Ave ov Falls Run	78232	11																																																	X	15								
Talbot Avenue Ramp Bridge Rehabilitation	93915	11												X	X																																				X	23								
Tarentum Bridge ov NS RR	100624	11	X							X	X			X	X	X	H	X										X																									X	81						
Homestead-Grays Bridge Rehabilitation	103366	11	X											X	X	X	H	X										X																				X					X	79						
West Newton Bridge	98869	12	X											X	X	X	L	X																																			X	79						
Layton Bridge	81192	12	X											X	X	X	X	X											X																								X	77						
Salina Bridge	81747	12	X											X	X	X	M	X									X	X																										X	60					
PA 366 over PA 400/380	88617	12	X																								X																												7					
Karns Crossing Bridge	86105	10	X				X							X	X	X	L	X									X																												X	43				
US 119 over SR 8001 Bridges	25621	10																X										X	X																								X	11						
1/112th Infantry Bridge and Graff Ramp Rehabilitation	109622	10	X											X	X					X						X	X																											X	38					
PA 528 over Lake Arthur	24241	10	X											X	X	X	M	X									X																											X	61					
US 422 over PA 356	24663	10																										X																															18	
PA 8 over Muddy Creek	24722	10	X											X	X	X	X	X									X	X																															X	57
PA 528 over Big Run	83323	10	X											X	X	X	H	X									X																												X	29				
Highland Park Bridge	109549	11	X											X	X	X	X	H	X																																					X	82			
40th Street Bridge	69071	11	X											X	X	X	X	M	X																																				X	99				
McKees Rocks Bridge Phase 3	100701	11	X											X	X	X	H	X																																					X	88				
West End Bridge	100956	11	X											X	X	X	M	X																																					X	77				
62nd Street Bridge	100958	11	X											X	X	X	H	X																																					X	80				
Sewickley Bridge Preservation Phase 2	114106	11	X											X	X	X	M	X																																					X	95				
10th Street Bridge Preservation	118910	11	X											X	X	X	L	X																																					X	96				
Corliss Tunnel	27806	11	X											X	X	X	M	X																																						X	7			
Ambridge-Alliquippa Bridge	117987	11	X											X	X	X	X	H																																					X	64				
SR 56, Vandergrift Bridge	112391	12	X											X	X	X	X	M	X																																				X	74				
SR 4093, W Leechburg Bridge (Full Paint/Deck/Barrier)	112395	12	X											X	X	X	X	X																																					X	70				
Graff Bridge Preservation	23978	10	X											X	X	X	X	H	X																																				X	64				
PA 8 General Butler Bridge PM	113652	10												X			L	X																																				X	52					

*Transit Project

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McKeesport-Duquesne Southern Ramps Deck Replacement	100955	11									X				X	L	X										X																									X	49		
Hot Metal Bridge	119367	11	X							X	X	X	X				X			X																X	X														X	70			
Mission St. (West)	28279	11															L			X															X	X	X	X	X											X	25				
Mission St. (East)	119364	11															L			X															X	X	X	X	X											X	25				
Bloomfield Bridge	119365	11													X	L																			X	X	X	X	X										X	49					
Fifth Avenue Signal Improvement Project	119398	11									X			X			M			X																		X					X	X			X			X	50				
US 30 over SR 3077 Preservation	119608	12													X	L	X										X	X																								22			
Donora-Monessen Bridge Preservation	116850	12	X								X	X	X	X			X	L	X																												X			X	59				
PA 18 over Chartiers Ck-1	79365	12	X								X	X	X	X			X	M	X						X		X	X								X														X	47				
SR 1005 Chapel Drive ov Brush Creek	78326	11	X								X	X	X				X	M	X				X		X	X	X																					X				42			
SR 18, Big Beaver Boulevard	116315	11									X	X	X				X	M	X				X		X	X	X																	X	X				X	61					
Washington Road US 19/Weavertown Rd	119628	12	X											X			L	X											X																			X			X	39			
Weavertown Rd SR 1025/I-79 NB Exit Ramp/Hook St	119627	12															X	L	X																															X	22				
US 422 County Line East PM	115104	10	X						X	X	X	X	X			X	M	X			X			X		X	X	X																			X			X	99				
US 422 Prospect PM	115108	10	X						X	X	X	X	X			X	M	X			X			X		X	X	X																					X		X	76			
Rayburn Township-North of Kittanning Bridge #2	83239	10	X								X	X	X		X	X	L	X									X	X																					X		X	29			
Versailles Ave Bridge	28044	11															L																																	X	26				
SR 3011 over Hargus Creek	74220	12	X								X	X					L					X																										X			X	49			
PA 218 ov Br Smith Ck	81849	12									X	X					L							X		X																								X	21				
SR 4073 over PA 56	83686	12															M									X	X																							X	11				
SR 885 (Bates Street) Improvement (Pending Study)	98125	11									X						L	X			X																													X		X	40		
B'ville High Level Brdg	98847	12	X								X	X	X	X			L	X		X							X																						X		X	47			
356 Corridor Improvements	106486	10	X										X				M	X			X	X	X				X	X																					X			X	42		
SR 19, Perry Highway	109389	11	X								X	X	X	X			M	X			X			X		X	X	X																					X		X	49			
356 Park and Ride	116127	10															M				X	X				X																									X	10			
SR 819 over Yough River - Bearing Replacement	116917	12	X								X	X		X			H	X							X		X																					X		X	59				
US 119 over Crooked Creek	117248	10	X								X	X					L	X						X		X	X	X																						X	31				
McArdle Rdwy over Sycamore	119375	11															L			X																														X	24				
McKeesport Bridge Ramps (10th Ward)	119603	11	X								X	X	X				L	X																															X		X	73			
Tarentum Bridge Ramps A, B, C, D	63306	11	X								X	X		X	X		M	X																																X	45				
Tenth Street Bypass	119607	11	X								X	X		X			H	X			X																											X		X	X	90			
US 119 Uniontown Bypass	119629	12	X								X	X	X				M								X		X	X																						X		X	63		

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SR 119 Bridge Rehabs	119610	12	X					X		X	X	X			X	L	X																X												X	X					47		
US 119 West Tec Drive	119625	12	X					X		X					X	L	X							X		X	X	X											X										X		25		
PA 136 Reconstruction & Realignment	119630	12								X			X		X	L	X							X		X	X															X								1			
SR 1055: I-70 to Dual Lane Roundabout	119634	12	X				X			X	X				X	L	X							X		X	X					X												X					X		59		
SR 68 Glasgow Bridge	117006	11	X						X	X	X		X	X	X	M												X						X								X	X							61			
SR 4032 Reconstruction: 7th Street to Turkey Ridge Road	119640	12	X					X	X	X	X				X	L	X							X		X	X	X						X																	23		
SR 21 Operations and Capacity Feasibility Study GRCO	119633	12	X						X	X	X	X	X	X		M	X			X				X	X	X	X	X			X	X	X									X	X	X			X			89			
Bridge over Route 51 Near Woodruff St.	117472	11	X						X	X	X				X	L				X													X									X	X							21			
California Avenue Bridge	117889	11							X							L																									X		X					X		36			
*NCATA - Park and Ride Lot Upgrades	N/A	N/A										X			X	L	X							X			X	X																							20		
*BCTA - Expressway Travel Center	N/A	N/A													X	L										X	X																								15		
*BTA - Light Maintenance Facility	N/A	N/A								X					X	L	X							X		X																									39		
*WASH - Multimodal Facility Improvements: Washington Transit Center	N/A	N/A																																																X		24	
*WASH - Bus Shelter: Donnan Ave	N/A	N/A	X						X																		X																					X			20		
*ICTA - Parking Lot Improvements	N/A	N/A																										X	X																					X		30	
*BTA - Security Cameras at New Terminal	N/A	N/A																																																X		40	
*BTA - LCD Sign for Terminal	N/A	N/A																																															X		40		
*PRT - Allentown LRT Line	N/A	N/A	X						X	X	X	X	X	X	X	H				X								X	X			X	X											X	X	X			X			119	
*PRT - Corridor R, Homestead to McKeesport	N/A	N/A	X						X	X	X	X	X	X	H											X	X																					X			X	105	

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