CHAPTER 5

NEPA Compliance

This Chapter identifies and summarizes the major Federal, state and local laws, regulations, and requirements that may apply to the alternatives analyzed in this DEIS.

It also lists persons that prepared the document and the people to whom it was sent.

5.0 NEPA Compliance

5.1 Statutes, Regulations, Consultations, and Other Requirements

Federal Environmental Statutes and Regulations

Water Resources Development Act of 1986.
The Levisa Fork (Pike County) Flood Damage Reduction Project was authorized under this act, which mandates the USACE to design and implement a flood damage reduction project for the Levisa Fork Basin. The Act specifically states the project must be sufficient to afford the communities with protection against flooding such as occurred in April 1977.

National Environmental Policy Act of 1969, as amended (42 USC 4321 et seq.), the Council on Environmental Quality Implementing Regulations (CFR 1500 et seq.).
The environmental impacts are being analyzed in order to comply with NEPA, the Federal Law that requires agencies of the Federal government to study the possible environmental impacts of major Federal Actions significantly affecting the quality of the natural and human environment.

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 USC 4601 et seq.)
This Act establishes guidelines to provide compensation for owners of property and houses affected by Federal projects. Owners of property and houses that must be acquired and removed to construct the proposed action will be compensated according to the guidelines established by the Act.

Clean Air Act, as amended (42 USC 7401 et seq.)
The CAA establishes National Ambient Air Quality Standards (NAAQS) set by the USEPA for certain pollutants. The standards are set at a level designed to protect human health with a conservative margin of safety. Regulations implementing the CAA are found in 40 CFR Parts 50-95.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 / Superfund Amendments and Reauthorization Act of 1986 (42 USC 9601 et seq.) This statute requires cleanup and notification if there is a release or threatened release of a hazardous substance.

Occupational Safety and Health Act of 1970, as amended (29 USC 651 et seq.)
Compliance with the Occupational Safety and Health Act would be required according to implementing regulations for construction and general industry rules in 29 CFR Parts 1910 and 1926. Operational employees would be instructed in worker protection and safety procedures, and would be provided appropriate personal protective equipment

Clean Water Act of 1977 as amended (33 USC 1251 et seq.)
The CWA provides a framework of standards, technical tools, and financial assistance to improve the quality of US water resources. It addresses causes of poor water quality and pollution, such as municipal and industrial wastewater discharges, and urban and rural runoff. Section 404 of the CWA establishes a program to regulate the discharge of dredged and fill material into waters of the US, including wetlands. Activities in waters of the US that are regulated under this program include fills for development, water resource projects, infrastructure development, and conversion of wetlands to uplands for farming and forestry. A Federal permit is required to discharge dredged or fill material into wetlands or other waters.

Compliance with Floodplain/Wetlands Environmental Review Requirements.
Executive Order 11988, Floodplain Management, directs Federal Agencies to establish procedures to ensure they consider and minimize potential effects of flood hazards and floodplain management for any action undertaken. Executive Order 11990, Protection of Wetlands, required Federal agencies to avoid short- and long-term impacts to wetlands if a practical alternative exists. Where there is no practical alternative to development in floodplain and wetlands, the USACE is required to prepare a floodplain and wetlands assessment discussing the effects on the floodplain and wetlands, and consideration of alternatives. In addition, these regulations require the USACE to design or modify its actions to minimize potential damage in floodplains or harm to wetlands and provide opportunity for public review.

Endangered Species Act of 1973 (16 UES 1531 et seq.)
Section 7, “Interagency Cooperation”, requires any Federal Agency authorizing, funding, or carrying out any action to ensure the action is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of critical habitat of such species. Consequently, the U.S. Fish and Wildlife Service conducts a consultation, in compliance with Subsection (a)(2) of Section 7 of the Act, with regard to the impacts of the proposed project on threatened and endangered species listed by the USFWS and any critical habitat of such species in the vicinity of the project.

Executive Order 12898: Federal Actions to Address Environmental Justice In Minority Populations and Low-Income Populations (February 11, 1994)
This Executive Order requires Federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activies on minority and low-income populations.

Farmland Protection Policy Act of 1981, (PL 97-98). This law applies only to Federal actions and assistance that would convert important farmland to nonagricultural use. The goal of the FPPA is to minimize Federal Programs’ contribution to farmland conversion. Important farmlands are those with soils designated as prime and unique or of statewide and local importance.

Fish and Wildlife Coordination Act (16 USC 661 et seq.)
This Federal statute requires consultation for the possible effects on wildlife if there is construction, modification, or control of bodies of water in excess of 10 acres (4 ha) in surface area.

National Historic Preservation Act of 1966, as amended 16 USC et seq.)
This Federal statute requires the USACE and other Federal Agencies to consult with the State Historic Preservation Officer (SHPO) prior to construction to determine the project's effect on historical properties and to avoid, minimize, or mitigate impacts.

Wild and Scenic Rivers Act of 1968 (16 USC 1271 et seq.)
This Act, as amended, protects selected national rivers possessing outstanding scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values. These rivers are to be preserved in a free-flowing condition to protect water quality and for other vital national conservation purposes. This Act instituted a National Wild and Scenic Rivers system, designated the initial rivers within the system, and developed standards for the addition of new rivers in the future. The Act requires consultation before construction of any Federal project associated with a river designated as wild and scenic or under study in order to minimize and mitigate any adverse effects on the physical and biological properties of the river.

Rivers and Harbors Act of 1899 (33 USC 403).
Section 9 of this Act prohibits the construction of any bridge, dam, dike, or causeway over or in navigable waterways of the US without Congressional approval. Administration of Section 9 has been delegated to the Coast Guard. Structures authorized by State legislatures may be built if the affected navigable waters are totally within one State, provided the plan is approved by the Chief of Engineers and Secretary of the Army (33 USC 401). Section 10 covers construction, excavation, or deposition of materials in, over, or under such waters, or any work which would affect the course, location, condition, or capacity of those waters.

Federal Water Project Recreation Act of 1965 (16 USC 4601-12 et seq.)
This Act, as amended, states that Federal agencies must consider the potential outdoor recreational opportunities and potential fish and wildlife enhancement when planning navigation, flood control, reclamation, hydroelectric, or multipurpose water resource projects. If a project can provide either one or both of these, it must be constructed, operated, and maintained accordingly. Second, planning for a project's recreation potential must be coordinated with existing and planned federal, state or local public recreation developments. Third, project construction agencies must encourage non-federal public bodies to administer project land and water areas for recreation and fish and wildlife enhancement purposes, and to operate, maintain and replace facilities provided for these purposes, unless the areas or facilities are within a national recreation area, the national forest system, the public lands classified for retention in federal ownership or an authorized federal program for the conservation and development of fish and wildlife.

Kentucky Environmental Statutes and Regulations

Kentucky Water Resources Standards (KRS 224.70-71)

KRS 224.70-71 provides for the water quality programs in Kentucky. Water quality is regulated under 401 KAR 4-8.

Title 401 KAR 4:020-4:060. The Water Resources Branch, Floodplain Management Section, is responsible for the review and approval or denial of proposed construction and other activities in the 100-year floodplain of all streams in the Commonwealth. Typical activities permitted include dams, bridges, culverts, residential and commercial buildings, placement of fill, stream alterations or relocations, small impoundments and water and wastewater treatment plants. Physical disturbances to wetland and streams may also require a Water Quality Certification Permit. Exemptions may exist for activities covered under Corps of Engineers General Permits, activities in watersheds of less than one square mile, and some utility pipeline stream crossings.

Title 401 KAR 5:050-5:080. Kentucky Pollutant Discharge Elimination System (KPDES) Permitting and associated regulations. These regulations were adopted from the federal National Pollutant Discharge Elimination System (NPDES) program, as authorized by the Clean Water Act. Permits must be obtained for certain types of point source discharges into the waters of the Commonwealth of Kentucky. Industrial and construction activities are required to assess the need for a KPDES permit. Permits regulate industrial and storm water related discharges. Division of Water, KPDES Branch.

Title 401 KAR Chapter 5 Projects involving activities that result in physical disturbances to wetlands or streams may need a Water Quality Certification from the Division of Water, Water Quality Branch, Water Quality Certification Section. These activities are typically regulated by the U.S. Army Corps of Engineers under Clean Water Act Section 404 and require a Section 401 certification. Examples of activities that might require the Section 404 permit and a Section 401 certification include stream relocations, road crossings, stream bank protection, construction of boat ramps, placing fill, grading, dredging, ditching, mechanically clearing a wetland, building in a wetland, construction of a dam or dike, and stream diversions. The U.S. Army Corps of Engineers is responsible for jurisdictional wetland determinations

Kentucky Waste Standards (KRS 224.70-71)

Chapter 224 Environmental Protection, Subchapters 40 (Waste – Generalities), 43 (Solid Waste), 46 (Hazardous Waste), 50 (Other Specific Types of Waste) and 60 (Underground Storage Facilities).

Title 401 KAR Chapter 45. Generators of certain volumes of special waste must complete and submit a hazardous waste registration form to the Division of Waste Management, Hazardous Waste Branch.

Title 401 KAR Chapter 32. Generators of certain volumes of hazardous waste must complete and submit a hazardous waste registration form to the Division of Waste Management, Hazardous Waste Branch. The registration is required for small and large quantity generators of hazardous waste, but is optional for conditionally exempt small quantity generators. An identification number is assigned to the facility for future use on manifests and other related documents. Generators are also required to prepare and submit an annual report to the Hazardous Waste Branch documenting generation, treatment, and disposal activities in the preceding calendar year.

Kentucky Air Quality Standards (KRS 224.20)

Kentucky Revised Statutes Chapter 224 Subchapter20 (KRS 224.20) provides for the air quality program in Kentucky. Air quality is regulated under Title 401 Kentucky Administrative Regulations Chapters 50-65 (401 KAR 50-65).

Title 401 KAR Chapter 52. Provides for air permitting and registration of air emission sources.

Title 401 KAR Chapter 57. Incorporates by reference National Emission Standards for Hazardous Air Pollutants (NESHAP) codified in 40 CFR 61.

Title 401 KAR Chapter 58. Provides for accreditation of asbestos professionals. Requires control of asbestos emissions in schools. Establishes identification, handling, and disposal requirements of asbestos materials.

Title 401 KAR Chapter 59-60. Provides for the establishment of monitoring requirements, performance testing requirements, and other general provisions as related to new sources, including Standards of Performance for New Stationary Sources (NSPS) codified in 40 CFR 60.

Title 401 KAR Chapter 63. Incorporates by reference the NESHAP codified in 40 CFR 63.

Title 401 KAR Chapter 65. Provides for the regulation of mobile source-related air emissions.

5.2 List of Preparers and Reviewers

This DEIS was prepared under the supervision of the USACE, Huntington District. The individuals who contributed to the preparation of the document are listed below, with their organization, education, years of experience, and project role.

Aya-ay, Jay, USACE
MA, Biological Sciences, BA, Biology – 4 years
Lead DEIS Coordinator

Holley, Travis, USACE
B.A. Economics - 5 years
Environmental Justice, Aesthetics, Socio-economic impact

Jackson, Brantley, RPA , USACE
MA Anthropology - 40 years
Reviewer-Cultural Resources

Dean, Wallace A., USACE
MS, Biological Sciences, BS Fish and Wildlife Management – 46 years
Document Review

Preston, John, USACE
B.S. Forest Resource Management – 25 years
Technical Reviewer

Radcliff, Steven, USACE
MS Environmental Engineering - 14 years
Reviewer

Valluri, Jagan, Marshall University
PhD, Ecology – 11 years
Document Review

Drum, Gus, USACE
Community Planner – 30 years
Document Review

Schatz, David, AMEC
BA, Archaeology - 11 years
Cultural Resources

Scherer, Mathia, AMEC
MA, History – 2 years
Cultural Resources

Sabraoui, Rebecca, AMEC
BSE, Chemical - 13 years
Consultant Team DEIS Coordinator

Money, Robert, PG, AMEC
Geology, Soils, Hazardous, Toxic, and Radioactive Wastes

Donna Duke, Donna, AMEC
BS, Environmental Science - 3 years
Terrestrial Resources Field Investigation

Connolly, Sean, AMEC
MS, Earth and Environmental Resource Management – 4 years
Ecological Resources and Mitigation

Phillips Kelly, AMEC
BS, Earth Science - 5 years
Water Resources and Mitigation

Zopff, David, PE, AMEC
BSE Chemical - 17 years
Air Quality and Noise

Johoboeke, Todd, AMEC
Junior Year University of Louisville - 1 year
GIS and Graphics

Coleman, Robin, AMEC
BS, Environmental Geography - 4 years
GIS and Graphics

Walker, Mary Motte, AMEC
MS, Forest Resources - 4 years
Terrestrial Resources

Severe, Traci, PB

Socioeconomics, Community Cohesion

5.3 DEIS Distribution List

Federal Agencies and Elected Officials

Honorable Mitch McConnell
United States Senator
361A Russell Senate Office Building
Washington, DC 20510

Honorable Jim Bunning
United States Senator
316 Hart Senate Office Building
Washington, DC 20510

Honorable Hal Rogers
Representative in Congress
2406 Rayburn Building
Washington, DC 20515

Dr. Gerald Miller, Environmental Scientist
US Environmental Protection Agency
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303-3104

US Environmental Protection Agency
Office of Federal Activities
EIS Filing Section
Mail Code 2252-2, Room 7241
Ariel Rios Building (South Oval Lobby)
1200 Pennsylvania Avenue, NW
Washington, DC 20004

Federal Highway Administration
400 Seventh Street, SW
Washington, DC 20590

Advisory Council on Historic Preservation
1100 Pennsylvania Avenue NW, Suite 809
Old Post Office Building
Washington, DC 20004

Mr. Christopher Slone, District Conservationist
US Department of Agriculture
Natural Resources Conservation Service
Prestonsburg Service Center
214 S Central Avenue
Prestonsburg, Kentucky 41653-1953

US Department of Health and Human Services
200 Independence Avenue, SW
Washington, DC 20201

US Department of Housing and Urban Development
451 7th Street SW
Washington, DC 20410

Terence N. Martin
Team Leader, Natural Resources Management
US Department of the Interior
Office of Environmental Policy and Compliance
1849 C Street, N.W. Room 2340
Washington, DC 20260

Mr. Lee Andrews, Field Supervisor
US Department of the Interior
Fish and Wildlife Service
3761 Georgetown Road
Frankfort, Kentucky 40601

US Environmental Protection Agency
Office of Federal Activities
Washington DC

US Environmental Protection Agency
Region IV
Atlanta Federal Center
61 Forsyth Street, SW
Atlanta, Georgia 30303-3104

Federal Emergency Management Agency
500 C Street, SW
Washington, DC 20472

Federal Emergency Management Agency
Region IV
3003 Chamblee Tucker Road
Atlanta, Georgia 30341

Appalachian Regional Council, Washington, DC
1666 Connecticut Ave. NW, Suite 700
Washington, DC 20009

State Agencies and Elected Officials

Representative Hubert Collins
Capitol Annex, Room 329H
Frankfort, Kentucky 40601

Representative Howard Cornett

Capitol Annex, Room 432H
Frankfort, Kentucky 40601

Representative W. Keith Hall
Capitol Annex, Room 424E
Frankfort, Kentucky 40601

Senator Ray S. Jones, II
Capitol Annex, Room 225
Frankfort, Kentucky 40601

Kentucky Transportation Cabinet
501 High Street
Frankfort, Kentucky 40622

Governor Ernie Fletcher
Office of the Governor
700 Capitol Avenue
Frankfort, Kentucky 40601

Department for Local Government
Capital Complex East Building
1024 Capital Center Drive, Suite 340
Frankfort, Kentucky 40601

Kentucky Appalachian Commission
The Appalachian Center
University of Kentucky
624 Maxwelton Court
Lexington, Kentucky 40506-0347

Mr. Boyce Wells, State Environmental Review Officer
Kentucky Environmental and Public Protection Cabinet
Kentucky Department of Environmental Protection
14 Riley Road
Frankfort, Kentucky 40601

For Distribution to the Following Agencies:

Division of Water
Division of Waste Management
Division for Air Quality
Department of Health Services
Economic Development Cabinet
Division of Forestry
Department of Surface Mining Reclamation and Enforcement
Department of Parks
Department of Agriculture
State Nature Preserves Commission
Kentucky Heritage Council
Division of Conservation

Department for Natural Resources
Department of Fish and Wildlife Resources
Department for Military Affairs

Local Agencies and Elected Officials

Mayor Frank Morris
324 Main Street
County Courthouse
Pikeville, Kentucky 41501-1118

Pikeville City Council
324 Main Street
County Courthouse
Pikeville, Kentucky 41501-1118

Tom Hall
Pikeville Fire Chief
PO Box 1076
Pikeville, Kentucky 41502

William Deskins
Pike County Judge Executive
324 Main Street
County Courthouse
Pikeville, Kentucky 41501-1118

Big Sandy Area Development District
100 Resource Drive
Prestonsburg, Kentucky 41653

Coal Run Volunteer Fire Department
Church Street
Coal Run Village
Pikeville, Kentucky 41501

City of Coal Run Village
79 Church Street
Pikeville, Kentucky 41501

City of Elkhorn City
S. Center Street
Elkhorn City, Kentucky 41522

Organizations and Individuals

Sierra Club
c/o Oscar Geralds, Jr.
257 West Short Street
Lexington, Kentucky 40507

CSX Transportation Services
500 Water Street
Jacksonville, Florida 32202

Public Libraries

Pike County Public Library
119 College Street
Pikeville, Kentucky 41522

Pike County Public Library
Elkhorn City Branch
309 Main Street
Elkhorn City, Kentucky 41522

Pike County Public Library
Phelps Branch
38575 State Highway 194 E
P.O. Box 404
Phelps, Kentucky 41553

Vesta Roberts Johnson Memorial Library
P.O. Box 548
Virgie, Kentucky 41572

Frank M. Allara Library
Pikeville College
147 Sycamore Street
Pikeville, Kentucky 41500

CHAPTER 6

References and Bibiography

6.0 References and Bibliography

AMEC, 2004. Ambient Noise Measurements, Levisa Fork (Pike County) Section 202 Project Documentation.

Amos, C. 1995. A Historic and Architectural Reconnaissance and Survey for the Levisa Basin Flood Control Project, Western Virginia and Eastern Kentucky. Report prepared for the U.S. Army Corps of Engineers, Huntington District.

Big Sandy Economic Development District (BSADD). 2003. Update to Big Sandy Comprehensive Economic Development Strategy. <http://www.bigsandy.org/Ceds/ceds2003/>.

Big Sandy Economic Development District (BSADD). 2002. Big Sandy Comprehensive Economic Development Strategy. <http://www.bigsandy.org/Ceds/ceds2002/>.

City of Pikeville. 1990. Code of Ordinances. Chapter 92.50.

Coal Run Volunteer Fire Department. <http://departments.firehouse.com/dept/Pikeville2KY>. December 2003.

Kentucky Administrative Regulations 401 KAR 50:010. Attainment status designations.

Kentucky Administrative Regulations 401 KAR 50:020. Air quality control regions.

Kentucky Cabinet for Economic Development, January 20, 3004. http://www.thinkkentucky.com/kyedc/topten.asp.

Kentucky Cabinet for Economic Development. 2003. Pike County Community Information, Economic Development Information System.

Kentucky Department of Fish and Wildlife Resources. 2004. Species Information for Pike County. <http://www.kdfwr.state.ky.us/kfwis/speciesInfo/speciesInfo.asp>.

Kentucky Division of Water and the Rivers, Trails, and Conservation Assistance Program of the National Park Service. 1992. Kentucky Rivers Assessment.

Kentucky Division of Water. 2002. Methods for Assessing Biological Integrity of Surface Water.

Kentucky Geological Survey. 2001. Ground-Water Resources of Pike County, Kentucky, Open File Report OF-01-98.

Kentucky Geological Survey. <http://www.uky.edu/KGS/home.htm>. November 2003.

Kentucky National Resources and Environmental Protection Cabinet, Department of Environmental Protection, Division for Air Quality. 2002. Kentucky Ambient Air Quality Annual Report.

Kentucky Natural Resources and Environmental Protection Cabinet, Kentucky Division of Water, January 2003. 303(d) List of Water for Kentucky.

Kentucky Regulatory Statutes (KRS) 224.10-100.

Kentucky State Nature Preserves Commission. 2002. County Report of Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities of Kentucky.

Kleber, J.E. (editor). 1992. The Kentucky Encyclopedia. The University Press of Kentucky, Lexington. 721pp.

Lewis. 1996. Kentucky Archaeology.

Libby, Gary W., 2003, Survey of Potential Winter Habitat Sites for Indiana Bat, Levisa Fork (Pike County) Section 202 Project Structural Areas, Eco-Tech.

Libby, Gary W., James E. Spencer, Hal D. Bryan, P. Lee Droppelman, Shawn M. Cochran, and Rebecca D. M. Smith. 2002. Terrestrial and Aquatic Ecological Assessment for the Proposed US 23 Congestion Relief Build Alternatives, Pike County, Kentucky. Prepared for QK4, Louisville, Kentucky and Kentucky Transportation Cabinet, Frankfort, Kentucky, Item Number: 12-131.00.

Morton, J.M. 1992. Assessment of 13 Streams as Sites to Mitigate Impacts of the Proposed Haysi Reservoir. U.S. Fish and Wildlife Service.

National Resource Conservation Service. June 1990. Soil Survey of Pike County, Kentucky. United States Department of Agriculture, Soil Conservation Service.

Norman, Janet. 1998. Levisa Fork Basin Flood Damage Reduction Plan: Final Fish and Wildlife Coordination Act Report. U.S. Fish and Wildlife Service.

Norman, Janet. 1997. A Preliminary Fish and Wildlife Coordination Act Report, Levisa Fork Basin Flood Damage Reduction Plan. U.S. Fish and Wildlife Service.

Norman, Janet. 1995. A Preliminary Fish and Wildlife Coordination Act Report, Levisa Fork Basin Flood Damage Reduction Plan. U.S. Fish and Wildlife Service.

Ogle, D.W. *Spiraea Virginiana* Survey, Levisa Fork Basin Flood Damage Reduction Plan in Kentucky and Virginia. 1995. Prepared for the U.S. Army Corps of Engineers, Huntington District, WV. Virginia Highlands Community College, Abington, VA.

Ogle, D.W. *Spiraea Virginiana* Recovery Plan. 1992. Virginia Highlands Community College, Abington, VA.

Parsons Brinkerhoff. January 2004. Community Cohesion and Social Impact Study, Final Report, Pike County, Kentucky, Levisa Fork. Prepared for U.S. Army Corps of Engineers, Huntington District, WV.

Parsons Brinkerhoff. November 2003. Draft Socio-economic Analysis for Pike County, Kentucky. DACW69-02-D-0019. Prepared for U.S. Army Corps of Engineers, Huntington District, WV.

Pollack. 1990. Kentucky Heritage Council State Historic Preservation Comprehensive Plan.

Powell, H.C. January 2003. A Cultural Resources Survey for US 23 in Pike County, Kentucky. H. Powell and Co. Inc. Lexington, Kentucky.

QK4. February 2003. Air Quality Analysis for the Proposed US 23 Congestion Relief Build Alternatives, Kentucky Transportation Cabinet Item 12-131.00. Louisville, KY.

QK4. January 2003a. Noise Impact Analysis for the Proposed US 23 Congestion Relief Build Alternatives, Kentucky Transportation Cabinet Item 12-131.00. Louisville, KY.

Tipler, P.A. 1976. Physics. Worth Publishers. New York, New York.

U.S. Army Corps of Engineers, Huntington District. July 2003. Lower Mud River at Milton, WV, Draft Limited Reevaluation Report and Environmental Impact Statement – Supplement 1.0. Huntington, WV.

U.S. Army Corps of Engineers, Huntington District. 2003a. Dean, Wallace A., Final Environmental Assessment, Section 202 General Plan Nonstructural Project, Dickenson County, Virginia, Levisa Fork Basin. Huntington, WV.

U.S. Army Corps of Engineers, Huntington District. 2003b. ER 200-1-5, Environmental Quality – Policy for Implementation and Integrated Application of the U.S. Army Corps of Engineers Environmental Operating Principles and Doctrine.

U.S. Army Corps of Engineers, Huntington District. 2001. Dean, Wallace A., Section 202 General Plan Nonstructural Project: Appendix U Buchanan County, Virginia, Levisa Fork Basin, Volume 6, Final Environmental Assessment. Huntington, WV.

U.S. Army Corps of Engineers, Huntington District. 2000. Dean, Wallace A. Town of Martin Nonstructural Project, Detailed Project Report, Appendix T, Section 202 General Plan, Environmental Assessment. Huntington, WV.

U.S. Army Corps of Engineers, Jacksonville District. 2000a. Levisa Fork Flood Control Project, Final EIS, Independent Technical Review. Huntington, WV.

U.S. Army Corps of Engineers, 1998, Johnson, Charles R. Levisa Fork Basin General Planning Memorandum: Appendix I, Recreational Resources, Supplement to Section 202 General Plan.

U.S. Army Corps of Engineers, Huntington District. 1998a. Section 202, Levisa Fork Flood Control Project, Final Environmental Impact Statement. Huntington, WV.

U.S. Army Corps of Engineers, Huntington District, 1988b. Twohig, James B. Jr. Levisa Fork Basin General Planning Memorandum: Main Report and EIS, Supplement to Section 202 General Plan.

U.S. Army Corps of Engineers, Huntington District. 1997. Section 202 Flood Damage Reduction Plan for the Levisa Fork Basin Haysi Dam Project, Draft of the General Plan Supplement, Appendix B, Draft EIS. Huntington, WV.

U.S. Army Corps of Engineers, Huntington District. 1997a. Public Meeting. Pikeville, Kentucky. June 4, 1997.

U.S. Army Corps of Engineers, Huntington District. 1997b. Public Meeting. Prestonburg, Kentucky. June 5, 1997.

U.S. Army Corps of Engineers, 1997c, Dial Cordy and Associates, Section 202 Flood Damage Reduction Plan, Levisa Fork Basin/Haysi Dam Project, Appendix B, Environmental Assessment and Mitigation Plan.

U.S. Army Corps of Engineers, Huntington District. 1996. Appendix L: Levisa Fork Valley Flood Control Project: Compensatory Mitigation Plan. Huntington, WV.

U.S. Army Corps of Engineers, Huntington District. 1994. Hazardous, Toxic, and Radioactive Waste for the EIS Report. Huntington, WV.

U.S. Army Corps of Engineers, Huntington District. 1990. Dean, Wallace A. Section 202 Flood Damage Reduction Plan, Levisa Fork Basin/Haysi Dam Project, Preliminary Draft Environmental Impact Statement (DEIS). Huntington, WV.

U.S. Army Corps of Engineers, 1990a, Dean, Wallace E., Haysi Dam and Reservoir Russell Fork

River, VA, Environmental Development Plan. 1990. U.S. Army Corps of Engineers, Huntington District, Huntington, WV.

U.S. Army Corps of Engineers, 1988, Dean, Wallace E., Levisa Fork Basin General Planning Memorandum: Appendix C, Environmental Baseline Conditions, Supplement to Section 202 General Plan.

U.S. Army Corps of Engineers, 1988a, Maslowski, Dr. Robert F., Levisa Fork Basin General Planning Memorandum: Appendix B, Social and Cultural Resources.

U.S. Army Corps of Engineers, Huntington District. 1987. Mitigation Plans for the Levisa Fork Valley Flood Reduction Study. Huntington, WV.

U.S. Army Corps of Engineers, Huntington District. 1982 Tug Fork Valley Flood Damage Reduction Plan, Appendix H, Environmental Design and Mitigation, General Design Memorandum. Huntington, WV.

U.S. Army Corps of Engineers, Huntington District. 1982a. Tug Fork Valley Flood Damage Reduction Plan, Main Report and EIS, General Design Memorandum. Huntington, WV.

U.S. Census Bureau. 2000. Dicennial Census and County Business Patterns 1998-2001.

U.S. Code of Federal Regulations. April 2001. Noise Abatement and Control Housing and Urban Development, 24 CFR 51 B.

U.S. Department of Agriculture, Natural Resources Conservation Service, 1996. Farmland Conversion Impact Ratings for Haysi Dam Project, Pike County, correspondence from Jim Rospapo.

U.S. Department of Transportation, Federal Highway Administration and Kentucky Transportation Cabinet, Division of Environmental Analysis. September 2003. Draft Environmental Assessment and Finding of No Significant Impact, Proposed US 23 Congestion Relief, Kentucky Transportation Cabinet Item 12-131.00.

U.S. Department of Transportation, Federal Highway Administration and Kentucky Transportation Cabinet, Division of Environmental Analysis. January 2003. Cultural Resource Study for the Proposed US 23 Congestion Relief Build Alternatives, Kentucky Transportation Cabinet Item 12-131.00.

U.S. Environmental Protection Agency, Office of Noise Abatement and Control. July 8-9, 1971. Public Hearings for Noise Abatement and Control, Vol. I: Construction Noise. Atlanta, GA.

U.S. Environmental Protection Agency. 2003. Technology Transfer Network, County Emission Summaries by Source Category, EI T-3 NET96, Pike County, Kentucky.

U.S. Environmental Protection Agency. March 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, EPA/ONAC 550/9-74-004.

U.S. Environmental Protection Agency. August 1999. NAAQS Information and Standards. Office of Air Quality Planning and Standards. <http://www.epa.gov/oar/oaqps>.

U.S. Geological Survey. 1965. Geologic Quadrangle Map, Broad Bottom, Kentucky.

U.S. Geological Survey. 1965. Geologic Quadrangle Map, Pikeville, Kentucky.

U.S. Geological Survey. 2002. Ecoregions of Kentucky (color poster with map, descriptive text, summary tables, and photographs). Woods, A.J., Omernik, J.M., Martin, W.H., Pond, G.J., Andrews, W.M., Call, S.M, Comstock, J.A., and Taylor, D.D. Reston, VA. Map scale 1:1,000,000.

Wastetron, 2002. Phase I Site Investigation for Pike County Section 202 Structural Areas. Prepared for U.S. Army Corps of Engineers.

CHAPTER 7

Glossary

7.0 Glossary

Ambient - The environment as it exists around people, plants, and structures.

Ambient Air Quality Standards - Those standards established according to the CAA to protect health and welfare (AR 200-1).

Aquifer - An underground geological formation containing usable amounts of ground water which can supply wells and springs.

Asbestos - Either of two incombustible, chemical-resistant, fibrous mineral forms of impure magnesium silicate, used for fireproofing, electrical insulation, building materials, brake linings, and chemical filters. Asbestos is a carcinogenic substance.

Attainment Area - Region that meets the National Ambient Air Quality Standard (NAAQS) for a criteria pollutant under the Clean Air Act (CAA).

Bankfull – The water level at which a stream is just ready to overflow its banks.

Berm - A mound of earth, located either away from a building, as a levee, or against the building wall.

Best Management Practices (BMPs) - Methods, measures, or practices to prevent or reduce the contributions of pollutants to U.S. waters. Best management practices may be imposed in addition to, or in the absence of, effluent limitations, standards, or prohibitions (AR 200-1).

Compaction - The packing of soil together into a firmer, more dense mass, generally caused by the pressure of great weight.

Contaminants - Any physical, chemical, biological or radiological substances that have an adverse affect on air, water or soil.

Council on Environmental Quality (CEQ) - An Executive Office of the President composed of three members appointed by the President, subject to approval by the Senate. Each member shall be exceptionally qualified to analyze and interpret environmental trends; to appraise programs and activities of the Federal Government. Members are to be conscious of and responsive to the scientific, economic, social, esthetic, and cultural needs of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.

Criteria Pollutants - The Clean Air Act (CAA) of 1970 required the USEPA to set air quality standards for common and widespread pollutants in order to protect human health and welfare. There are six "criteria pollutants": ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), lead (Pb), nitrogen dioxide (NO_2), and particulate matter less than 10 micrometers in diameter (PM-10).

Cultural Resources - The physical evidence of our Nation's heritage. Included are: archaeological sites; historic buildings, structures, and districts; and localities with social significance to the human community.

Culvert - A drainage which crosses beneath a road.

Cumulative Impact - The impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

dBA - A-weighted non-impulse noise measurement in decibels, weighted to match human hearing frequency response.

Decibel (dB) - A unit of measurement of sound pressure level (AR 200-1).

Direct Impact - *A direct impact is caused by a proposed action, and occurs at the same time and place.* For example, a direct impact of the proposed action is that construction of the proposed MAAF Runway Repair/Enhancement Project would include the clearing of trees and other vegetation to accommodate the new development.

Dissolved Solids - A general indicator or contamination by inorganic materials.

Elevation - Raising a building and placing it on a higher foundation so the first or lowest floor is above flood levels.

Emission - A release of a pollutant.

Environmental Assessment/Environmental Impact Statement (EA/EIS) - An EA is a publication that provides sufficient evidence and analysis to show whether a proposed system will adversely affect the environment or be environmentally controversial. If the proposed system will adversely affect the environment or be controversial, an EIS is prepared to disclose impacts.

Erosion - The wearing away of the land surface by detachment and movement of soil and rock fragments through the action of moving water and other geological agents.

Farmland - Cropland, pastures, meadows, and planted woodland.

Fauna - Animal life, especially the animal characteristics of a region, period, or special environment.

Flora - Vegetation; plant life characteristic of a region, period, or special environment.
Floodplain - The relatively flat area or lowlands adjoining a river, stream, ocean, lake, or other body of water that is susceptible to being inundated by floodwaters.

Flood Proofing - Any combination of structural or non-structural changes or adjustments incorporated in the design, construction, or alteration of individual buildings or properties that will reduce flood damages.

Flood Protection Level - The level or elevation of floodwaters to which a structure or its contents are protected from flooding.

Floodwall - A barrier of concrete, masonry block, or other impervious material designed to keep water away from a building.

Floodway - The channel of a river and the portion of the adjacent overbank floodplain that usually carry most of a flood. The floodway must be kept open so that floods can proceed downstream and not be obstructed or diverted onto other properties. The NFIP and local regulations prohibit construction in floodways that obstructs flood flows and increases flood heights.

FONSI - Finding of No Significant Impact, a NEPA document.

Freeboard - An extra margin of safety added to the base flood elevation to account for waves, debris, hydraulic surge, or lack of data.

Fugitive Dust - Particles light enough to be suspended in air which are not caught in a capture or filtering system. For this document, this refers to particles put in the air by moving vehicles and air movement over disturbed soils at construction sites.

Geographic Information System (GIS) - GIS is a computer system that allows environmental analysts to compile, analyze, and model information relevant to proposals that require environmental analysis. It is also a tool that assists decision making by providing a visual depiction of complex data, customized for the situation and circumstances associated with the decision.

Geology - Science which deals with the physical history of the earth, the rocks of which it is composed, and physical changes in the earth.

Hazardous Substances - A substance as defined by section 101(14) of CERCLA. a. For the purpose of this regulation a hazardous substance is any one of the following. 1) Any substance designated pursuant to section 311 (b)(2) (A) of the CWA. 2) Any element, compound, mixture, solution or substance designated pursuant to Section 102 of CERCLA. 3) Any hazardous waste having the characteristics identified under the

RCRA. 4) Any toxic pollutant listed under TSCA. 5) Any hazardous air pollutant listed under Section 112 of CAA. 6) Any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to fraction subsection 7 of TSCA. b. The term does not include: 1) Petroleum, including crude oil or any thereof, which is not otherwise specifically listed or designated as a hazardous substance in a above. 2) Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). c. A list of hazardous substances is found in 40 CFR 302.4 (AR 200-1).

Hazardous Waste - A solid waste, which when improperly treated, stored, transported or disposed of poses a substantial hazard to human health or the environment. Hazardous wastes are identified in 40 CFR 261.3 or applicable foreign law, rule, or regulation (see also solid waste) (AR 200-1).

Hazardous Waste Storage - As defined in 40 CFR 260.10, ". . . the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere" (AR 200-1).

Heavy Metals - Metallic or semi-metallic elements of high molecular weight, such as mercury, chromium, cadmium, lead, and arsenic, that are toxic to plants and animals at known concentrations.

Hydrocarbon - Any of a vast family of compounds containing hydrogen and carbon. Used loosely to include many organic compounds in various combinations; most fossil fuels are composed predominantly of hydrocarbons. When hydrocarbons mix with nitrogen oxides in the presence of sunlight, ozone is formed.

Hydrologic Soil Group - Four hydrologic soil groups are recognized by the NRCS and are provided in the Soil Survey for Lebanon County (USDA 1981). The groups reflect the permeability of the soil based on texture, clay mineralogy, impervious layers, water tables, and depth. Because the infiltration rate generally is inversely related to runoff and erosion, the hydrologic soil group is an indirect index to site erodibility. Groups A and B have moderate infiltration rates when thoroughly wetted. Group C has slow infiltration rates when thoroughly wetted. Group D has very slow infiltration rates when thoroughly wetted. As a general rule, soils in Group C are considered borderline while soils in Group D should be avoided for use as maneuver areas.

Indirect Impact - *An indirect impact is caused by a proposed action, but occurs later in time or farther removed in distance, but is still reasonably foreseeable.* Indirect impacts may include induced changes in the pattern of land use, population density or growth rate, and related effects on air, water, and other natural and social systems. For example, referring to the possible direct impacts described above, the clearing of trees for new development may have an indirect impact on area wildlife by decreasing available habitat.

Installation - A grouping of facilities, located in the same general vicinity, over which the installation commander has authority (AR 200-1).

Karst - A limestone region characterized by underground drainage, sinkholes, rolling surfaces, and caverns.

Levee - A mound of earth with an impermeable core that prevents water passage.

Local Protection Project – A floodwall or levee structure designed to prevent flood waters from reaching a group of homes, businesses, schools, or other structures that are in a relatively dense development.

Major impact - An impact which would be particularly large in magnitude, considering both context and intensity.

Minor impact - An impact which would be of a smaller scale or would be more readily mitigated than impacts categorized as major.

Mitigation - Measures taken to reduce adverse impacts on the environment.

Mobile Sources - Vehicles, aircraft, watercraft, construction equipment, and other equipment that use internal combustion engines for energy sources (AR 200-1).

Monitoring - The assessment of emissions and ambient air quality conditions. The following monitoring techniques are used emission estimates, visible emission readings, diffusion or dispersion estimates, sampling or measurement with analytical instruments (AR 200-1).

National Ambient Air Quality Standards (NAAQS) - Nationwide standards set up by the USEPA for widespread air pollutants, as required by Section 109 of the Clean Air Act (CAA). Currently, six pollutants are regulated by primary and secondary NAAQS: carbon monoxide (CO), lead, (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM-10), and sulfur dioxide (SO_2).

National Environmental Policy Act (NEPA) - U.S. statute that requires all federal agencies to consider the potential effects of proposed actions on the human and natural environment (AR 200-1).

Nonattainment Area - An area that has been designated by the EPA or the appropriate state air quality agency as exceeding one or more national or state ambient air quality standards.

Ordinary High Water Mark – The mark of where vegetation stops on a streambank. Below this mark, the streambank is inundated often enough to limit vegetation growth. Above this mark, vegetation growth is not inhibited by inundatation.

Particulates or Particulate Matter - Fine liquid or solid particles such as dust, smoke, mist, fumes or smog found in air.

Plant Community - A vegetative complex unique in its combination of plants which occurs in particular locations under particular conditions.

Pollutant - A substance introduced into the environment that adversely affects the usefulness of a resource.

Potable Water - Water which is suitable for drinking.

Remediation - A long-term action that reduces or eliminates a threat to the environment.

Ringwall – A floodwall that protects a single structure and consists of a wall and a gate.

Riparian Areas - Areas adjacent to rivers and streams that have a high density, diversity and productivity of plant and animal species relative to nearby uplands.

Significant Impact - According to 40 CFR 1508.27, "Significantly" as used in NEPA requires consideration of both context and intensity.

> a. Context. The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.
>
> b. Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action.

Soil - The mixture of altered mineral and organic material at the earth's surface that supports plant life.

Solid Waste - Any discarded material that is not excluded by section 261.4(a) or that is not excluded by variance granted under sections 260.30 and 260.3 1 (40 CFR 261.2).

Stakeholder – A person, jurisdiction, organization, or agency with an interest in a particular project.

Topography - The relief features or surface configuration of an area.

Toxic Substance - A harmful substance which includes elements, compounds, mixtures, and materials of complex composition.

Wetlands - Areas that are regularly saturated by surface or ground water and, thus, are characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions. Examples include swamps, bogs, fens, marshes and estuaries.

Wildlife Habitat - The set of living communities in which a wildlife population lives.

CHAPTER 8

Index

8.0 Index