

SHRP2 I-64 Corridor Plan Environmental Considerations

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Big Picture

- ✓ Environmental Review Process (ERP)
- ✓ National Environmental Policy Act (NEPA)
- ✓ State Environmental Review Process (State)
- ✓ Endangered species
- ✓ Water Quality Permits
 - Cultural Resource (Section 106)
 - Hazardous Materials
 - Noise
 - Air

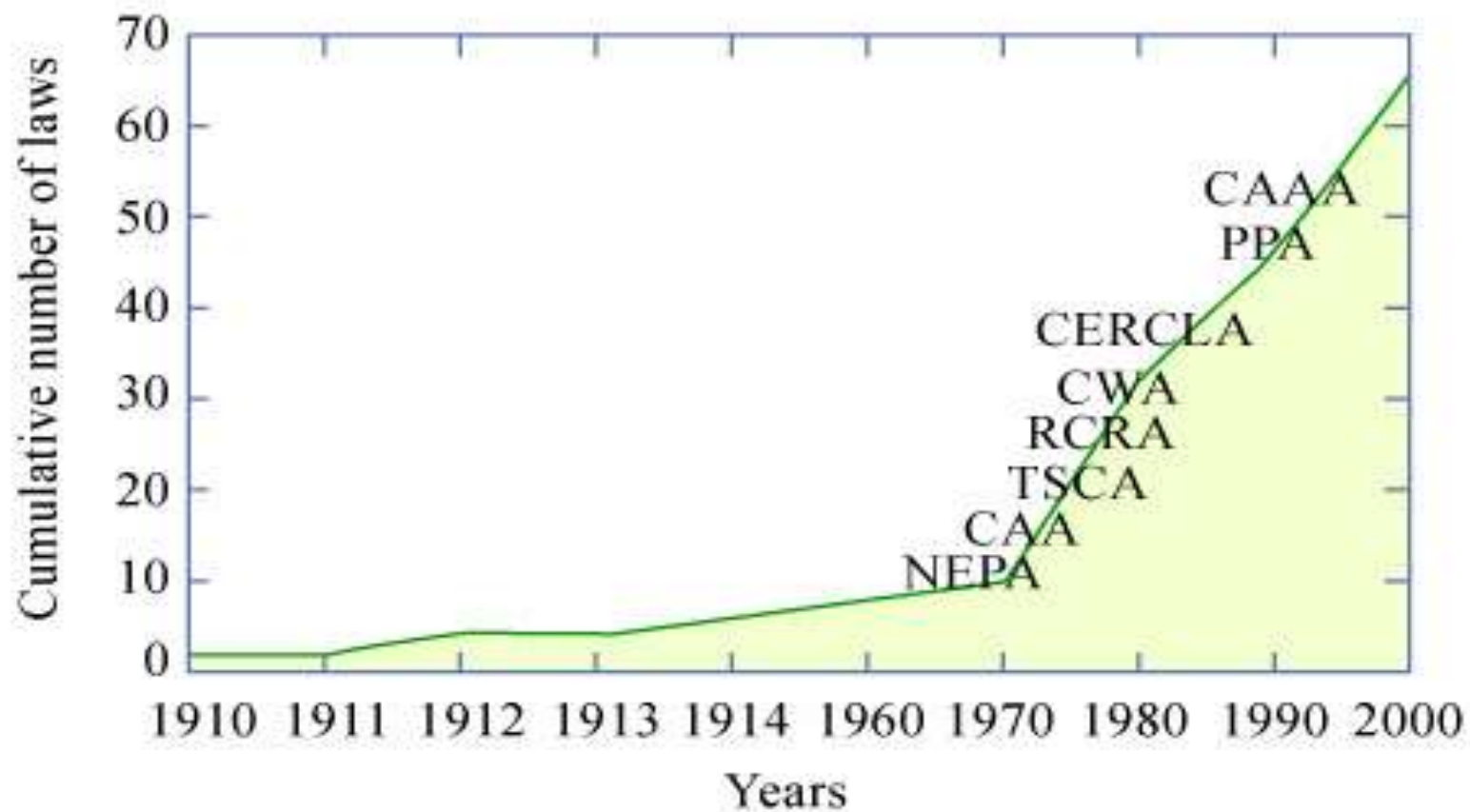
Why Consider Environmental Factors?

- It's the law
- Civil penalties
- Criminal penalties
- Criminal prosecution
- Basis for lawsuits
- Loss of efficiencies
- Loss of federal funds
- Resource agency relations
- Public relations
- Travel and tourism
- Schedule and budget

Environmental Factors to Avoid/Minimize

- Wetlands
- Streams
- Endangered species
- Historic properties
- Hazardous materials
- Outdoor easements
- Public parks, recreational areas, wildlife refuges
- Agricultural / Forestal Districts
- Noise
- Environmental Justice

Cumulative Number of Federal Environmental Laws



ERP

- Coordinate with environmental staff to use studies identified in ERP to inform scoping process
- Manage project changes, and communicate project design and schedule changes to environmental staff
- Use input from Environmental staff to adjust budget and schedule (task durations)

NEPA

- Provide timely additional project details to environmental staff
- Avoid/minimize impacts to facilitate lowest level of NEPA document
- Recommend increasing foot print of your study areas/ NEPA Study window to be larger than the project footprint to avoid repeated survey efforts
- Purpose & Need

Reality Check: External influence- FHWA

<i>Document Type</i>	<i>Time (Duration)</i>	<i>Cost</i>	<i>Controlling Entity</i>
BCE	1 Week	<\$500	FHWA
PCE	3 Months	<\$1,000	FHWA
CE	Up to 8 months	\$1,000- \$10,000	FHWA
EA	14 months	\$30,000- \$500,000	FHWA*
EIS	3+ years	3 million+	FHWA*

*FHWA influenced by federal environmental agencies

VDOT's Record: NEPA Documents for FHWA (April 2016-April 2017)

- Blanket Categorical Exclusion – 16.2%
- Programmatic Categorical Exclusion – 75.0%
- Categorical Exclusion – 5.8%
- Environmental Assessment / Environmental Impact Statement – 3%

Endangered Species

- Provide project details to environmental lead
- Avoid/minimize impacts to:
 - Facilitate lowest level of effect determination
 - Eliminate or reduce time of year restrictions
- Consider requirement to update endangered species review, ex survey have expirations and must be revisited
- Manage project changes, and communicate project design and schedule changes to environmental staff
- Critical Path, determine presence of species within action areas due to seasonal constraints for surveys. Long Durations for “Biological Opinions” from USFWS on impacts
- Endangered species
 - Time of year restrictions (up to 7 months; construction season)
 - Surveys (up to \$20,000 and 2 years) and relocations

Threatened & Endangered Species

Federal Species

- James Spiny mussel *Pleurobema collina*
- Madison Cave Isopod *Antrolana lira*
- Swamp Pink *Helonias bullata*
- Indiana Bat *Myotis sodalis*
- Northern Long-eared Bat *Myotis septentrionalis*



Endangered Species

State Species

- Peregrine Falcon
- Loggerhead Shrike
- Bald Eagles
- Little Brown Bat
- Tri-colored Bat
- Anadromous Fish



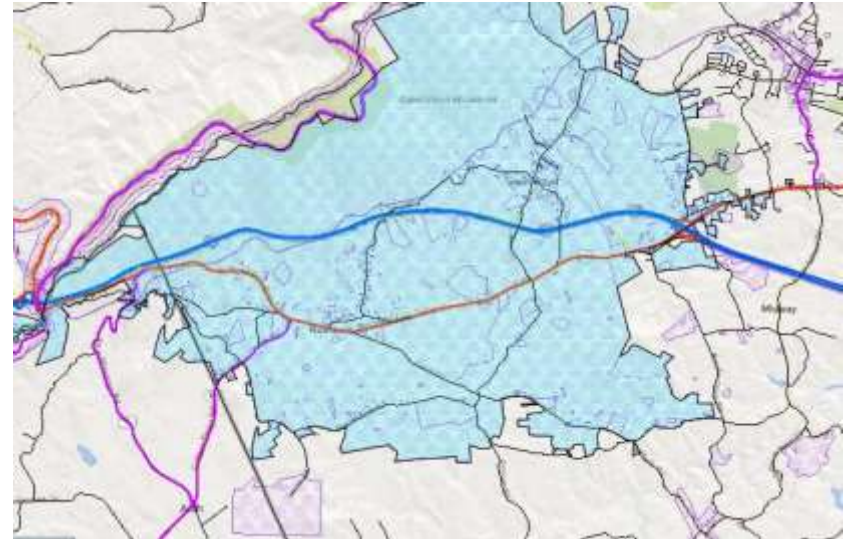
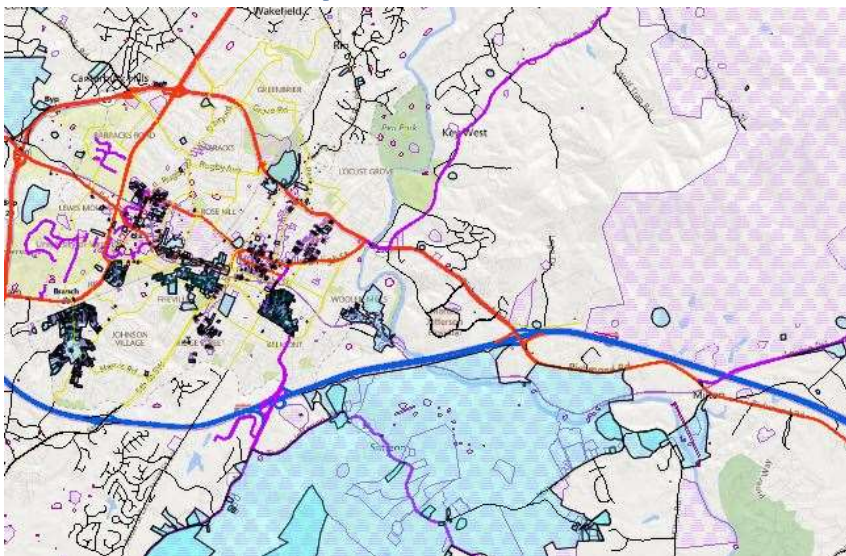
Section 106 NHPA

Historic Resources:

- The terms “historic resources” or “cultural resources” refer to properties such as buildings, bridges, archaeological sites, cemeteries, battlefields, designed landscapes, traditional cultural properties, and districts (a geographically- and thematically-defined group of resources), usually 50 years of age or older, that may have historical significance.
- Ensure that potential harmful effects to historic properties are identified and considered early in project planning so that these effects can be avoided or minimized.
- Consider this to be a critical path and should be started early to avoid future schedule delays, ex. Consulting parties, MOA’s, etc...

Historic Districts

- Jefferson Carter Rural Historic District
- Southern Albemarle Rural Historic District
- Greenwood Afton Historic Districts
- Yancey Mills Historic District



Reality Check: External Influence – FHWA and Others

<i>Study/Evaluation</i>	<i>Time (Duration)</i>	<i>Cost</i>	<i>Controlling Entity</i>
Section 106	6 months-1 year	\$50,000- \$500,000	FHWA, DHR*, ACHP*
Agricultural/ Forestal District	5 months	\$1,000 - \$5,000	Local Government
4(f)	6-8 months	\$50,000+	FHWA/DOI*

*DHR - Department of Historic Resources; *ACHP - President's Advisory Council on Historic Preservation;

*DOI - Department of Interior

Water Quality Permits

- Identify potential impacts associated with culvert replacements/extensions, bridges, roadway widening, etc...
- Requires delineation of WOUS to identify Streams & Wetlands
- Utilize VDOT IACM (Inter Agency Coordination Meeting) process

Permit Costs

- Processing fees
- Public notice
- Mitigation
 - Design, ROW, construction, monitoring
 - Wetlands: \$100,000+/acre
 - Streams: \$650+/linear foot
- Erosion and sedimentation control
 - Design, construction, monitoring
- Monitoring and reporting (including post-construction)

Reality Check: External Influences – Corps of Engineers

<i>Permit Type</i>	<i>Time</i>	<i>Compensatory Mitigation Required</i>	<i>Public Notice</i>	<i>Agency Pre-Const. Review</i>
No Permit / Non-Reporting Permit	15-30 days	No	No	No
Nationwide	60-75 days	Yes	No	Yes
Regional	60-120+ days	Yes	No	Yes
State Program General Permit	60-75 days	Yes	No	Yes
Standard	180-360+ days	Yes	Yes	Yes

Reality Check: External Influences – Department of Environmental Quality (DEQ)

<i>Permit Type</i>	<i>Time</i>	<i>Compensatory Mitigation Required</i>	<i>Public Notice</i>	<i>Agency Pre-const. Review</i>	<i>State Water Control Board Hearing</i>
No permit	15-30	No	No	No	No
VWPP* General	45 days	Yes	No	Yes	No
VWPP*	180 - 220 days	Yes	Yes	Yes	Yes

*VWPP-Virginia Water Protection Permit

Reality Check: External Influence – Virginia Marine Resources Commission (VMRC)

<i>Permit Type</i>	<i>Time</i>	<i>Compensatory Mitigation Required</i>	<i>Public Notice</i>	<i>Agency Pre-Const. Review</i>	<i>VMRC Hearing</i>
VA General Permit 1 (VGP-1)	45-75 days	Yes	No	Yes	No
Standard	180+ days	Yes	Yes	Yes	Yes

Hazardous Materials

- UST
- AST
- Contaminated Soil & Groundwater
- Solid Waste
- Evaluated potential to impact previously reported release sites and new sites.

Noise

- A highway is being built on a new location
- An existing highway is being redesigned with a significant change in its alignment
- The number of through traffic lanes on an existing highway is being increased
- The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot or toll plaza

VOF Easements

- An open-space easement is an interest in property voluntarily offered by a landowner that limits the property's uses in order to protect its conservation and open-space values
- Numerous VOF Easements along I-64 corridor in Albemarle County



Take Control

- Avoiding and minimizing impacts will reduce FHWA and regulatory agency control of your schedule and budget

How do you manage your destiny?

- Understand your environmental role on Project Team
- Involve environmental staff
- Manage project scope
- **Identify environmental issues early**
- Avoid/minimize impacts:
 - Project footprint
 - Shift alignment
 - Modify typical section
 - Retaining walls
 - Pier spacing
 - Countersink pipes
 - Eliminate channelization and stream relocation; stream impacts
 - Use bridges, bottomless arches
 - Construction BMPs